Report of the NFPA Motions Committee
for the
2022 NFPA Technical Meeting

I. Introduction

As was previously announced by NFPA, the 2022 NFPA Technical Meeting will continue to maximize participation opportunities by allowing electronic submission of position statements online for two weeks prior to the live debate and voting taking place during the Technical Meeting on June 8-9, 2022.

The Standards Council, as well as NFPA, sincerely appreciate your continued interest and support of the important step of the Technical Meeting in the NFPA standards development process, and the evolution of increased participation to those who may not be traveling to the live event. This meeting, as always, will develop a complete record to assist the Standards Council in determining the degree of consensus achieved during the Fall ’21 and Annual ‘22 revision cycles. Complete information and instructions on how to participate electronically or in person in Boston are now available at www.nfpa.org/2022techsession and will be updated regularly.

The Motions Committee, as appointed by the Chair of the Standards Council in accordance with the NFPA Technical Meeting Convention Rules to certify proper amending motions and otherwise review and act on submitted Notices of Intent to Make a Motion (NITMAMs) on NFPA standards, consists of NFPA Standards Council Members Kenneth Bush (Chair), Jeffrey Foisel, Jack Poole, Jim Quiter, and Rodger Reiswig. The Motions Committee met on April 28, 2022 to review and act on NITMAMs submitted on six Annual ‘22 standards, resulting in Certified Amending Motions for six standards. The Motions Committee previously met on October 11, 2021 to act on NITMAMs submitted for the 2021 Fall Revision cycle with the Committee’s actions documented in the Fall 2021 Report of the Motions Committee (posted at www.nfpa.org/2022techsession). All Certified Amending Motions from the Fall ’21 and Annual ‘22 standards may be acted on during the 2022 NFPA Technical Meeting, including online submission of position statements preceding the live event in Boston.

The Report of the Motions Committee documents and identifies: (1) Certified Amending Motions that may be presented at the 2022 NFPA Technical Meeting (Tech Session); (2) NITMAMs that the Motions Committee did not certify per the Regulations Governing the Development of NFPA Standards; and (3) NITMAMs for which the Motions Committee approved withdrawal at the request of the submitter. Additionally, this Report includes the schedule of which standards’ Certified Amending Motions will be heard on which day of the 2022 Technical Meeting.

Note that in instances of identical Certified Amending Motions submitted by multiple individuals and Certifying Amending Motions resulting in the same recommended text, the Motions Committee may direct that they be identified and presented as a single motion for consideration by the membership. At this time, the Motions Committee took no such action on Certified Amending Motions. However, as the Motions Committee finalizes the order in which CAMs will be presented for debate at the Technical Meeting on June 8th and June 9th, any such action will be indicated in the final agenda.

The Report concludes with documentation of each Certified Amending Motion setting forth the submitter’s motion in legislative text and the text recommended by the responsible Technical Committee, as included in the Second Draft Report. For further transparency and clarity, the appropriate ballot is also included for the Certified Amending Motions which will require a ballot should the motion pass the vote of the NFPA
membership. Please note that for those Certified Amending Motions seeking to return the recommended text to previous edition text, no ballot is required by the Regulations and therefore is not included in the agenda.

In reviewing the Report of the Motions Committee, the following information is important to note:

- The Certified Amending Motions set forth herein are proper and permissible; they will be presented for the submission of position statements May 23rd through June 3rd, and consideration of the membership during the 2022 NFPA Technical Meeting upon commencement of the meeting, June 8th and 9th, 2022.
- Only Certified Amending Motions set forth herein will be presented during the Technical Meeting.
- In accordance with 1.6.2 of the Regulations, anyone who is dissatisfied with the results of the Certified Amending Motions at the conclusion of the 2022 NFPA Technical Meeting or the result of the Technical Committee amending ballots have the right to appeal the results. Please refer to Section 1.6.2 of the Regulations for the deadlines that apply for filing such appeals. The final date to file such an appeal will be noted with the results of the actions following the conclusion of the Technical Meeting.

The information included above is intended to provide a general introduction to the 2022 NFPA Technical Meeting. Please check the Technical Meeting website regularly for more information, reminders and instructions about participation in the 2022 Technical Meeting at www.nfpa.org/2022techsession.

II. Certified Amending Motions

Six standards processed in the Annual ‘22 revision cycle and one standard processed in the Fall ‘21 revision cycle have Certified Amending Motions to be presented and acted upon at the 2022 NFPA Technical Meeting. These motions are documented on pages 3-9 of this report.

III. NITMAMs Not Certified

Of the NITMAMs received on Annual ‘22 revision cycle standards, there were four NITMAMs which were not certified. Of the NITMAMs received on the Fall ‘21 revision cycle standards, zero were not certified by the Motions Committee. The NITMAMs which were not certified are documented on page 10 of this report.

IV. NITMAMs Requested to be Withdrawn

Of the NITMAMs received on Annual ‘22 revision cycle standards, seven were approved as withdrawn by the Motions Committee. Of the NITMAMs received on the Fall ‘21 revision cycle standards, two were approved as withdrawn by the Motions Committee. The approved withdrawn NITMAMs are documented on pages 11-12 of this report.

V. Consent Standards

Any standard which receives no comments, second revisions, or NITMAMs resulting in Certified Amending Motions is considered a “Consent Standard” in accordance with the Regulations Governing the Development of NFPA Standards. A consent standard is not presented at the NFPA Technical Meeting but is rather forwarded directly to the Council for issuance. For complete listing and information regarding issuance of Consent Standards for the Annual ‘22 and Fall ‘21 revision cycles, please consult www.nfpa.org/2022techsession.
<table>
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<tr>
<th>NFPA Standard</th>
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<td>5.2.2.2 and 5.2.2.2.1</td>
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<td>Jay Tamblingson, Rockwell Automation</td>
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<td>William McCoy, Telco Sales, Inc.</td>
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<td>Kevin Cheong, ChargePoint, Inc.</td>
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<td>NFPA 70</td>
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<td>Joseph Andre, JFA Consulting</td>
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<td>Mark Fillip, National Oilwell Varco</td>
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<td>Greg Woyczynski, Association of Home Appliance Manufacturers</td>
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<td>David Mammarella, SABIC</td>
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<td>Andrew Tanner, Yotta Energy</td>
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### Certified Amending Motions

**Fall 2021 Revision Cycle**

<table>
<thead>
<tr>
<th>NFPA Standard</th>
<th>CAM #</th>
<th>Section/Paragraph</th>
<th>Person(s) Authorized to Make the Motion</th>
<th>Certified Amending Motion</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA 285</td>
<td>285-7</td>
<td>B.8.5.1.1.2</td>
<td>John Stahl, Preferred Solutions Inc.</td>
<td>Reject an Identifiable Part of Second Revision No. 7 and Related Portion of First Revision No. 15</td>
</tr>
<tr>
<td>NFPA 285</td>
<td>285-12</td>
<td>B.8.5.1.1.3</td>
<td>John Stahl, Preferred Solutions Inc.</td>
<td>Reject an Identifiable Part of Second Revision No. 7 and Related Portion of First Revision No. 15</td>
</tr>
<tr>
<td>NFPA 285</td>
<td>285-13</td>
<td>B.8.5.1.2.1</td>
<td>John Stahl, Preferred Solutions, Inc.</td>
<td>Reject an Identifiable Part of Second Revision No. 7 and Related Portion of First Revision No. 15</td>
</tr>
</tbody>
</table>
## NITMAMs Not Certified
### Annual 2022 Revision Cycle

<table>
<thead>
<tr>
<th>NFPA Standard</th>
<th>NITMAM #</th>
<th>Section/Paragraph</th>
<th>Person(s) Authorized to Make the Motion</th>
<th>Certified Amending Motion</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA 70</td>
<td>70-36</td>
<td>Article 100</td>
<td>Kevin Cheong, ChargePoint, Inc.</td>
<td>Reject an Identifiable Part of Second Correlating Revision No. 123</td>
</tr>
<tr>
<td>NFPA 70</td>
<td>70-52</td>
<td>722.3(N) and (O)</td>
<td>Trevor Bowmer, Bunya Telecom Consulting, LLC</td>
<td>Reject an Identifiable Part of Second Revision No. 8392</td>
</tr>
<tr>
<td>NFPA 70</td>
<td>70-54</td>
<td>722.179</td>
<td>Trevor Bowmer, Bunya Telecom Consulting, LLC</td>
<td>Reject an Identifiable Part of Second Revision No. 8495</td>
</tr>
<tr>
<td>NFPA 70</td>
<td>70-67</td>
<td>625.42(A)</td>
<td>Kevin Cheong, ChargePoint, Inc.</td>
<td>Reject an Identifiable Part of Second Correlating Revision No. 9</td>
</tr>
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### Withdrawn NITMAMs

**Annual 2022 Revision Cycle**

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<tr>
<th>NFPA Standard</th>
<th>NITMAM #</th>
<th>Section/Paragraph</th>
<th>Submitter of Motion</th>
<th>Proposed Amending Motion</th>
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<tbody>
<tr>
<td>NFPA 70</td>
<td>70-71</td>
<td>110.3(A)</td>
<td>Vince Saporita, Saporita Consulting</td>
<td>Accept Public Comment No. 349</td>
</tr>
<tr>
<td>NFPA 70</td>
<td>70-99</td>
<td>334.15(C)</td>
<td>Johnnie Miller, Electrical Solutions</td>
<td>Reject an Identifiable Part and any related First Revisions and First Correlating Revisions</td>
</tr>
<tr>
<td>NFPA 70</td>
<td>70-104</td>
<td>Article 337 Global Change</td>
<td>Mark Fillip, National Oilwell Varco</td>
<td>Reject Second Revision No. 8298 and any related First Revisions and First Correlating Revisions</td>
</tr>
<tr>
<td>NFPA 70</td>
<td>70-110</td>
<td>215.18(E)</td>
<td>James Moellmann, Maxivolt</td>
<td>Accept an Identifiable Part of Public Comment No. 1918</td>
</tr>
<tr>
<td>NFPA 70</td>
<td>70-114</td>
<td>210.54(C)(4)</td>
<td>Frederic Hartwell, Hartwell Electrical Services, Inc.</td>
<td>Reject Public Comment No. 737</td>
</tr>
<tr>
<td>NFPA 130</td>
<td>130-4</td>
<td>8.6.7.1.2</td>
<td>Marcelo Hirschler, GBF International</td>
<td>Accept Public Comment No. 19</td>
</tr>
<tr>
<td>NFPA 2112</td>
<td>2112-4</td>
<td>7.1.5</td>
<td>Craig Tutterow, Mount Vernon Mills</td>
<td>Reject an Identifiable Part and any related First Revisions and First Correlating Revisions</td>
</tr>
</tbody>
</table>
# Withdrawn NITMAMs

## Fall 2021 Revision Cycle

<table>
<thead>
<tr>
<th>NFPA Standard</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NFPA 285</td>
<td>285-5</td>
<td>B.18.1.3</td>
<td>Larry Wainright, Qualtim</td>
<td>Reject an Identifiable Part of Global Revision</td>
</tr>
<tr>
<td>NFPA 285</td>
<td>285-6</td>
<td>B.18.6.3</td>
<td>Larry Wainright, Qualtim</td>
<td>Reject an Identifiable Part of Global Revision</td>
</tr>
</tbody>
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**2022 Technical Meeting Schedule**  
*Certified Amending Motions (CAMs)  
June 8-9, 2022*

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<th>Standards with Certified Amending Motions for Consideration</th>
<th>Wednesday, June 8, 2022</th>
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<tbody>
<tr>
<td>NFPA 25, <em>Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems</em></td>
<td></td>
</tr>
<tr>
<td>NFPA 86, <em>Standard for Ovens and Furnaces</em></td>
<td></td>
</tr>
<tr>
<td>NFPA 130, <em>Standard for Fixed Guideway Transit and Passenger Rail Systems</em></td>
<td></td>
</tr>
<tr>
<td>NFPA 502, <em>Standard for Road Tunnels, Bridges, and Other Limited Access Highways</em></td>
<td></td>
</tr>
<tr>
<td>NFPA 855, <em>Standard for the Installation of Stationary Energy Storage Systems</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard with Certified Amending Motions for Consideration</th>
<th>Thursday, June 9, 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA 70®, <em>National Electrical Code®</em></td>
<td></td>
</tr>
</tbody>
</table>
## Certified Amending Motion to Accept Committee Comment No. 3

<table>
<thead>
<tr>
<th>CAM No. 25-2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>5.2.2.2</strong></td>
<td></td>
</tr>
<tr>
<td>Sprinkler piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe used to support nonsystem components.</td>
<td></td>
</tr>
<tr>
<td><strong>5.2.2.2.1</strong></td>
<td></td>
</tr>
<tr>
<td>Nonmetallic sprinkler pipe shall not be subjected to incompatible components or materials in contact with the pipe.</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>5.2.2.2</strong></td>
<td></td>
</tr>
<tr>
<td>Sprinkler piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe.</td>
<td></td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 25-2

Technical Committee on Inspection, Testing, and Maintenance of Water-Based Systems

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 25-2 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

5.2.2.2
Sprinkler piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe used to support nonsystem components.

5.2.2.2.1
Nonmetallic sprinkler pipe shall not be subjected to incompatible components or materials in contact with the pipe.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 25-2 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

5.2.2.2
Sprinkler piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe.
| CAM No. 25-3 |  |  |
|--------------|------------------------|
| **Recommended Text if Motion Passes:** |  |
| 5.2.2.2 Sprinkler piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe used to support nonsystem components. | |
| **Recommended Text if Motion Fails:** |  |
| 5.2.2.2 Sprinkler piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe. | |
AMENDMENT BALLOT No. 25-3

Technical Committee on Inspection, Testing, and Maintenance of Water-Based Systems

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

June 8-9, 2022

---

IF YOU AGREE TO SUPPORT AMENDMENT 25-3 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

5.2.2.2

Sprinkler piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe used to support nonsystem components.

---

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 25-3 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

5.2.2.2

Sprinkler piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe.
Certified Amending Motion to Reject Second Revision No. 4

<table>
<thead>
<tr>
<th>CAM No. 25-10</th>
</tr>
</thead>
</table>

| Recommended Text if Motion Passes: |
| 4.1.3* Nonmetallic Sprinkler Piping. |
| Nonmetallic sprinkler piping shall not be subjected to incompatible components or materials in contact with the pipe. |
| A.4.1.3 |
| CPVC is a plastic material, and consideration is necessary when other materials or chemicals come in contact with CPVC that can cause degradation of performance of the pipe due to interaction of materials. Other construction materials include but are not limited to materials used in fabrication of the sprinkler system, additives to water supplies, cable and wiring, and certain insecticides and fungicides. Compliance with the requirements of NFPA 13 combined with following the manufacturer’s guidance on installation and compatible materials will help prevent premature performance degradation of nonmetallic piping. |

*NOTE: The text of §4.1.3 is identical to the text of §5.2.2.2.1 of Committee Comment No. 3 which is the subject of submitted NITMAM 25-2.

| Recommended Text if Motion Fails: |
| 4.1.3* Nonmetallic Sprinkler Piping. |
| Nonmetallic sprinkler piping shall not be subjected to incompatible components or materials in contact with the pipe. |
| A.4.1.3 |
| CPVC is a plastic material, and consideration is necessary when other materials or chemicals come in contact with CPVC that can cause degradation of performance of the pipe due to interaction of materials. Other construction materials include but are not limited to materials used in fabrication of the sprinkler system, additives to water supplies, cable and wiring, and certain insecticides and fungicides. Compliance with the requirements of NFPA 13 combined with following the manufacturer’s guidance on installation and compatible materials will help prevent premature performance degradation of nonmetallic piping. |

*NOTE: The text of §4.1.3 is identical to the text of §5.2.2.2.1 of Committee Comment No. 3 which is the subject of submitted NITMAM 25-2.
### Certified Amending Motion to Reject Second Revision No. 60

<table>
<thead>
<tr>
<th>CAM No. 25-15</th>
<th>Recommended Text if Motion Passes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.3.5.8  Annual Activation Test for Water Mist Positive Displacement Pumping Units.</td>
</tr>
<tr>
<td></td>
<td>8.3.5.8.1</td>
</tr>
<tr>
<td></td>
<td>Annually, an automatic activation test for systems with automatic nozzles shall be conducted using a test connection that simulates the smallest system nozzle in the hydraulically most remote area discharged at system maintenance pressure/standby pressure.</td>
</tr>
<tr>
<td></td>
<td>8.3.5.8.2</td>
</tr>
<tr>
<td></td>
<td>The pumping unit shall achieve the system design discharge pressure within the time specified in the listing but not greater than 60 seconds after the start of flow from the smallest nozzle.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Text if Motion Fails:</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.3.5.8  Annual Activation Test for Water Mist Positive Displacement Pumping Units.</td>
</tr>
<tr>
<td>8.3.5.8.1</td>
</tr>
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</tr>
<tr>
<td>8.3.5.8.2</td>
</tr>
<tr>
<td>The pumping unit shall achieve the system design discharge pressure within the time specified in the listing but not greater than 60 seconds after the start of flow from the smallest nozzle.</td>
</tr>
</tbody>
</table>
**Certified Amending Motion to Reject Second Revision No. 2**

<table>
<thead>
<tr>
<th>CAM No. 25-16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td>5.2.1.1.1.1</td>
</tr>
<tr>
<td>A representative sample of concealed sprinklers consisting of not less than four concealed sprinklers or 1 percent of the number of concealed sprinklers per individual sprinkler sample area, whichever is greater, shall have their cover plates removed and the sprinklers inspected every 5 years.</td>
</tr>
<tr>
<td>5.2.1.1.1.1</td>
</tr>
<tr>
<td>Where one sprinkler within a representative sample fails to meet the inspection requirements of 5.2.1.1.2, the owner and the AHJ shall be consulted to determine a reinspection plan for the remaining sprinklers within the sample area.</td>
</tr>
</tbody>
</table>

**Recommended Text if Motion Fails:**

<table>
<thead>
<tr>
<th>5.2.1.1.1</th>
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<tbody>
<tr>
<td>A representative sample of concealed sprinklers consisting of not less than four concealed sprinklers or 1 percent of the number of concealed sprinklers per individual sprinkler sample area, whichever is greater, shall have their cover plates removed and the sprinklers inspected every 5 years.</td>
</tr>
<tr>
<td>5.2.1.1.1.1</td>
</tr>
<tr>
<td>Where one sprinkler within a representative sample fails to meet the inspection requirements of 5.2.1.1.2, the owner and the AHJ shall be consulted to determine a reinspection plan for the remaining sprinklers within the sample area.</td>
</tr>
</tbody>
</table>
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 13

Recommended Text if Motion Passes:

5.1.1.2

Table 5.1.1.2 shall be used to determine the minimum required frequencies for inspection, testing, and maintenance.

Table 5.1.1.2 Summary of Sprinkler System Inspection, Testing, and Maintenance

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sprinklers</td>
<td>Annually</td>
<td>5.2.1</td>
</tr>
<tr>
<td>Sprinklers (concealed)</td>
<td>Every 5 years</td>
<td>5.2.1.1.1</td>
</tr>
<tr>
<td>Sprinklers clearance to storage</td>
<td>Annually</td>
<td>5.2.1.2</td>
</tr>
<tr>
<td>Sprinklers (spare)</td>
<td>Annually</td>
<td>5.2.1.4</td>
</tr>
<tr>
<td>Sprinkler guards</td>
<td>Annually</td>
<td>5.2.1.1.8</td>
</tr>
</tbody>
</table>

Recommended Text if Motion Fails:

5.1.1.2

Table 5.1.1.2 shall be used to determine the minimum required frequencies for inspection, testing, and maintenance.

Table 5.1.1.2 Summary of Sprinkler System Inspection, Testing, and Maintenance

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sprinklers</td>
<td>Annually</td>
<td>5.2.1</td>
</tr>
<tr>
<td>Sprinklers (concealed)</td>
<td>Every 5 years</td>
<td>5.2.1.1.1</td>
</tr>
<tr>
<td>Sprinklers clearance to storage</td>
<td>Annually</td>
<td>5.2.1.2</td>
</tr>
<tr>
<td>Sprinklers (spare)</td>
<td>Annually</td>
<td>5.2.1.4</td>
</tr>
<tr>
<td>Sprinkler guards</td>
<td>Annually</td>
<td>5.2.1.1.8</td>
</tr>
</tbody>
</table>

*Note: Only the identifiable part of Table 5.1.1.2 is included.*
## Certified Amending Motion to Reject Second Revision No. 61

<table>
<thead>
<tr>
<th>CAM No. 25-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td>8.3.7.1.1</td>
</tr>
<tr>
<td>The interpretation of the net flow test performance relative to the manufacturer’s original performance shall be the basis for determining acceptable performance of the pump assembly.</td>
</tr>
<tr>
<td>8.3.7.1.1.1</td>
</tr>
<tr>
<td>The interpretation of the gross flow test performance relative to acceptably meeting the demands of all connected fire protection systems shall be the basis for determining acceptable performance of the pump assembly and connected water supply.</td>
</tr>
</tbody>
</table>

*Note: §8.3.7.1.1 in shown for context purposes only.*

| **Recommended Text if Motion Fails:** |
| 8.3.7.1.1 |
| The interpretation of the net flow test performance relative to the manufacturer’s original performance shall be the basis for determining acceptable performance of the pump assembly. |
| 8.3.7.1.1.1 |
| The interpretation of the gross flow test performance relative to acceptably meeting the demands of all connected fire protection systems shall be the basis for determining acceptable performance of the pump assembly and connected water supply. |

*Note: §8.3.7.1.1 in shown for context purposes only.*
AMENDMENT BALLOT No. 25-18

Technical Committee on Inspection, Testing, and Maintenance of Water-Based Systems
NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 25-18 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

8.3.7.1.1
The interpretation of the net flow test performance relative to the manufacturer’s original performance shall be the basis for determining acceptable performance of the pump assembly.

8.3.7.1.1.1
The interpretation of the gross flow test performance relative to acceptably meeting the demands of all connected fire protection systems shall be the basis for determining acceptable performance of the pump assembly and connected water supply.

*Note: §8.3.7.1.1 is shown for context purposes only.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 25-18 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

8.3.7.1.1
The interpretation of the flow test performance relative to the manufacturer’s performance shall be the basis for determining performance of the pump assembly.

*Note: §8.3.7.1.1 has no previous edition text.
Certified Amending Motion to Reject an Identifiable Part of Second Correlating Revision No. 27

Recommended Text if Motion Passes:

210.52(C)(3) Receptacle Outlet Location.
Receptacle outlets shall be located in one or more of the following:

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

(2) In a countertop using or work surfaces: receptacle outlet assemblies listed for use in countertops or work surfaces shall be permitted to be installed in countertops or work surfaces.

(3) Below countertop or work surfaces: Not more than 300 mm (12 in.) below countertops or work surfaces. Receptacles installed below a countertop or work surface shall not be located where the countertop or work surface extends more than 150 mm (6 in.) beyond the face of such receptacles. In a work surface using receptacle outlet assemblies listed for use in work surfaces or listed for use in countertops.

Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in 210.52(C)(1), Exception No. 1, or appliances occupying assigned spaces shall not be considered as these required outlets.

Informational Note No. 1: See 406.5(E) for installation of receptacles in countertops and 406.5(F) for installation of receptacles in work surfaces. See 380.10 for installation of multioutlet assemblies.


Recommended Text if Motion Fails:

210.52(C)(3) Receptacle Outlet Location.
Receptacle outlets shall be located in one or more of the following:

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

(2) In a countertop using receptacle outlet assemblies listed for use in countertops.

(3) In a work surface using receptacle outlet assemblies listed for use in work surfaces or listed for use in countertops.

Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in 210.52(C)(1), Exception No. 1, or appliances occupying assigned spaces shall not be considered as these required outlets.

Informational Note No. 1: See 406.5(E) for installation of receptacles in countertops and 406.5(F) for installation of receptacles in work surfaces. See 380.10 for installation of multioutlet assemblies.

IF YOU AGREE TO SUPPORT AMENDMENT 70-11 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

210.52(C)(3) Receptacle Outlet Location.

Receptacle outlets shall be located in one or more of the following:

1. On or above, but not more than 500 mm (20 in.) above, a countertop or work surface
2. In a countertop using or work surfaces: receptacle outlet assemblies listed for use in countertops or work surfaces shall be permitted to be installed in countertops or work surfaces.
3. Below countertop or work surfaces: Not more than 300 mm (12 in.) below countertops or work surfaces. Receptacles installed below a countertop or work surface shall not be located where the countertop or work surface extends more than 150 mm (6 in.) beyond the face of such receptacles. In a work surface using receptacle outlet assemblies listed for use in work surfaces or listed for use in countertops.

Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in 210.52(C)(1), Exception No. 1, or appliances occupying assigned spaces shall not be considered as these required outlets.

Informational Note No. 1: See 406.5(E) for installation of receptacles in countertops and 406.5(F) for installation of receptacles in work surfaces. See 380.10 for installation of multioutlet assemblies.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-11 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

210.52(C)(3) Receptacle Outlet Location.
Receptacle outlets shall be located in one or more of the following:

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

(2) In countertop or work surfaces: Receptacle outlet assemblies listed for use in countertops or work surfaces shall be permitted to be installed in countertops or work surfaces.

(3) Below countertop or works surfaces: Not more than 300 mm (12 in.) below the countertop or work surface. Receptacles installed below a countertop or work surface shall not be located where the countertop or work surface extends more than 150 mm (6 in.) beyond its support base.

Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in 210.52(C)(1), Exception, or appliances occupying assigned spaces shall not be considered as these required outlets.

Informational Note No. 1: See 406.5(E) and 406.5(G) for installation of receptacles in countertops and 406.5(F) and 406.5(G) for installation of receptacles in work surfaces. See 380.10 for installation of multioutlet assemblies.

Certified Amending Motion to Accept Public Comment No. 2034

Recommended Text if Motion Passes:

(C) Rating or Setting.
(1) In Accordance with Table 430.52(C)(1).
A protective device that has a rating or setting not exceeding the value calculated according to the values given in Table 430.52(C)(1) shall be used unless otherwise permitted in 430.52 (C)(1)(a) or (C)(1)(b).

Table 430.52(C)(1) Maximum Rating or Setting of Motor Branch-Circuit Short-Circuit and Ground-Fault Protective Devices

<table>
<thead>
<tr>
<th>Type of Motor</th>
<th>Percentage of Full-Load Current</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nontime Delay Fuse&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Single-phase motors</td>
<td>300</td>
</tr>
<tr>
<td>AC polyphase motors other than wound-rotor</td>
<td>300</td>
</tr>
<tr>
<td>Squirrel cage — other than Design B energy-efficient — and Design B premium efficiency</td>
<td>300</td>
</tr>
<tr>
<td>Design B energy-efficient and Design B premium efficiency</td>
<td>300</td>
</tr>
<tr>
<td>Synchronous&lt;sup&gt;3&lt;/sup&gt;</td>
<td>300</td>
</tr>
<tr>
<td>Wound-rotor</td>
<td>150</td>
</tr>
<tr>
<td>DC (constant voltage)</td>
<td>150</td>
</tr>
</tbody>
</table>

Note: See 430.54 for certain exceptions to the values specified.

<sup>1</sup>The values in the Nontime Delay Fuse column apply to time-delay Class CC fuses.

<sup>2</sup>The values given in the last column also cover the ratings of nonadjustable inverse time types of circuit breakers that can be modified as in 430.52(C)(1)(a) and (C)(1)(b).

<sup>3</sup>Synchronous motors of the low-torque, low-speed type (usually 450 rpm or lower), such as those used to drive reciprocating compressors, pumps, and so forth, that start unloaded, do not require a fuse rating or circuit-breaker setting in excess of 200 percent of full-load current.

(a) Where the values as determined by Table 430.52(C)(1) do not correspond to the standard ampere ratings and settings provided in 240.6, the next higher standard rating or setting shall be permitted. Where the branch-circuit short-circuit and ground-fault protective device is a nonadjustable circuit breaker and the next higher standard ampere rating according to 240.6 is less than 15 amperes, an ampere rating of 15 amperes shall be permitted.

(b) Where the rating specified in Table 430.52(C)(1), or the rating modified by 430.52(C)(1)(a), is not sufficient for the starting current of the motor any of the following shall apply:

1. The rating of a nontime-delay fuse not exceeding 600 amperes or a time-delay Class CC fuse shall be permitted to be increased but shall in no case exceed 400 percent of the full-load current.

2. The rating of a time-delay (dual-element) fuse shall be permitted to be increased but shall in no case exceed 225 percent of the full-load current.
(3) The rating of an inverse time circuit breaker shall be permitted to be increased but shall in no case exceed 400 percent for full-load currents of 100 amperes or less or 300 percent for full-load currents greater than 100 amperes.

(4) The rating of a fuse of 601–6000 ampere classification shall be permitted to be increased but shall in no case exceed 300 percent of the full-load current.

Informational Note: See Informative Annex D, Example D8, for an example of motor branch-circuit short-circuit and ground-fault rating and setting and Informational Note Figure 430.1 for an example location.

### Table 430.52(C)(1) Maximum Rating or Setting of Motor Branch-Circuit Short-Circuit and Ground-Fault Protective Devices

<table>
<thead>
<tr>
<th>Type of Motor</th>
<th>Percentage of Full-Load Current</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nontime Delay Fuse</td>
</tr>
<tr>
<td>Single-phase motors</td>
<td>300</td>
</tr>
<tr>
<td>AC polyphase motors other than wound-rotor</td>
<td>300</td>
</tr>
<tr>
<td>Squirrel cage — other than Design B energy-efficient — and Design B premium efficiency</td>
<td>300</td>
</tr>
<tr>
<td>Design B energy-efficient and Design B premium efficiency</td>
<td>300</td>
</tr>
<tr>
<td>Synchronous</td>
<td>300</td>
</tr>
<tr>
<td>Wound-rotor</td>
<td>150</td>
</tr>
<tr>
<td>DC (constant voltage)</td>
<td>150</td>
</tr>
</tbody>
</table>

Note: See 430.54 for certain exceptions to the values specified.

1 The values in the Nontime Delay Fuse column apply to time-delay Class CC fuses.

2 The values given in the last column also cover the ratings of nonadjustable inverse time types of circuit breakers that can be modified as in 430.52(C)(1)(a) and (C)(1)(b).

3 Synchronous motors of the low-torque, low-speed type (usually 450 rpm or lower), such as those used to drive reciprocating compressors, pumps, and so forth, that start unloaded, do not require a fuse rating or circuit-breaker setting in excess of 200 percent of full-load current.

(a) Where the values as determined by Table 430.52(C)(1) do not correspond to the standard ampere ratings and settings provided in 240.6, the next higher standard rating or setting shall be permitted.

(b) Where the rating specified in Table 430.52(C)(1), or the rating modified by 430.52(C)(1)(a), is not sufficient for the starting current of the motor any of the following shall apply:

1 The rating of a nontime-delay fuse not exceeding 600 amperes or a time-delay Class CC fuse shall be permitted to be increased but shall in no case exceed 400 percent of the full-load current.

2 The rating of a time-delay (dual-element) fuse shall be permitted to be increased but shall in no case exceed 225 percent of the full-load current.

3 The rating of an inverse time circuit breaker shall be permitted to be increased but shall in no case exceed 400 percent for full-load currents of 100 amperes or less or 300 percent for full-load currents greater than 100 amperes.
(4) The rating of a fuse of 601–6000 ampere classification shall be permitted to be increased but shall in no case exceed 300 percent of the full-load current.

Informational Note: See Informative Annex D, Example D8, for an example of motor branch-circuit short-circuit and ground-fault rating and setting and Informational Note Figure 430.1 for an example location.
AMENDMENT BALLOT No. 70-17

Technical Committee on National Electrical Code®
NFPA 70, National Electrical Code®
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-17 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

430.52(C) Rating or Setting.

(1) In Accordance with Table 430.52(C)(1).

A protective device that has a rating or setting not exceeding the value calculated according to the values given in Table 430.52(C)(1) shall be used unless otherwise permitted in 430.52 (C)(1)(a) or ((C)(1)(b).

Table 430.52(C)(1) Maximum Rating or Setting of Motor Branch-Circuit Short-Circuit and Ground-Fault Protective Devices

<table>
<thead>
<tr>
<th>Type of Motor</th>
<th>Percentage of Full-Load Current</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nontime</td>
</tr>
<tr>
<td></td>
<td>Delay Fuse^1</td>
</tr>
<tr>
<td>Single-phase motors</td>
<td>300</td>
</tr>
<tr>
<td>AC polyphase motors other than wound-rotor</td>
<td>300</td>
</tr>
<tr>
<td>Squirrel cage — other than Design B energy-efficient — and Design B premium efficiency</td>
<td>300</td>
</tr>
<tr>
<td>Design B energy-efficient and Design B premium efficiency</td>
<td>300</td>
</tr>
<tr>
<td>Synchronous^3</td>
<td>300</td>
</tr>
</tbody>
</table>
Wound-rotor  150  150  800  150
DC (constant voltage)  150  150  250  150

Note: See 430.54 for certain exceptions to the values specified.

1The values in the Nontime Delay Fuse column apply to time-delay Class CC fuses.

2The values given in the last column also cover the ratings of nonadjustable inverse time types of
circuit breakers that can be modified as in 430.52(C)(1)(a) or (C)(1)(b).

3Synchronous motors of the low-torque, low-speed type (usually 450 rpm or lower), such as those used
to drive reciprocating compressors, pumps, and so forth, that start unloaded, do not require a fuse rating
or circuit-breaker setting in excess of 200 percent of full-load current.

(a) Where the values as determined by Table 430.52(C)(1) do not correspond to the standard ampere
ratings and settings provided in 240.6, the next higher standard rating or setting shall be permitted.
Where the branch-circuit short-circuit and ground-fault protective device is a nonadjustable circuit
breaker and the next higher standard ampere rating according to 240.6 is less than 15 amperes, an
ampere rating of 15 amperes shall be permitted.

(b) Where the rating specified in Table 430.52(C)(1), or the rating modified by 430.52(C)(1)(a), is
not sufficient for the starting current of the motor any of the following shall apply:

(1) The rating of a nontime-delay fuse not exceeding 600 amperes or a time-delay Class CC
fuse shall be permitted to be increased but shall in no case exceed 400 percent of the full-load
current.

(2) The rating of a time-delay (dual-element) fuse shall be permitted to be increased but shall
in no case exceed 225 percent of the full-load current.

(3) The rating of an inverse time circuit breaker shall be permitted to be increased but shall in
no case exceed 400 percent for full-load currents of 100 amperes or less or 300 percent for
full-load currents greater than 100 amperes.

(4) The rating of a fuse of 601–6000 ampere classification shall be permitted to be increased
but shall in no case exceed 300 percent of the full-load current.

Informational Note: See Informative Annex D, Example D8, for an example of motor branch-circuit
short-circuit and ground-fault rating and setting and Informational Note Figure 430.1 for an example
location.
IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-17 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

(C) Rating or Setting.

(1) In Accordance with Table 430.52.

A protective device that has a rating or setting not exceeding the value calculated according to the values given in Table 430.52 shall be used.

Table 430.52 Maximum Rating or Setting of Motor Branch-Circuit Short-Circuit and Ground-Fault Protective Devices

<table>
<thead>
<tr>
<th>Type of Motor</th>
<th>Percentage of Full-Load Current</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nontime</td>
</tr>
<tr>
<td></td>
<td>Dual Element</td>
</tr>
<tr>
<td></td>
<td>Instantaneous</td>
</tr>
<tr>
<td></td>
<td>Inverse</td>
</tr>
<tr>
<td></td>
<td>(Time-Delay)</td>
</tr>
<tr>
<td></td>
<td>Breaker</td>
</tr>
<tr>
<td></td>
<td>Breaker^2</td>
</tr>
<tr>
<td>Single-phase motors</td>
<td>300</td>
</tr>
<tr>
<td>AC polyphase motors other than wound-rotor</td>
<td>300</td>
</tr>
<tr>
<td>Squirrel cage — other than Design B energy-efficient</td>
<td>300</td>
</tr>
<tr>
<td>Design B energy-efficient</td>
<td>300</td>
</tr>
<tr>
<td>Synchronous^3</td>
<td>300</td>
</tr>
<tr>
<td>Wound-rotor</td>
<td>150</td>
</tr>
<tr>
<td>DC (constant voltage)</td>
<td>150</td>
</tr>
</tbody>
</table>

Note: For certain exceptions to the values specified, see 430.54.

^1The values in the Nontime Delay Fuse column apply to time-delay Class CC fuses.
The values given in the last column also cover the ratings of nonadjustable inverse time types of circuit breakers that may be modified as in 430.52(C)(1), Exceptions No. 1 and No. 2.

Synchronous motors of the low-torque, low-speed type (usually 450 rpm or lower), such as are used to drive reciprocating compressors, pumps, and so forth, that start unloaded, do not require a fuse rating or circuit-breaker setting in excess of 200 percent of full-load current.

Exception No. 1: Where the values for branch-circuit short-circuit and ground-fault protective devices determined by Table 430.52 do not correspond to the standard sizes or ratings of fuses, nonadjustable circuit breakers, thermal protective devices, or possible settings of adjustable circuit breakers, a higher size, rating, or possible setting that does not exceed the next higher standard ampere rating shall be permitted.

Exception No. 2: Where the rating specified in Table 430.52, or the rating modified by Exception No. 1, is not sufficient for the starting current of the motor:

1. The rating of a non-time-delay fuse not exceeding 600 amperes or a time-delay Class CC fuse shall be permitted to be increased but shall in no case exceed 400 percent of the full-load current.

2. The rating of a time-delay (dual-element) fuse shall be permitted to be increased but shall in no case exceed 225 percent of the full-load current.

3. The rating of an inverse time circuit breaker shall be permitted to be increased but shall in no case exceed 400 percent for full-load currents of 100 amperes or less or 300 percent for full-load currents greater than 100 amperes.

4. The rating of a fuse of 601–6000 ampere classification shall be permitted to be increased but shall in no case exceed 300 percent of the full-load current.

Informational Note: See Informative Annex D, Example D8, and Figure 430.1.
## Certified Amending Motion to Accept Public Comment No. 111

<table>
<thead>
<tr>
<th>CAM No. 70-24</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td></td>
</tr>
<tr>
<td>722.24 (B) <strong>Support of Cables.</strong></td>
<td></td>
</tr>
<tr>
<td>Cables shall not be strapped, taped, or attached by any means to the exterior of any conduit or other raceway as a means of support.</td>
<td></td>
</tr>
<tr>
<td><em>Exception No. 1:</em> Class 2 circuit conductors or cables shall be permitted to be installed as permitted by 300.11(C)(2).</td>
<td></td>
</tr>
<tr>
<td><em>Exception No. 2:</em> Refer to Section 770.133(D) for the exception on overhead. Overhead (aerial) spans of optical fiber cables shall be permitted to be attached to the exterior of a raceway-type mast intended for the attachment and support of such cables.</td>
<td></td>
</tr>
</tbody>
</table>

| **Recommended Text if Motion Fails:** |  |
| 722.24 (B) **Support of Cables.** |  |
| Cables shall not be strapped, taped, or attached by any means to the exterior of any conduit or other raceway as a means of support. |  |
| *Exception No. 1:* Class 2 circuit conductors or cables shall be permitted to be installed as permitted by 300.11(C)(2). |  |
| *Exception No. 2:* Overhead (aerial) spans of optical fiber cables shall be permitted to be attached to the exterior of a raceway-type mast intended for the attachment and support of such cables. |  |
AMENDMENT BALLOT No. 70-24

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-24 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

722.24

(B) Support of Cables.

Cables shall not be strapped, taped, or attached by any means to the exterior of any conduit or other raceway as a means of support.

Exception No. 1: Class 2 circuit conductors or cables shall be permitted to be installed as permitted by 300.11(C)(2).

Exception No. 2: Refer to Section 770.133(D) for the exception on overhead (aerial) spans of optical fiber cables shall be permitted to be attached to the exterior of a raceway-type mast intended for the attachment and support of such cables.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-24 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text (Article 722 is new in its entirety)
# Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 1036

<table>
<thead>
<tr>
<th>CAM No. 70-33</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td><strong>Article 100</strong></td>
</tr>
<tr>
<td><strong>Load Management.</strong></td>
</tr>
<tr>
<td>The process within an energy management system that limits the total electrical load on an electrical supply system to a set value by adjusting or controlling the individual loads. (625) (CMP-12)</td>
</tr>
<tr>
<td>Informational Note: Load management is sometimes called <em>demand-side management</em> (DSM).</td>
</tr>
</tbody>
</table>

| **Recommended Text if Motion Fails:** |
| **Article 100** |
| **Load Management.** |
| The process within an energy management system that limits the total electrical load on an electrical supply system to a set value by adjusting or controlling the individual loads. (625) (CMP-12) |
| Informational Note: Load management is sometimes called *demand-side management* (DSM). |
AMENDMENT BALLOT No. 70-33

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-33 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

Article 100
Load Management.
The process within an energy management system that limits the total electrical load on an electrical supply system to a set value by adjusting or controlling the individual loads. (625) (CMP-12)

Informational Note: Load management is sometimes called demand-side management (DSM).

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-33 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
## Recommended Text if Motion Passes:

### 210.8

#### (A) Dwelling Units.

All 125-volt through 250-volt receptacles installed in the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

1. Bathrooms
2. Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use
3. Outdoors
4. Crawl spaces — at or below grade level
5. Basements
6. Kitchens
7. Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking
8. Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
9. Boathouses
10. Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall
11. Laundry areas
12. Indoor damp and wet locations

*Exception No. 1: Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.*

*Exception No. 2: A receptacle supplying only a permanently installed premises security system shall be permitted to omit ground-fault circuit-interrupter protection.*

*Exception No. 3: Listed weight-supporting ceiling receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WSAF) installed for the purpose of supporting a ceiling luminaire or ceiling-suspended fan shall be permitted to omit ground-fault circuit-interrupter protection. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.*

*Exception No. 4: Factory-installed receptacles that are not readily accessible and are mounted internally to bathroom exhaust fan assemblies shall not require GFCI protection unless required by the installation instructions or listing.*

*Exception No. 5: In the areas covered by List Item (2), receptacles greater than 20 amperes installed and labeled exclusively for EVSE.*

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems.

*Note: Exception No. 5 has been modified and relocated from the submitted PC to comply with the NEC Style Manual.*
Recommended Text if Motion Fails:

210.8
(A) Dwelling Units.
All 125-volt through 250-volt receptacles installed in the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

1. Bathrooms
2. Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use
3. Outdoors
4. Crawl spaces — at or below grade level
5. Basements
6. Kitchens
7. Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking
8. Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
9. Boathouses
10. Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall
11. Laundry areas
12. Indoor damp and wet locations

Exception No. 1: Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

Exception No. 2: A receptacle supplying only a permanently installed premises security system shall be permitted to omit ground-fault circuit-interrupter protection.

Exception No. 3: Listed weight-supporting ceiling receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WSAF) installed for the purpose of supporting a ceiling luminaire or ceiling-suspended fan shall be permitted to omit ground-fault circuit-interrupter protection. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.

Exception No. 4: Factory-installed receptacles that are not readily accessible and are mounted internally to bathroom exhaust fan assemblies shall not require GFCI protection unless required by the installation instructions or listing.

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems.
AMENDMENT BALLOT No. 70-38

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-38 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows *(changes shown legislatively to the Second Draft)*:

210.8

(A) Dwelling Units.

All 125-volt through 250-volt receptacles installed in the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

1. Bathrooms
2. Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use
3. Outdoors
4. Crawl spaces — at or below grade level
5. Basements
6. Kitchens
7. Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking
8. Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
9. Boathouses
10. Bathubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall
11. Laundry areas
12. Indoor damp and wet locations

*Exception No. 1: Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.*

*Exception No. 2: A receptacle supplying only a permanently installed premises security system shall be permitted to omit ground-fault circuit-interrupter protection.*

*Exception No. 3: Listed weight-supporting ceiling receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WSAF) installed for the purpose of supporting a...*
ceiling luminaire or ceiling-suspended fan shall be permitted to omit ground-fault circuit-interrupter protection. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.

Exception No. 4: Factory-installed receptacles that are not readily accessible and are mounted internally to bathroom exhaust fan assemblies shall not require GFCI protection unless required by the installation instructions or listing.

Exception No. 5: In the areas covered by List Item (2), receptacles greater than 20 amperes installed and labeled exclusively for EVSE.

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems.

*Note: Exception No. 5 has been modified and relocated from the submitted PC to comply with the NEC Style Manual.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-38 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

210.8

(A) Dwelling Units.

All 125-volt through 250-volt receptacles installed in the locations specified in 210.8(A)(1) through (A)(11) and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

1) Bathrooms

2) Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use

3) Outdoors

Exception to (3): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

4) Crawl spaces — at or below grade level

5) Basements

Exception to (5): A receptacle supplying only a permanently installed fire alarm or burglar alarm system shall not be required to have ground-fault circuit-interrupter protection.

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems.

Receptacles installed under the exception to 210.8(A)(5) shall not be considered as meeting the requirements of 210.52(G).

6) Kitchens — where the receptacles are installed to serve the countertop surfaces
(7) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink

(8) Boathouses

(9) Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

(10) Laundry areas
Exception to (1) through (3), (5) through (8), and (10): Listed locking support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan shall not be required to be ground-fault circuit-interrupter protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.

(11) Indoor damp and wet locations
**Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 1797**

**Recommended Text if Motion Passes:**

210.8

**(B) Other Than Dwelling Units.**

All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less, installed in the following locations shall be provided with GFCI protection:

1. Bathrooms
2. Kitchens
3. Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking
4. Buffet serving areas with permanent provisions for food serving, beverage serving, or cooking
5. Rooftops
6. Outdoors
7. Sinks where receptacles or cord-and-plug-connected fixed or stationary appliances are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
8. Indoor damp or wet locations
9. Locker rooms with associated showering facilities
10. Garages, accessory buildings, service bays, and similar areas other than vehicle exhibition halls and showrooms
11. Crawl spaces at or below grade level
12. Unfinished areas of basements
13. Aquariums, bait wells, and similar open aquatic vessels or containers, such as tanks or bowls, where receptacles are installed within 1.8 m (6 ft.) from the top inside edge or rim or from the conductive support framing of the vessel or container
14. Laundry areas
15. Bathtubs and shower stalls where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

*Exception No. 1: Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.*

*Exception No. 2: Receptacles on rooftops shall not be required to be readily accessible other than from the rooftop.*
Exception No. 3: Receptacles or cord-and-plug-connected fixed and stationary appliances installed within 1.8 m (6 ft) from the top inside edge of a bowl of a sink shall not be required to be GFCI protected in industrial establishments where the conditions of maintenance and supervision ensure that only qualified personnel are involved, an assured equipment grounding conductor program in accordance with 590.6(B)(2) shall be permitted for only those receptacle outlets used to supply equipment that would create a greater hazard if power is interrupted or that has a design not compatible with GFCI protection.

Exception No. 4: Receptacles or cord-and-plug-connected fixed and stationary appliances installed within 1.8 m (6 ft) from the top inside edge of a bowl of a sink shall not be required to be GFCI protected in industrial laboratories where the receptacles are used to supply equipment if removal of power would introduce a greater hazard.

Exception No. 5: Receptacles located in patient bed locations of Category 2 (general care) or Category 1 (critical care) spaces of health care facilities shall be permitted to comply with 517.21.

Exception No. 6: Listed weight-supporting ceiling receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WSAF) installed for the purpose of serving a ceiling luminaire or ceiling-suspended fan shall be permitted to omit GFCI protection. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.

Exception No. 7: In the areas covered by List Item (10), receptacles greater than 20 amperes installed and labeled exclusively for EVSE.

*Note: Exception No. 7 has been modified and relocated from the submitted PC to comply with the NEC Style Manual.

Recommended Text if Motion Fails:

210.8

(B) Other Than Dwelling Units.

All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less, installed in the following locations shall be provided with GFCI protection:

1. Bathrooms
2. Kitchens
3. Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking
4. Buffet serving areas with permanent provisions for food serving, beverage serving, or cooking
5. Rooftops
6. Outdoors
7. Sinks where receptacles or cord-and-plug-connected fixed or stationary appliances are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
8. Indoor damp or wet locations
9. Locker rooms with associated showering facilities
10. Garages, accessory buildings, service bays, and similar areas other than vehicle exhibition halls and showrooms
11. Crawl spaces at or below grade level
12. Unfinished areas of basements
13. Aquariums, bait wells, and similar open aquatic vessels or containers, such as tanks or bowls, where receptacles are installed within 1.8 m (6 ft.) from the top inside edge or rim or from the conductive support framing of the vessel or container

14. Laundry areas

15. Bathtubs and shower stalls where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

Exception No. 1: Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

Exception No. 2: Receptacles on rooftops shall not be required to be readily accessible other than from the rooftop.

Exception No. 3: Receptacles or cord-and-plug-connected fixed and stationary appliances installed within 1.8 m (6 ft) from the top inside edge of a bowl of a sink shall not be required to be GFCI protected in industrial establishments where the conditions of maintenance and supervision ensure that only qualified personnel are involved, an assured equipment grounding conductor program in accordance with 590.6(B)(2) shall be permitted for only those receptacle outlets used to supply equipment that would create a greater hazard if power is interrupted or that has a design not compatible with GFCI protection.

Exception No. 4: Receptacles or cord-and-plug-connected fixed and stationary appliances installed within 1.8 m (6 ft) from the top inside edge of a bowl of a sink shall not be required to be GFCI protected in industrial laboratories where the receptacles are used to supply equipment if removal of power would introduce a greater hazard.

Exception No. 5: Receptacles located in patient bed locations of Category 2 (general care) or Category 1 (critical care) spaces of health care facilities shall be permitted to comply with 517.21.

Exception No. 6: Listed weight-supporting ceiling receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WSAF) installed for the purpose of serving a ceiling luminaire or ceiling-suspended fan shall be permitted to omit GFCI protection. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.
AMENDMENT BALLOT No. 70-39

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-39 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

210.8

(B) Other Than Dwelling Units.

All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less, installed in the following locations shall be provided with GFCI protection:

1. Bathrooms
2. Kitchens
3. Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking
4. Buffet serving areas with permanent provisions for food serving, beverage serving, or cooking
5. Rooftops
6. Outdoors
7. Sinks where receptacles or cord-and-plug-connected fixed or stationary appliances are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
8. Indoor damp or wet locations
9. Locker rooms with associated showering facilities
10. Garages, accessory buildings, service bays, and similar areas other than vehicle exhibition halls and showrooms
11. Crawl spaces at or below grade level
12. Unfinished areas of basements
13. Aquariums, bait wells, and similar open aquatic vessels or containers, such as tanks or bowls, where receptacles are installed within 1.8 m (6 ft.) from the top inside edge or rim or from the conductive support framing of the vessel or container

14. Laundry areas

15. Bathtubs and shower stalls where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

Exception No. 1: Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

Exception No. 2: Receptacles on rooftops shall not be required to be readily accessible other than from the rooftop.

Exception No. 3: Receptacles or cord-and-plug-connected fixed and stationary appliances installed within 1.8 m (6 ft) from the top inside edge of a bowl of a sink shall not be required to be GFCI protected in industrial establishments where the conditions of maintenance and supervision ensure that only qualified personnel are involved, an assured equipment grounding conductor program in accordance with 590.6(B)(2) shall be permitted for only those receptacle outlets used to supply equipment that would create a greater hazard if power is interrupted or that has a design not compatible with GFCI protection.

Exception No. 4: Receptacles or cord-and-plug-connected fixed and stationary appliances installed within 1.8 m (6 ft) from the top inside edge of a bowl of a sink shall not be required to be GFCI protected in industrial laboratories where the receptacles are used to supply equipment if removal of power would introduce a greater hazard.

Exception No. 5: Receptacles located in patient bed locations of Category 2 (general care) or Category 1 (critical care) spaces of health care facilities shall be permitted to comply with 517.21.

Exception No. 6: Listed weight-supporting ceiling receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WSAF) installed for the purpose of serving a ceiling luminaire or ceiling-suspended fan shall be permitted to omit GFCI protection. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.

Exception No. 7: In the areas covered by List Item (10), receptacles greater than 20 amperes installed and labeled exclusively for EVSE.

*Note: Exception No. 7 has been modified and relocated from the submitted PC to comply with the NEC Style Manual.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-39 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.
210.8(B) Other Than Dwelling Units.
All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less, installed in the locations specified in 210.8(B)(1) through (B)(12) shall have ground-fault circuit-interrupter protection for personnel.

1 (1) Bathrooms

2 (2) Kitchens or areas with a sink and permanent provisions for either food preparation or cooking

3 (3) Rooftops
Exception: Receptacles on rooftops shall not be required to be readily accessible other than from the rooftop.

4 (4) Outdoors
Exception No. 1 to (3) and (4): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

Exception No. 2 to (4): In industrial establishments only, where the conditions of maintenance and supervision ensure that only qualified personnel are involved, an assured equipment grounding conductor program as specified in 590.6(B)(2) shall be permitted for only those receptacle outlets used to supply equipment that would create a greater hazard if power is interrupted or having a design that is not compatible with GFCI protection.

5 (5) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
Exception No. 1 to (5): In industrial laboratories, receptacles used to supply equipment where removal of power would introduce a greater hazard shall be permitted to be installed without GFCI protection.

Exception No. 2 to (5): Receptacles located in patient bed locations of Category 2 (general care) or Category 1 (critical care) spaces of health care facilities shall be permitted to comply with 517.21.

6 (6) Indoor damp and wet locations

7 (7) Locker rooms with associated showering facilities

8 (8) Garages, accessory buildings, service bays, and similar areas other than vehicle exhibition halls and showrooms

9 (9) Crawl spaces — at or below grade level

10 (10) Unfinished areas of basements
Exception to (1) through (5), (8), and (10): Listed locking support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan shall not be required to be ground-fault circuit-interrupter protected. If a general-purpose
If a convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.

11. Laundry areas

12. Bathtubs and shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall
### Certified Amending Motion to Reject Second Correlating Revision No. 110

**Recommended Text if Motion Passes:**

*Note: This motion is seeking to restore the text in Article 770 which was determined by the Correlating Committee as redundant: this information is now contained in new Article 722, among other requirements. For this reason, the Correlating Committee took action to remove the text through SCR 110. Disagreeing with the floor amendment will yield a result of 770.113 being deleted with no changes to Article 722.*

**770.113 Installation of Optical Fiber Cables.**

Installation of optical fiber cables shall comply with 770.113(A) through (J). Installation of raceways and cable routing assemblies shall comply with 770.110.

(A) **Listing.**

Optical fiber cables installed in buildings shall be listed in accordance with 770.179 and installed in accordance with the limitations of the listing.

*Exception: Optical fiber cables that are installed in compliance with 770.48 shall not be required to be listed.*

(B) **Ducts Specifically Fabricated for Environmental Air.**

Installations of optical fiber cables in ducts specifically fabricated for environmental air shall be in accordance with 770.113(B)(1) and (B)(2).

(1) **Uses Permitted.**

The following cables shall be permitted in ducts specifically fabricated for environmental air as described in 300.22(B) if they are directly associated with the air distribution system:

1. Up to 1.22 m (4 ft) of Types OFNP and OFCP
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in raceways that are installed in compliance with 300.22(B)

Informational Note: For information on fire protection of wiring installed in fabricated ducts, see NFPA 90A-2018, *Standard for the Installation of Air-Conditioning and Ventilating Systems.*

(2) **Uses Not Permitted.**

Types OFNR, OFCR, OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in ducts specifically fabricated for environmental air as described in 300.22(B).


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

Installations of optical fiber cables in other spaces used for environmental air shall be in accordance with 770.13(C)(1) and (C)(2).

(1) **Uses Permitted.**

The following cables shall be permitted in other spaces used for environmental air as described in 300.22(C):

1. Types OFNP and OFCP
2. Types OFNP and OFCP installed in plenum communications raceways
3. Types OFNP and OFCP installed in plenum cable routing assemblies
(4) Types OFNP and OFCP supported by open metal cable tray systems

(5) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in raceways that are installed in compliance with 300.22(C)

(6) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums), as described in 300.22(C)

(7) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in plenum riser and general-purpose communications raceways supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums), as described in 300.22(C)

(2) Uses Not Permitted.
Types OFNR, OFCR, OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in other spaces used for environmental air (plenums).

Informational Note: See NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems, for information on fire protection of wiring installed in other spaces used for environmental air.

(D) Risers — Cables in Vertical Runs.
Installations of optical fiber cables in vertical runs shall be in accordance with 770.113(D)(1) and (D)(2).

(1) Uses Permitted.
The following cables shall be permitted in vertical runs penetrating one or more floors and in vertical runs in a shaft:

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

   (2) Types OFNP, OFCP, OFNR, and OFCR installed in the following:

      a. Plenum communications raceways
      b. Plenum cable routing assemblies
      c. Riser communications raceways
      d. Riser cable routing assemblies

(2) Uses Not Permitted.
Types OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in vertical runs.

Informational Note: See 770.26 for firestop requirements for floor penetrations.

(E) Risers — Cables Permitted in Metal Raceways.
The following cables shall be permitted to be installed in metal raceways in a riser having firestops at each floor:

   (1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

   (2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:

      a. Plenum communications raceways (innerduct)
      b. Riser communications raceways (innerduct)
      c. General-purpose communications raceways (innerduct)

Informational Note: See 770.26 for firestop requirements for floor penetrations.

(F) Risers — Cables Permitted in Fireproof Shafts.
The following cables shall be permitted to be installed in fireproof riser shafts having firestops at each floor:

   (1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

   (2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
a. Plenum communications raceways
b. Plenum cable routing assemblies
c. Riser communications raceways
d. Riser cable routing assemblies
e. General-purpose communications raceways
f. General-purpose cable routing assemblies

Informational Note: See 770.26 for firestop requirements for floor penetrations.

(G) Risers — Cables Permitted in One- and Two-Family Dwellings.
The following cables shall be permitted in one- and two-family dwellings:

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies
   e. General-purpose communications raceways
   f. General-purpose cable routing assemblies

(H) Cable Trays — Cables Permitted.
The following cables shall be permitted to be supported by cable trays:

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Riser communications raceways
   c. General-purpose communications raceways

The following cables shall be permitted to be installed in distributing frames and cross-connect arrays:

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies
   e. General-purpose communications raceways
   f. General-purpose cable routing assemblies

(J) Other Building Locations — Cables Permitted.
The following cables shall be permitted to be installed in building locations other than the locations covered in 770.113(B) through (I):

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies
   e. General-purpose communications raceways
   f. General-purpose cable routing assemblies

3. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in a raceway of a type recognized in Chapter 3

Recommended Text if Motion Fails:

770.113 Installation of Optical Fiber Cables.
Installation of optical fiber cables shall comply with 770.113(A) through (J). Installation of raceways and cable routing assemblies shall comply with 770.110.

(A) Listing.
Optical fiber cables installed in buildings shall be listed in accordance with 770.179 and installed in accordance with the limitations of the listing.

Exception: Optical fiber cables that are installed in compliance with 770.48 shall not be required to be listed.

(B) Ducts Specifically Fabricated for Environmental Air.
Installations of optical fiber cables in ducts specifically fabricated for environmental air shall be in accordance with 770.113(B)(1) and (B)(2).

(1) Uses Permitted.
The following cables shall be permitted in ducts specifically fabricated for environmental air as described in 300.22(B) if they are directly associated with the air distribution system:

   (1) Up to 1.22 m (4 ft) of Types OFNP and OFCP

   (2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in raceways that are installed in compliance with 300.22(B)

Informational Note: For information on fire protection of wiring installed in fabricated ducts, see NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems.

(2) Uses Not Permitted.
Types OFNR, OFCR, OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in ducts specifically fabricated for environmental air as described in 300.22(B).

Informational Note: See NFPA 90A-2021, Standard for the Installation of Air-Conditioning and Ventilating Systems, for information on fire protection of wiring installed in fabricated ducts.

(C) Other Spaces Used for Environmental Air (Plenums).
Installations of optical fiber cables in other spaces used for environmental air shall be in accordance with 770.13(C)(1) and (C)(2).

(1) Uses Permitted.
The following cables shall be permitted in other spaces used for environmental air as described in 300.22(C):

   (1) Types OFNP and OFCP

   (2) Types OFNP and OFCP installed in plenum communications raceways
(3) Types OFNP and OFCP installed in plenum cable routing assemblies

(4) Types OFNP and OFCP supported by open metal cable tray systems

(5) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in raceways that are installed in compliance with 300.22(C)

(6) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums), as described in 300.22(C)

(7) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in plenum, riser, and general-purpose communications raceways supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums), as described in 300.22(C)

(2) Uses Not Permitted.
Types OFNR, OFCR, OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in other spaces used for environmental air (plenums).
Informational Note: See NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems, for information on fire protection of wiring installed in other spaces used for environmental air.

(D) Risers — Cables in Vertical Runs.
Installations of optical-fiber cables in vertical runs shall be in accordance with 770.113(D)(1) and (D)(2).

(1) Uses Permitted.
The following cables shall be permitted in vertical runs penetrating one or more floors and in vertical runs in a shaft:

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

(2) Types OFNP, OFCP, OFNR, and OFCR installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies

(2) Uses Not Permitted.
Types OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in vertical runs.
Informational Note: See 770.26 for firestop requirements for floor penetrations.

(E) Risers — Cables Permitted in Metal Raceways.
The following cables shall be permitted in metal raceways in a riser having firestops at each floor:

(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways (innerduct)
   b. Riser communications raceways (innerduct)
   c. General-purpose communications raceways (innerduct)

Informational Note: See 770.26 for firestop requirements for floor penetrations.

(F) Risers — Cables Permitted in Fireproof Shafts.
The following cables shall be permitted to be installed in fireproof riser shafts having firestops at each floor:

(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
(b) Plenum cable routing assemblies

e. Riser communications raceways
d. Riser cable routing assemblies
e. General-purpose communications raceways
f. General-purpose cable routing assemblies

Informational Note: See 770.26 for firestop requirements for floor penetrations.

(G) Risers — Cables Permitted in One- and Two-Family Dwellings.
The following cables shall be permitted in one- and two-family dwellings:

(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:

a. Plenum communications raceways
b. Plenum cable routing assemblies
c. Riser communications raceways
d. Riser cable routing assemblies
e. General-purpose communications raceways
f. General-purpose cable routing assemblies

(H) Cable Trays — Cables Permitted.
The following cables shall be permitted to be supported by cable trays:

(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:

a. Plenum communications raceways
b. Riser communications raceways
c. General-purpose communications raceways

The following cables shall be permitted to be installed in distributing frames and cross-connect arrays:

(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:

a. Plenum communications raceways
b. Plenum cable routing assemblies
c. Riser communications raceways
d. Riser cable routing assemblies
e. General-purpose communications raceways
f. General-purpose cable routing assemblies

(J) Other Building Locations — Cables Permitted.
The following cables shall be permitted to be installed in building locations other than the locations covered in 770.113(B) through (I):

(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:

a. Plenum communications raceways
b. Plenum cable routing assemblies
c. Riser communications raceways
d. Riser cable routing assemblies
e. General-purpose communications raceways
f. General-purpose cable routing assemblies

Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in a raceway of a type recognized in Chapter 3

d. Riser cable routing assemblies
e. General-purpose communications raceways
f. General-purpose cable routing assemblies

Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in a raceway of a type recognized in Chapter 3
AMENDMENT BALLOT No. 70-48

Technical Committee on National Electrical Code®
NFPA 70, National Electrical Code®
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-48 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

770.113 Installation of Optical Fiber Cables.
Installation of optical fiber cables shall comply with 770.113(A) through (J). Installation of raceways and cable routing assemblies shall comply with 770.110.

(A) Listing.
Optical fiber cables installed in buildings shall be listed in accordance with 770.179 and installed in accordance with the limitations of the listing.
Exception: Optical fiber cables that are installed in compliance with 770.48 shall not be required to be listed.

(B) Ducts Specifically Fabricated for Environmental Air.
Installations of optical fiber cables in ducts specifically fabricated for environmental air shall be in accordance with 770.113(B)(1) and (B)(2).

(1) Uses Permitted.
The following cables shall be permitted in ducts specifically fabricated for environmental air as described in 300.22(B) if they are directly associated with the air distribution system:

(1) Up to 1.22 m (4 ft) of Types OFNP and OFCP
(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in raceways that are installed in compliance with 300.22(B)

Informational Note: For information on fire protection of wiring installed in fabricated ducts, see NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems.

(2) Uses Not Permitted.
Types OFNR, OFCR, OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in ducts specifically fabricated for environmental air as described in 300.22(B).

Informational Note: See NFPA 90A-2021, Standard for the Installation of Air-Conditioning and Ventilating Systems, for information on fire protection of wiring installed in fabricated ducts.

(C) Other Spaces Used for Environmental Air (Plenums).
Installations of optical fiber cables in other spaces used for environmental air shall be in accordance with 770.13(C)(1) and (C)(2).

(1) Uses Permitted.

The following cables shall be permitted in other spaces used for environmental air as described in 300.22(C):

(1) Types OFNP and OFCP

(2) Types OFNP and OFCP installed in plenum communications raceways

(3) Types OFNP and OFCP installed in plenum cable routing assemblies

(4) Types OFNP and OFCP supported by open metal cable tray systems

(5) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in raceways that are installed in compliance with 300.22(C)

(6) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums), as described in 300.22(C)

(7) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in plenum riser and general-purpose communications raceways supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums), as described in 300.22(C)

(2) Uses Not Permitted.

Types OFNR, OFCR, OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in other spaces used for environmental air (plenums).

Informational Note: See NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems, for information on fire protection of wiring installed in other spaces used for environmental air.

(D) Risers — Cables in Vertical Runs.

Installations of optical fiber cables in vertical runs shall be in accordance with 770.113(D)(1) and (D)(2).

(1) Uses Permitted.

The following cables shall be permitted in vertical runs penetrating one or more floors and in vertical runs in a shaft:

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

(2) Types OFNP, OFCP, OFNR, and OFCR installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies

(2) Uses Not Permitted.

Types OFNG, OFCG, OFN, and OFC shall not be permitted to be installed in vertical runs.
Informational Note: See 770.26 for firestop requirements for floor penetrations.

(E) **Risers — Cables Permitted in Metal Raceways.**
The following cables shall be permitted in metal raceways in a riser having firestops at each floor:

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways (innerduct)
   b. Riser communications raceways (innerduct)
   c. General-purpose communications raceways (innerduct)

Informational Note: See 770.26 for firestop requirements for floor penetrations.

(F) **Risers — Cables Permitted in Fireproof Shafts.**
The following cables shall be permitted to be installed in fireproof riser shafts having firestops at each floor:

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies
   e. General-purpose communications raceways
   f. General-purpose cable routing assemblies

Informational Note: See 770.26 for firestop requirements for floor penetrations.

(G) **Risers — Cables Permitted in One- and Two-Family Dwellings.**
The following cables shall be permitted in one- and two-family dwellings:

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies
   e. General-purpose communications raceways
   f. General-purpose cable routing assemblies

Informational Note: See 770.26 for firestop requirements for floor penetrations.

(H) **Cable Trays — Cables Permitted.**
The following cables shall be permitted to be supported by cable trays:

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Riser communications raceways
   c. General-purpose communications raceways


The following cables shall be permitted to be installed in distributing frames and cross-connect arrays:

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies
   e. General-purpose communications raceways
   f. General-purpose cable routing assemblies

(J) Other Building Locations — Cables Permitted.

The following cables shall be permitted to be installed in building locations other than the locations covered in 770.113(B) through (I):

1. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
2. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in the following:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies
   e. General-purpose communications raceways
   f. General-purpose cable routing assemblies
3. Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in a raceway of a type recognized in Chapter 3
*Note: This motion is seeking to restore the text in Article 770 which was determined by the Correlating Committee as redundant; this information is now contained in new Article 722, among other requirements. For this reason, the Correlating Committee took action to remove the text through SCR 110. Disagreeing with the floor amendment will yield a result of 770.113 being deleted with no changes to Article 722.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-48 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

770.113 Installation of Optical Fiber Cables.

Installation of optical fiber cables shall comply with 770.113(A) through (J). Installation of raceways and cable routing assemblies shall comply with 770.110.

770.113(A) Listing.

Optical fiber cables installed in buildings shall be listed in accordance with 770.179 and installed in accordance with the limitations of the listing.

Exception: Optical fiber cables that are installed in compliance with 770.48 shall not be required to be listed.

770.113(B) Ducts Specifically Fabricated for Environmental Air.

The following cables shall be permitted in ducts specifically fabricated for environmental air as described in 300.22(B) if they are directly associated with the air distribution system:

   (1) Up to 1.22 m (4 ft) of Types OFNP and OFCP
   (2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in raceways that are installed in compliance with 300.22(B)

Informational Note: For information on fire protection of wiring installed in fabricated ducts, see NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems.

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

The following cables shall be permitted in other spaces used for environmental air as described in 300.22(c):

   (1) Types OFNP and OFCP
   (2) Types OFNP and OFCP installed in plenum communications raceways
   (3) Types OFNP and OFCP installed in plenum cable routing assemblies
   (4) Types OFNP and OFCP supported by open metal cable tray systems
(5) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in raceways that are installed in compliance with 300.22(C)

(6) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums), as described in 300.22(C)

(7) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in plenum communications raceways, riser communications raceways, or general-purpose communications raceways or supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums), as described in 300.22(C)

Informational Note: For information on fire protection of wiring installed in other spaces used for environmental air, see NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems.

770.113(D) Risers — Cables in Vertical Runs.

The following cables shall be permitted in vertical runs penetrating one or more floors and in vertical runs in a shaft:

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

(2) Types OFNP, OFCP, OFNR, and OFCR installed in:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies

Informational Note: See 770.26 for firestop requirements for floor penetrations.

770.113(E) Risers — Cables and Innerducts in Metal Raceways.

The following cables and innerducts shall be permitted in metal raceways in a riser having firestops at each floor:

(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in:
   a. Plenum communications raceways (innerduct)
   b. Riser communications raceways (innerduct)
   c. General-purpose communications raceways (innerduct)

Informational Note: See 770.26 for firestop requirements for floor penetrations.

770.113(F) Risers — Cables in Fireproof Shafts.

The following cables shall be permitted to be installed in fireproof riser shafts having firestops at each floor:
(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in:
   a. Plenum communications raceways
   b. Plenum cable routing assemblies
   c. Riser communications raceways
   d. Riser cable routing assemblies
   e. General-purpose communications raceways
   f. General-purpose cable routing assemblies

Informational Note: See 770.26 for firestop requirements for floor penetrations.

770.113(G) Risers — One- and Two-Family Dwellings.
The following cables shall be permitted in one- and two-family dwellings:

   (1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
   (2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in:
       a. Plenum communications raceways
       b. Plenum cable routing assemblies
       c. Riser communications raceways
       d. Riser cable routing assemblies
       e. General-purpose communications raceways
       f. General-purpose cable routing assemblies

770.113(H) Cable Trays.
The following cables shall be permitted to be supported by cable trays:

   (1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
   (2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in:
       a. Plenum communications raceways
       b. Riser communications raceways
       c. General-purpose communications raceways

770.113(I) Distributing Frames and Cross-Connect Arrays.
The following cables shall be permitted to be installed in distributing frames and cross-connect arrays:

   (1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC
   (2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in:
a. Plenum communications raceways  
b. Plenum cable routing assemblies  
c. Riser communications raceways  
d. Riser cable routing assemblies  
e. General-purpose communications raceways  
f. General-purpose cable routing assemblies  

770.113(J) Other Building Locations.

The following cables shall be permitted to be installed in building locations other than the locations covered in 770.113(B) through (I):

(1) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC

(2) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in:
   a. Plenum communications raceways  
   b. Plenum cable routing assemblies  
   c. Riser communications raceways  
   d. Riser cable routing assemblies  
   e. General-purpose communications raceways  
   f. General-purpose cable routing assemblies  

(3) Types OFNP, OFCP, OFNR, OFCR, OFNG, OFCG, OFN, and OFC installed in a raceway of a type recognized in Chapter 3
<table>
<thead>
<tr>
<th>CAM No. 70-49</th>
<th>Recommended Text if Motion Passes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Article 722  Cables for Power-Limited Circuits, and Fault-Managed Power Circuits, and Optical Fiber</td>
</tr>
<tr>
<td></td>
<td>*Note: The “and” preceding “Fault-Managed Power Circuits” has been added editorially as allowed by the Regulations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Text if Motion Fails:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 722  Cables for Power-Limited Circuits, Fault-Managed Power Circuits, and Optical Fiber</td>
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</table>
AMENDMENT BALLOT No. 70-49

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-49 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

Article 722  Cables for Power-Limited Circuits, and Fault-Managed Power Circuits, and Optical Fiber

*Note: The “and” preceding “Fault-Managed Power Circuits” has been added editorially as allowed by the Regulations.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-49 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
<table>
<thead>
<tr>
<th>CAM No. 70-51</th>
<th><strong>Certified Amending Motion to Reject an Identifiable Part of Second Correlating Revision No. 126</strong></th>
</tr>
</thead>
<tbody>
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<td><strong>Recommended Text if Motion Passes:</strong></td>
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<tr>
<td></td>
<td>722.1 Scope.</td>
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<tr>
<td></td>
<td>This article covers the general requirements for the installation of single- and multiple-conductor cables used in Class 2 and Class 3 power-limited circuits, power-limited fire alarm (PLFA) circuits, and Class 4 fault-managed power circuits, and optical fiber installations.</td>
</tr>
<tr>
<td></td>
<td><em>Note: The word “and” preceding “Class 4” has been added editorially as allowed by the Regs to make the revision grammatically correct.</em></td>
</tr>
<tr>
<td></td>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td></td>
<td>722.1 Scope.</td>
</tr>
<tr>
<td></td>
<td>This article covers the general requirements for the installation of single- and multiple-conductor cables used in Class 2 and Class 3 power-limited circuits, power-limited fire alarm (PLFA) circuits, Class 4 fault-managed power circuits, and optical fiber installations.</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 70-51

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-51 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

722.1 Scope.
This article covers the general requirements for the installation of single- and multiple-conductor cables used in Class 2 and Class 3 power-limited circuits, power-limited fire alarm (PLFA) circuits, and Class 4 fault-managed power circuits, and optical fiber installations.

*Note: The word “and” preceding “Class 4” has been added editorially as allowed by the Regs to make the revision grammatically correct.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-51 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text (Article 722 is new in entirety)
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 8466

Recommended Text if Motion Passes:

722.135

*Note: Text of Sections 722.135 (A) through (D) are not impacted by this motion.

(E) Cable Substitutions.

The substitutions for cables listed in Table 722.135(E) shall be permitted. Where substitute cables are installed, the installation requirements of the articles described in 722.3(O) shall also apply. CI cables shall be permitted to be installed to provide 2-hour circuit integrity. See 722.135(F).

Informational Note: See 800.179 for information on Types CMP, CMR, CM, and CMX

Table 722.135(E) Cable Substitutions

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<thead>
<tr>
<th>Cable Type</th>
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<td>CL3P</td>
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*Note: Text of Sections 722.135 (F) through (I) are not impacted by this motion.

(J) Raceway Fill for Optical Fiber Cables.

Raceway fill for optical fiber cables shall comply with either 722.135(J)(1) or (J)(2).

(1) Without Electric Light or Power Conductors.
Where optical fiber cables are installed in a raceway without electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall not apply.

(2) Nonconductive Optical Fiber Cables with Electric Light or Power Conductors.
Where nonconductive optical fiber cables are installed in a raceway with electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall apply.

Recommended Text if Motion Fails:

722.135

NOTE “Text of Sections 722.135 (A) through (D) are not impacted by this motion.”

(E) Cable Substitutions.

The substitutions for cables listed in Table 722.135(E) shall be permitted. Where substitute cables are installed, the installation requirements of the articles described in 722.3(O) shall also apply. CI cables shall be permitted to be installed to provide 2-hour circuit integrity. See 722.135(F).

Informational Note: See 800.179 for information on Types CMP, CMR, CM, and CMX

Table 722.135(E) Cable Substitutions

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
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<tbody>
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</tr>
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<td>CL3</td>
<td>CMP, CL3P, CMR, CL3R, CMG, CM, PLTC</td>
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</tbody>
</table>
NOTE “Text of Sections 722.135 (F) through (I) are not impacted by this motion.”

(J) Raceway Fill for Optical Fiber Cables.

Raceway fill for optical fiber cables shall comply with either 722.135(J)(1) or (J)(2).

(1) Without Electric Light or Power Conductors.
Where optical fiber cables are installed in a raceway without electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall not apply.

(2) Nonconductive Optical Fiber Cables with Electric Light or Power Conductors.
Where nonconductive optical fiber cables are installed in a raceway with electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall apply.
AMENDMENT BALLOT No. 70-53

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-53 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

722.135

*Note: Text of Sections 722.135 (A) through (D) are not impacted by this motion.

(E) Cable Substitutions.

The substitutions for cables listed in Table 722.135I shall be permitted. Where substitute cables are installed, the installation requirements of the articles described in 722.3(O) shall also apply. CI cables shall be permitted to be installed to provide 2-hour circuit integrity. See 722.135(F).

Informational Note: See 800.179 for information on Types CMP, CMR, CM, and CMX

Table 722.135I Cable Substitutions

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<td>CMUC</td>
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*Note: Text of Sections 722.135 (F) through (I) are not impacted by this motion.*

(J) Raceway Fill for Optical Fiber Cables.
Raceway fill for optical fiber cables shall comply with either 722.135(J)(1) or (J)(2).

(1) Without Electric Light or Power Conductors.
Where optical fiber cables are installed in a raceway without electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall not apply.

(2) Nonconductive Optical Fiber Cables with Electric Light or Power Conductors.
Where nonconductive optical fiber cables are installed in a raceway with electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall apply.
shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text (Article 722 is new in its entirety)
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 109

**Recommended Text if Motion Passes:**

770.3  Other Articles.

Installations of optical fiber cables shall comply with 770.3(A) through (D). Only those sections of Chapter 2 and Article 300 referenced in this article shall apply to optical fiber cables.

(A)  Hazardous (Classified) Locations.

Listed optical fiber cables shall be permitted to be installed in hazardous (classified) locations. The cables shall be sealed in accordance with 501.15, 502.15, 505.16, or 506.16, as applicable.

(B)  Cables in Ducts for Dust, Loose Stock, or Vapor Removal.

The requirements of 300.22(A) for wiring systems shall apply to conductive optical fiber cables.

(C)  Hybrid Cables.

Hybrid optical fiber cables shall be classified as electrical cables in accordance with the type of electrical conductors. They shall be constructed, listed, and marked in accordance with the appropriate article for each type of electrical cable.

(D)  Vertical Support for Fire-Resistive Cables.

Vertical installations of circuit integrity (CI) cables installed in a raceway or cables of fire-resistive cable systems shall be installed in accordance with their listing.

(E)  Optical Fiber Cables within Buildings.

The listing and installation of optical fiber cables within buildings shall comply with Part V of this article and Parts I and II of Article 722.

**Recommended Text if Motion Fails:**

770.3  Other Articles.

Installations of optical fiber cables shall comply with 770.3(A) through (D). Only those sections of Chapter 2 and Article 300 referenced in this article shall apply to optical fiber cables.

(A)  Hazardous (Classified) Locations.

Listed optical fiber cables shall be permitted to be installed in hazardous (classified) locations. The cables shall be sealed in accordance with 501.15, 502.15, 505.16, or 506.16, as applicable.

(B)  Cables in Ducts for Dust, Loose Stock, or Vapor Removal.

The requirements of 300.22(A) for wiring systems shall apply to conductive optical fiber cables.

(C)  Hybrid Cables.
Hybrid optical fiber cables shall be classified as electrical cables in accordance with the type of electrical conductors. They shall be constructed, listed, and marked in accordance with the appropriate article for each type of electrical cable.

(D) Vertical Support for Fire-Resistive Cables.
Vertical installations of circuit integrity (CI) cables installed in a raceway or cables of fire-resistive cable systems shall be installed in accordance with their listing.

(E) Optical Fiber Cables within Buildings.
The listing and installation of optical fiber cables within buildings shall comply with Part V of this article and Parts I and II of Article 722.
AMENDMENT BALLOT No. 70-55

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-55 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

770.3 Other Articles.

Installations of optical fiber cables shall comply with 770.3(A) through (D). Only those sections of Chapter 2 and Article 300 referenced in this article shall apply to optical fiber cables.

(A) Hazardous ( Classified) Locations.

Listed optical fiber cables shall be permitted to be installed in hazardous (classified) locations. The cables shall be sealed in accordance with 501.15, 502.15, 505.16, or 506.16, as applicable.

(B) Cables in Ducts for Dust, Loose Stock, or Vapor Removal.

The requirements of 300.22(A) for wiring systems shall apply to conductive optical fiber cables.

(C) Hybrid Cables.

Hybrid optical fiber cables shall be classified as electrical cables in accordance with the type of electrical conductors. They shall be constructed, listed, and marked in accordance with the appropriate article for each type of electrical cable.

(D) Vertical Support for Fire-Resistive Cables.

Vertical installations of circuit integrity (CI) cables installed in a raceway or cables of fire-resistive cable systems shall be installed in accordance with their listing.

(E) Optical Fiber Cables within Buildings.

The listing and installation of optical fiber cables within buildings shall comply with Part V of this article and Parts I and II of Article 722.
IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-55 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text for (E).
The paragraph is an independent requirement from the requirements in 770.3(A) through (D)
Certified Amending Motion to Reject an Identifiable Part of Second Correlating Revision No. 136

**Recommended Text if Motion Passes:**

770.110 Raceways, Cable Routing Assemblies, and Cable Trays for Optical Fiber Cables General.

In addition to Part V of this article, Parts I and II of Article 722 shall apply to wiring methods and materials for optical fiber cable used within buildings.

(A) Types of Raceways.

Optical fiber cables shall be permitted to be installed in any raceway that complies with either 770.110(A)(1) or (A)(2).

(1) Raceways Recognized in Chapter 3.

Optical fiber cables shall be permitted to be installed in any raceway included in Chapter 3. The raceways shall be installed in accordance with Chapter 3.

(2) Communications Raceways.

Optical fiber cables shall be permitted to be installed in listed communications raceways selected in accordance with Table 800.154(b).

(B) Raceway Fill for Optical Fiber Cables.

Raceway fill for optical fiber cables shall comply with either 770.110(B)(1) or (B)(2).

(1) Without Electric Light or Power Conductors.

Where optical fiber cables are installed in raceway without electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall not apply.

(2) Nonconductive Optical Fiber Cables with Electric Light or Power Conductors.

Where nonconductive optical fiber cables are installed with electric light or power conductors in a raceway, the raceway fill requirements of Chapters 3 and 9 shall apply.

(C) Cable Routing Assemblies.

Optical fiber cables shall be permitted to be installed in listed cable routing assemblies selected in accordance with Table 800.154(c)

(D) Cable Trays.

Optical fiber cables shall be permitted to be installed in metal or listed nonmetallic cable tray systems.

**Recommended Text if Motion Fails:**

770.110 General.

In addition to Part V of this article, Parts I and II of Article 722 shall apply to wiring methods and materials for optical fiber cable used within buildings.

770.111 Innerduct for Optical Fiber Cables.

Listed plenum communications raceway, listed riser communications raceway, and listed general-purpose communications raceway selected in accordance with Table 800.154(b) shall be permitted to be installed as innerduct in any type of listed raceway permitted in Chapter 3.
*Note: 770.111 is merely shown for context as this provision was formerly 770.110(A)(3) in previous edition of NFPA 70 and was renumbered as 770.111 with successful balloting of Second Correlating Revision No. 136.
AMENDMENT BALLOT No. 70-56

Technical Committee on National Electrical Code®
NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-56 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

770.110 Raceways, Cable Routing Assemblies, and Cable Trays for Optical Fiber Cables General.

In addition to Part V of this article, Parts I and II of Article 722 shall apply to wiring methods and materials for optical fiber cable used within buildings.

(A) Types of Raceways.

Optical fiber cables shall be permitted to be installed in any raceway that complies with either 770.110(A)(1) or (A)(2).

(1) Raceways Recognized in Chapter 3.

Optical fiber cables shall be permitted to be installed in any raceway included in Chapter 3. The raceways shall be installed in accordance with Chapter 3.

(2) Communications Raceways.

Optical fiber cables shall be permitted to be installed in listed communications raceways selected in accordance with Table 800.154(b).

(B) Raceway Fill for Optical Fiber Cables.

Raceway fill for optical fiber cables shall comply with either 770.110(B)(1) or (B)(2).

(1) Without Electric Light or Power Conductors.

Where optical fiber cables are installed in raceway without electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall not apply.

(2) Nonconductive Optical Fiber Cables with Electric Light or Power Conductors.

Where nonconductive optical fiber cables are installed with electric light or power conductors in a raceway, the raceway fill requirements of Chapters 3 and 9 shall apply.

(C) Cable Routing Assemblies.
Optical fiber cables shall be permitted to be installed in listed cable routing assemblies selected in accordance with Table 800.154(c)

(D) Cable Trays.
Optical fiber cables shall be permitted to be installed in metal or listed nonmetallic cable tray systems.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-56 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

770.110 Raceways, Cable Routing Assemblies, and Cable Trays for Optical Fiber Cables.
(A) Types of Raceways.
Optical fiber cables shall be permitted to be installed in any raceway that complies with either 770.110(A)(1) or (A)(2).

(1) Raceways Recognized in Chapter 3.
Optical fiber cables shall be permitted to be installed in any raceway included in Chapter 3. The raceways shall be installed in accordance with the requirements of Chapter 3.

(2) Communications Raceways.
Optical fiber cables shall be permitted to be installed in listed communications raceways selected in accordance with Table 800.154(b).

(3) Innerduct for Optical Fiber Cables.
Listed plenum communications raceway, listed riser communications raceway, and listed general-purpose communications raceway selected in accordance with Table 800.154(b) shall be permitted to be installed as innerduct in any type of listed raceway permitted in Chapter 3.

(B) Raceway Fill for Optical Fiber Cables.
Raceway fill for optical fiber cables shall comply with either 770.110(B)(1) or (B)(2).

(1) Without Electric Light or Power Conductors.
Where optical fiber cables are installed in raceway without electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall not apply.

(2) Nonconductive Optical Fiber Cables with Electric Light or Power Conductors.
Where nonconductive optical fiber cables are installed with electric light or power conductors in a raceway, the raceway fill requirements of Chapters 3 and 9 shall apply.

(C) Cable Routing Assemblies.
Optical fiber cables shall be permitted to be installed in listed cable routing assemblies selected in accordance with Table 800.154(c)

(D) Cable Trays.
Optical fiber cables shall be permitted to be installed in metal or listed nonmetallic cable tray systems.
Certified Amending Motion to Reject Second Correlating Revision No. 135

Recommended Text if Motion Passes:

**770.154 Applications of Listed Optical Fiber Cables.**

Permitted and nonpermitted applications of listed optical fiber cables shall be as indicated in Table 770.154(a). The permitted applications shall be subject to the installation requirements of 770.110 and 770.113. The substitutions for optical fiber cables in Table 770.154(b) and illustrated in Figure 770.154 shall be permitted.

**Table 770.154(a) Applications of Listed Optical Fiber Cables in Buildings**

<table>
<thead>
<tr>
<th>Applications</th>
<th>Listed Optical Fiber Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OFNP, OFCP</td>
</tr>
<tr>
<td>In ducts specifically fabricated for environmental air as described in</td>
<td></td>
</tr>
<tr>
<td>300.22(B)</td>
<td>Y*</td>
</tr>
<tr>
<td>In fabricated ducts</td>
<td>N</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(B)</td>
<td>Y*</td>
</tr>
<tr>
<td></td>
<td>Y*</td>
</tr>
<tr>
<td>In other spaces used for environmental air (plenums) as described in 300.22</td>
<td></td>
</tr>
<tr>
<td>(C)</td>
<td>Y*</td>
</tr>
<tr>
<td>In other spaces used for environmental air</td>
<td>N</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(C)</td>
<td>Y*</td>
</tr>
<tr>
<td></td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>N</td>
</tr>
<tr>
<td>Supported by open metal cable trays</td>
<td>N</td>
</tr>
<tr>
<td>Supported by solid bottom metal cable trays with solid metal covers</td>
<td>Y*</td>
</tr>
<tr>
<td></td>
<td>Y*</td>
</tr>
<tr>
<td>In risers</td>
<td></td>
</tr>
<tr>
<td>In vertical runs</td>
<td>Y*</td>
</tr>
<tr>
<td>In metal raceways</td>
<td>Y*</td>
</tr>
</tbody>
</table>

CAM No. 70-57

Posted:  May 2, 2022
Corrected:  May 12, 2022
<table>
<thead>
<tr>
<th>Application</th>
<th>Y*</th>
<th>Y*</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>In fireproof shafts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In riser communications raceways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In one- and two-family dwellings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within buildings in other than air-handling spaces and risers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported by cable trays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In distributing frames and cross-connect arrays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In any raceway recognized in Chapter 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In riser communications raceways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general-purpose communications raceways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general-purpose cable routing assemblies</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: “N” indicates that the cable type shall not be permitted to be installed in the application.

“Y*” indicates that the cable type shall be permitted to be installed in the application subject to the limitations described in 770.110 and 770.113.

Informational Note No. 1: Part V of Article 770 covers installation methods within buildings. This table covers the applications of listed optical fiber cables in buildings. The definition of Point of Entrance is in 770.2.

Informational Note No. 2: For information on the restrictions to the installation of optical fiber cables in ducts specifically fabricated for environmental air, see 770.113(B).

Table 770.154(b) Cable Substitutions
<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFNP</td>
<td>None</td>
</tr>
<tr>
<td>OFCP</td>
<td>OFNP</td>
</tr>
<tr>
<td>OFNR</td>
<td>OFNP</td>
</tr>
<tr>
<td>OFCR</td>
<td>OFNP, OFCP, OFNR</td>
</tr>
<tr>
<td>OFNG, OFN</td>
<td>OFNP, OFNR</td>
</tr>
<tr>
<td>OFCG, OFC</td>
<td>OFNP, OFCP, OFNR, OFCR, OFNG, OFN</td>
</tr>
</tbody>
</table>

**Figure 770.154 Cable Substitution Hierarchy.**

```
Plenum                  Nonconductive  Conductive
OFNP  -> OFCP

Riser                   OFNR  -> OFCR

General purpose         OFNG  OFN  OFCG  OFC
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A→B Cable A shall be permitted to be used in place of cable B.

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**Recommended Text if Motion Fails:**

**770.154 Applications of Listed Optical Fiber Cables.**

Permitted and nonpermitted applications of listed optical fiber cables shall be as indicated in Table 770.154(a). The permitted applications shall be subject to the installation requirements of 770.110 and 770.113. The substitutions for optical fiber cables in Table 770.154(b) and illustrated in Figure 770.154 shall be permitted.

**Table 770.154(a) Applications of Listed Optical Fiber Cables in Buildings**

<table>
<thead>
<tr>
<th>Applications</th>
<th>Listed Optical Fiber Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OFENR, OFCR</td>
</tr>
<tr>
<td>In ducts specifically fabricated for environmental air as described in 300.22(B)</td>
<td>In fabricated ducts</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(B)</td>
<td>Y*</td>
</tr>
<tr>
<td>In other spaces used for environmental air (plenums) as described in 300.22(C)</td>
<td>In other spaces used for environmental air</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(C)</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>Supported by open metal cable trays</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>Supported by solid bottom metal cable trays with solid metal covers</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In risers</td>
<td>In vertical runs</td>
</tr>
<tr>
<td>In metal raceways</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In fireproof shafts</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In riser communications raceways</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In one and two family dwellings</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>Within buildings in other than air-handling spaces and risers</td>
<td>General</td>
</tr>
<tr>
<td>Supported by cable trays</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In distributing frames and cross-connect arrays</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In any raceway recognized in Chapter 3</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>ATTRIBUTE1</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>ATTRIBUTE1</td>
</tr>
</tbody>
</table>
In riser communications raceways  Y*  Y*  Y*
In riser cable routing assemblies  Y*  Y*  Y*
In general-purpose communications raceways  Y*  Y*  Y*
In general-purpose cable routing assemblies  Y*  Y*  Y*

Note: “N” indicates that the cable type shall not be permitted to be installed in the application.

“Y*” indicates that the cable type shall be permitted to be installed in the application subject to the limitations described in 770.110 and 770.113.

Informational Note No. 1: Part V of Article 770 covers installation methods within buildings. This table covers the applications of listed optical fiber cables in buildings. The definition of Point of Entrance is in 770.2.

Informational Note No. 2: For information on the restrictions to the installation of optical fiber cables in ducts specifically fabricated for environmental air, see 770.113(B).

Table 770.154(b) Cable Substitutions

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFNP</td>
<td>None</td>
</tr>
<tr>
<td>OFCP</td>
<td>OFNP</td>
</tr>
<tr>
<td>OFNR</td>
<td>OFNP</td>
</tr>
<tr>
<td>OFCR</td>
<td>OFNP, OFCP, OFNR</td>
</tr>
<tr>
<td>OFNG, OFN</td>
<td>OFNP, OFNR</td>
</tr>
<tr>
<td>OFCG, OFC</td>
<td>OFNP, OFCP, OFNR, OFCR, OFNG, OFN</td>
</tr>
</tbody>
</table>

Figure 770.154 Cable Substitution Hierarchy.

Nonconductive  Conductive

Plenum

OFNP
OFCP

Riser

OFNR
OFCR

General purpose

OFNG
OFN
OFG
OFC

[Diagram of cable substitution hierarchy]

A → B Cable A shall be permitted to be used in place of cable B.
IF YOU AGREE TO SUPPORT AMENDMENT 70-57 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

### 770.154 Applications of Listed Optical Fiber Cables.

Permitted and nonpermitted applications of listed optical fiber cables shall be as indicated in Table 770.154(a). The permitted applications shall be subject to the installation requirements of 770.110 and 770.113. The substitutions for optical fiber cables in Table 770.154(b) and illustrated in Figure 770.154 shall be permitted.

#### Table 770.154(a) Applications of Listed Optical Fiber Cables in Buildings

<table>
<thead>
<tr>
<th>Applications</th>
<th>Listed Optical Fiber Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OFNP, OFCP</td>
</tr>
<tr>
<td><strong>In ducts specifically fabricated for environmental air as described in 300.22(B)</strong></td>
<td>In fabricated ducts</td>
</tr>
<tr>
<td><strong>In other spaces used for environmental air (plenums) as described in 300.22(C)</strong></td>
<td>In other spaces used for environmental air</td>
</tr>
<tr>
<td><strong>In metal raceway that complies with 300.22(B)</strong></td>
<td>In metal raceway that complies with 300.22(B)</td>
</tr>
<tr>
<td><strong>In metal raceway that complies with 300.22(C)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>In plenum communications raceways</strong></td>
<td>Y*</td>
</tr>
<tr>
<td>Applications</td>
<td>Listed Optical Fiber Cable Type</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td></td>
<td>OFNP, OFCP</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
</tr>
<tr>
<td>Supported by open metal cable trays</td>
<td>Y*</td>
</tr>
<tr>
<td>Supported by solid bottom metal cable trays with solid metal covers</td>
<td>Y*</td>
</tr>
<tr>
<td>In risers</td>
<td>In vertical runs</td>
</tr>
<tr>
<td>In metal raceways</td>
<td>Y*</td>
</tr>
<tr>
<td>In fireproof shafts</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
</tr>
<tr>
<td>In riser communications raceways</td>
<td>Y*</td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td>Y*</td>
</tr>
<tr>
<td>In one- and two-family dwellings</td>
<td>Y*</td>
</tr>
<tr>
<td>Within buildings in other than air-handling spaces and risers</td>
<td>General</td>
</tr>
<tr>
<td>Supported by cable trays</td>
<td>Y*</td>
</tr>
<tr>
<td>In distributing frames and cross-connect arrays</td>
<td>Y*</td>
</tr>
<tr>
<td>In any raceway recognized in Chapter 3</td>
<td>Y*</td>
</tr>
</tbody>
</table>
Listed Optical Fiber Cable Type

<table>
<thead>
<tr>
<th>Applications</th>
<th>OFNP, OFCP</th>
<th>OFNR, OFCR</th>
<th>OFNG, OFCG, OFN, OFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
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<tr>
<td>In riser communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In general-purpose communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In general-purpose cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
</tbody>
</table>

Note: “N” indicates that the cable type shall not be permitted to be installed in the application.
“Y*” indicates that the cable type shall be permitted to be installed in the application subject to the limitations described in 770.110 and 770.113.

Informational Note No. 1: Part V of Article 770 covers installation methods within buildings. This table covers the applications of listed optical fiber cables in buildings. The definition of Point of Entrance is in 770.2.

Informational Note No. 2: For information on the restrictions to the installation of optical fiber cables in ducts specifically fabricated for environmental air, see 770.113(B).

Table 770.154(b) Cable Substitutions

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFNP</td>
<td>None</td>
</tr>
<tr>
<td>OFCP</td>
<td>OFNP</td>
</tr>
<tr>
<td>OFNR</td>
<td>OFNP</td>
</tr>
<tr>
<td>OFCR</td>
<td>OFNP, OFCP, OFNR</td>
</tr>
</tbody>
</table>
Table 770.154(a) Applications of Listed Optical Fiber Cables in Buildings

<table>
<thead>
<tr>
<th>Applications</th>
<th>Listed Optical Fiber Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OFNP, OFCP</td>
</tr>
<tr>
<td>In fabricated ducts</td>
<td>Y*</td>
</tr>
<tr>
<td>Applications</td>
<td>Listed Optical Fiber Cable Type</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>In ducts specifically fabricated for environmental air as described in 300.22(B)</td>
<td>In metal raceway that complies with 300.22(B)</td>
</tr>
<tr>
<td>In other spaces used for environmental air (plenums) as described in 300.22(C)</td>
<td>In other spaces used for environmental air</td>
</tr>
<tr>
<td></td>
<td>In metal raceway that complies with 300.22(C)</td>
</tr>
<tr>
<td></td>
<td>In plenum communications raceways</td>
</tr>
<tr>
<td></td>
<td>In plenum cable routing assemblies</td>
</tr>
<tr>
<td></td>
<td>Supported by open metal cable trays</td>
</tr>
<tr>
<td></td>
<td>Supported by solid bottom metal cable trays with solid metal covers</td>
</tr>
<tr>
<td>In risers</td>
<td>In vertical runs</td>
</tr>
<tr>
<td></td>
<td>In metal raceways</td>
</tr>
<tr>
<td></td>
<td>In fireproof shafts</td>
</tr>
<tr>
<td></td>
<td>In plenum communications raceways</td>
</tr>
<tr>
<td></td>
<td>In plenum cable routing assemblies</td>
</tr>
<tr>
<td></td>
<td>In riser communications raceways</td>
</tr>
<tr>
<td></td>
<td>In riser cable routing assemblies</td>
</tr>
<tr>
<td>Applications</td>
<td>Listed Optical Fiber Cable Type</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td></td>
<td>OFNP, OFCP</td>
</tr>
<tr>
<td>In one- and two-family dwellings</td>
<td>Y*</td>
</tr>
<tr>
<td>Within buildings in other than air-handling spaces and risers</td>
<td>General</td>
</tr>
<tr>
<td>Supported by cable trays</td>
<td>Y*</td>
</tr>
<tr>
<td>In distributing frames and cross-connect arrays</td>
<td>Y*</td>
</tr>
<tr>
<td>In any raceway recognized in Chapter 3</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
</tr>
<tr>
<td>In riser communications raceways</td>
<td>Y*</td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td>Y*</td>
</tr>
<tr>
<td>In general-purpose communications raceways</td>
<td>Y*</td>
</tr>
<tr>
<td>In general-purpose cable routing assemblies</td>
<td>Y*</td>
</tr>
</tbody>
</table>

Note: “N” indicates that the cable type shall not be permitted to be installed in the application.

“Y*” indicates that the cable type shall be permitted to be installed in the application subject to the limitations described in 770.110 and 770.113.

Informational Note No. 1: Part V of Article 770 covers installation methods within buildings. This table covers the applications of listed optical fiber cables in buildings. The definition of Point of Entrance is in 770.2.

Informational Note No. 2: For information on the restrictions to the installation of optical fiber cables in ducts specifically fabricated for environmental air, see 770.113(B).
### Table 770.154(b) Cable Substitutions

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFNP</td>
<td>None</td>
</tr>
<tr>
<td>OFCP</td>
<td>OFNP</td>
</tr>
<tr>
<td>OFNR</td>
<td>OFNP</td>
</tr>
<tr>
<td>OFCR</td>
<td>OFNP, OFCP, OFNR</td>
</tr>
<tr>
<td>OFNG, OFN</td>
<td>OFNP, OFNR</td>
</tr>
<tr>
<td>OFCG, OFC</td>
<td>OFNP, OFCP, OFGR, OFCR, OFNG, OFN</td>
</tr>
</tbody>
</table>

### Figure 770.154 Cable Substitution Hierarchy.

- **Plenum:**
  - Nonconductive: OFNP → OFCP
- **Riser:**
  - OFNP → OFCR
- **General purpose:**
  - OFNG, OFN → OFCG, OFC

*Note: Cable A shall be permitted to be used in place of cable B.*
Certified Amending Motion to Reject Second Correlating Revision No. 111

Recommended Text if Motion Passes:

770.179 Optical Fiber Cables.

Optical fiber cables shall be listed and identified in accordance with 772.179. 770.179(A) through (G) and shall be marked in accordance with Table 770.179. Optical fiber cables shall have a temperature rating of not less than 60°C (140°F). The temperature rating shall be marked on the jacket of optical fiber cables that have a temperature rating exceeding 60°C (140°F).

Informational Note: See UL 1651-2015, Standard for Optical Fiber Cable, for information on optical fiber cables.

Table 770.179 Cable Markings

<table>
<thead>
<tr>
<th>Cable Marking</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFNP</td>
<td>Nonconductive optical fiber plenum cable</td>
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<tr>
<td>OFCP</td>
<td>Conductive optical fiber plenum cable</td>
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<td>Conductive optical fiber riser cable</td>
</tr>
<tr>
<td>OFNG</td>
<td>Nonconductive optical fiber general-purpose cable</td>
</tr>
<tr>
<td>OFCG</td>
<td>Conductive optical fiber general-purpose cable</td>
</tr>
<tr>
<td>OFN</td>
<td>Nonconductive optical fiber general-purpose cable</td>
</tr>
<tr>
<td>OFC</td>
<td>Conductive optical fiber general-purpose cable</td>
</tr>
</tbody>
</table>

(A) Types OFNP and OFCP.

Types OFNP and OFCP nonconductive and conductive optical fiber plenum cables shall be suitable for use in ducts, plenums, and other space used for environmental air and shall also have adequate fire-resistant and low-smoke-producing characteristics.

Informational Note: See NFPA 262-2019, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces, for one method of defining that a cable has adequate fire-resistant and low-smoke-producing characteristics where the cable exhibits a maximum peak optical density of 0.50 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 1.52 m (5 ft) or less.

(B) Types OFNR and OFCR.
Types OFNR and OFCR nonconductive and conductive optical fiber riser cables shall be suitable for use in a vertical run in a shaft or from floor to floor and shall also have the fire-resistant characteristics capable of preventing the carrying of fire from floor to floor.

Informational Note: See ANSI/UL 1666-2017, Standard Test for Flame Propagation Height of Electrical and Optical-Fiber Cable Installed Vertically in Shafts, for one method of defining fire-resistant characteristics capable of preventing the carrying of fire from floor to floor.

(C) Types OFNG and OFCG.

Types OFNG and OFCG nonconductive and conductive general-purpose optical fiber cables shall be suitable for general-purpose use, with the exception of risers and plenums, and shall also be resistant to the spread of fire.

Informational Note No 1: See CSA Vertical Flame Test — Cables in Cable Trays, as described in CSA C22.2 No. 0.3-2009 (R2019), Test Methods for Electrical Wires and Cables, for one method of defining resistant to the spread of fire for the damage (char length) not to exceed 1.5 m (4 ft 11 in.) when performing the test.

Informational Note No 2: See ANSI/UL 1685-2015, Standard for Safety for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, for another method of defining resistant to the spread of fire where the cables do not spread fire to the top of the tray in the UL flame exposure, vertical tray flame test. The smoke measurements in the test method are not applicable.

(D) Types OFN and OFC.

Types OFN and OFC nonconductive and conductive optical fiber cables shall be suitable for general-purpose use, with the exception of risers, plenums, and other spaces used for environmental air, and shall also be resistant to the spread of fire.

Informational Note No 1: See ANSI/UL 1685-2015, Standard for Safety for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, for one method of defining resistant to the spread of fire where the cables do not spread fire to the top of the tray in the UL flame exposure, vertical tray flame test. The smoke measurements in the test method are not applicable.

Informational Note No 2: See CSA Vertical Flame Test — Cables in Cables Trays, as described in CSA C22.2 No. 0.3-2009 (R2019), Test Methods for Electrical Wires and Cables, for another method of defining resistant to the spread of fire where the damage (char length) does not exceed 1.5 m (4 ft 11 in.).

Informational Note No 3: Cable types are listed in descending order of fire resistance rating. Within each fire resistance rating, nonconductive cable is listed first because it is often substituted for conductive cable.

(E) Circuit Integrity (CI), Fire-Resistive Cable System, or Electrical Circuit Protective System.

Cables that are used for survivability of critical circuits under fire conditions shall meet either 770.179(E)(1), (E)(2), or (E)(3)

(1) Circuit Integrity (CI) Cables.

Cables specified in 770.179(A) through (D), and used for survivability of critical circuits, shall be marked with the additional classification using the suffix “CI.” In order to maintain its listed fire rating, CI cable shall only be installed in free air in accordance with 770.24. CI cables shall only be permitted to be installed in a raceway where specifically listed and marked as part of a fire-resistive cable system as covered in 770.179(E)(2).

Informational Note: See UL 2196, Standard for Fire Test for Circuit Integrity of Fire-Resistive Power, Instrumentation, Control and Data Cables, for one method of defining CI cable for establishing a minimum 2-hour fire resistance rating for the cable as specified in UL 1651, Optical Fiber Cable. UL Guide Information
for Optical Cable Fiber (QAYK) contains information to identify the cable and its installation limitations to maintain the fire-resistive rating.

(2) Fire-Resistive Cables.

Cables specified in 770.179(A) through (D) and 770.179(E)(1) that are part of an electrical circuit protective system shall be fire-resistive cable and identified with the protective system number on the product or on the smallest unit container in which the product is packaged and installed in accordance with the listing of the protective system.

Informational Note: See UL 2196, Standard for Fire Test for Circuit Integrity of Fire-Resistive Power, Instrumentation, Control and Data Cables, for one method of defining an electrical circuit protective system for establishing a rating for the system. UL Guide Information for Electrical Circuit Integrity Systems (FHIT) contains information to identify the system and its installation limitations to maintain a minimum fire-resistive rating.

(F) Field-Assembled Optical Fiber Cables.

Field-assembled optical fiber cable shall comply with the following:

(1) The specific combination of jacket and optical fibers intended to be installed as a field-assembled optical fiber cable shall be one of the types in 770.179(A), (B), or (D) and shall be marked in accordance with Table 770.179.

(2) The jacket of a field-assembled optical fiber cable shall have a surface marking indicating the specific optical fibers with which it is identified for use.

(3) The optical fibers shall have a permanent marking, such as a marker tape, indicating the jacket with which they are identified for use.

(4) The jacket without fibers shall meet the listing requirements for communications raceways in 800.182(A), (B), or (C) in accordance with the cable marking.

(G) Optional Markings.

Cables shall be permitted to be surface marked to indicate special characteristics of the cable materials.

Informational Note: These markings can include, but are not limited to, markings for limited-smoke, halogen-free, low-smoke halogen-free, and sunlight resistance.

Recommended Text if Motion Fails:

770.179 Optical Fiber Cables.

Optical fiber cables shall be listed and identified in accordance with 722.179.
AMENDMENT BALLOT No. 70-58

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-58 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

770.179 Optical Fiber Cables.

Optical fiber cables shall be listed and identified in accordance with 722.179(770.179(A) through (G) and shall be marked in accordance with Table 770.179. Optical fiber cables shall have a temperature rating of not less than 60°C (140°F). The temperature rating shall be marked on the jacket of optical fiber cables that have a temperature rating exceeding 60°C (140°F).

Informational Note: See UL 1651-2015, Standard for Optical Fiber Cable, for information on optical fiber cables.

Table 770.179 Cable Markings

<table>
<thead>
<tr>
<th>Cable Marking</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFNP</td>
<td>Nonconductive optical fiber plenum cable</td>
</tr>
<tr>
<td>OFCP</td>
<td>Conductive optical fiber plenum cable</td>
</tr>
<tr>
<td>OFNR</td>
<td>Nonconductive optical fiber riser cable</td>
</tr>
<tr>
<td>OFCR</td>
<td>Conductive optical fiber riser cable</td>
</tr>
<tr>
<td>OFNG</td>
<td>Nonconductive optical fiber general-purpose cable</td>
</tr>
<tr>
<td>OFCG</td>
<td>Conductive optical fiber general-purpose cable</td>
</tr>
<tr>
<td>OFN</td>
<td>Nonconductive optical fiber general-purpose cable</td>
</tr>
<tr>
<td>OFC</td>
<td>Conductive optical fiber general-purpose cable</td>
</tr>
</tbody>
</table>
(A) Types OFNP and OFCP.

Types OFNP and OFCP nonconductive and conductive optical fiber plenum cables shall be suitable for use in ducts, plenums, and other space used for environmental air and shall also have adequate fire-resistant and low-smoke-producing characteristics.

Informational Note: See NFPA 262-2019, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces, for one method of defining that a cable has adequate fire-resistant and low-smoke-producing characteristics where the cable exhibits a maximum peak optical density of 0.50 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 1.52 m (5 ft) or less.

(B) Types OFNR and OFCR.

Types OFNR and OFCR nonconductive and conductive optical fiber riser cables shall be suitable for use in a vertical run in a shaft or from floor to floor and shall also have the fire-resistant characteristics capable of preventing the carrying of fire from floor to floor.

Informational Note: See ANSI/UL 1666-2017, Standard Test for Flame Propagation Height of Electrical and Optical-Fiber Cable Installed Vertically in Shafts, for one method of defining fire-resistant characteristics capable of preventing the carrying of fire from floor to floor.

(C) Types OFNG and OFCG.

Types OFNG and OFCG nonconductive and conductive general-purpose optical fiber cables shall be suitable for general-purpose use, with the exception of risers and plenums, and shall also be resistant to the spread of fire.

Informational Note No. 1: See CSA Vertical Flame Test — Cables in Cable Trays, as described in CSA C22.2 No. 0.3-2009 (R2019), Test Methods for Electrical Wires and Cables, for one method of defining resistant to the spread of fire for the damage (char length) not to exceed 1.5 m (4 ft 11 in.) when performing the test.

Informational Note No. 2: See ANSI/UL 1685-2015, Standard for Safety for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, for another method of defining resistant to the spread of fire where the cables do not spread fire to the top of the tray in the UL flame exposure, vertical tray flame test. The smoke measurements in the test method are not applicable.

(D) Types OFN and OFC.

Types OFN and OFC nonconductive and conductive optical fiber cables shall be suitable for general-purpose use, with the exception of risers, plenums, and other spaces used for environmental air, and shall also be resistant to the spread of fire.

Informational Note No. 1: See ANSI/UL 1685-2015, Standard for Safety for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, for one method of defining resistant to the spread of fire where the cables do not spread fire to the top of the tray in the UL flame exposure, vertical tray flame test. The smoke measurements in the test method are not applicable.

Informational Note No. 2: See CSA Vertical Flame Test — Cables in Cable Trays, as described in CSA C22.2 No. 0.3-2009 (R2019), Test Methods for Electrical Wires and Cables, for another method of defining resistant to the spread of fire where the damage (char length) does not exceed 1.5 m (4 ft 11 in.).
Informational Note No. 3: Cable types are listed in descending order of fire resistance rating. Within each fire resistance rating, nonconductive cable is listed first because it is often substituted for conductive cable.

(E) Circuit Integrity (CI), Fire-Resistive Cable System, or Electrical Circuit Protective System.

Cables that are used for survivability of critical circuits under fire conditions shall meet either 770.179(E)(1), (E)(2), or (E)(3)

(1) Circuit Integrity (CI) Cables.

Cables specified in 770.179(A) through (D), and used for survivability of critical circuits, shall be marked with the additional classification using the suffix “CI.” In order to maintain its listed fire rating, CI cable shall only be installed in free air in accordance with 770.24. CI cables shall only be permitted to be installed in a raceway where specifically listed and marked as part of a fire-resistive cable system as covered in 770.179(E)(2).

Informational Note: See UL 2196, Standard for Fire Test for Circuit Integrity of Fire-Resistive Power, Instrumentation, Control and Data Cables, for one method of defining CI cable for establishing a minimum 2-hour fire resistance rating for the cable as specified in UL 1651, Optical Fiber Cable. UL Guide Information for Optical Cable Fiber (QAYK) contains information to identify the cable and its installation limitations to maintain the fire-resistive rating.

(2) Fire-Resistive Cables.

Cables specified in 770.179(A) through (D) and 770.179(E)(1) that are part of an electrical circuit protective system shall be fire-resistive cable and identified with the protective system number on the product or on the smallest unit container in which the product is packaged and installed in accordance with the listing of the protective system.

Informational Note: See UL 2196, Standard for Fire Test for Circuit Integrity of Fire-Resistive Power, Instrumentation, Control and Data Cables, for one method of defining an electrical circuit protective system for establishing a rating for the system. UL Guide Information for Electrical Circuit Integrity Systems (FHIT) contains information to identify the system and its installation limitations to maintain a minimum fire-resistive rating.

(F) Field-Assembled Optical Fiber Cables.

Field-assembled optical fiber cable shall comply with the following:

(1) The specific combination of jacket and optical fibers intended to be installed as a field-assembled optical fiber cable shall be one of the types in 770.179(A), (B), or (D) and shall be marked in accordance with Table 770.179.

(2) The jacket of a field-assembled optical fiber cable shall have a surface marking indicating the specific optical fibers with which it is identified for use.

(3) The optical fibers shall have a permanent marking, such as a marker tape, indicating the jacket with which they are identified for use.

(4) The jacket without fibers shall meet the listing requirements for communications raceways in 800.182(A), (B), or (C) in accordance with the cable marking.
(G) Optional Markings.

Cables shall be permitted to be surface marked to indicate special characteristics of the cable materials.

Informational Note: These markings can include, but are not limited to, markings for limited-smoke, halogen-free, low-smoke halogen-free, and sunlight resistance.

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IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-58 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

770.179 Optical Fiber Cables.

Optical fiber cables shall be listed and identified in accordance with 770.179(A) through (G) and shall be marked in accordance with Table 770.179. Optical fiber cables shall have a temperature rating of not less than 60°C (140°F). The temperature rating shall be marked on the jacket of optical fiber cables that have a temperature rating exceeding 60°C (140°F).

(A) Types OFNP and OFCP.

Types OFNP and OFCP nonconductive and conductive optical fiber plenum cables shall be suitable for use in ducts, plenums, and other space used for environmental air and shall also have adequate fire-resistant and low smoke producing characteristics.

Informational Note: One method of defining a cable that has adequate fire-resistant and low-smoke producing characteristics is that the cable exhibits a maximum peak optical density of 0.50 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 1.52 m (5 ft) or less when tested in accordance with NFPA 262-2019, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.

(B) Types OFNR and OFCR.

Types OFNR and OFCR nonconductive and conductive optical fiber riser cables shall be suitable for use in a vertical run in a shaft or from floor to floor and shall also have the fire-resistant characteristics capable of preventing the carrying of fire from floor to floor.

Informational Note: One method of defining fire-resistant characteristics capable of preventing the carrying of fire from floor to floor is that the cables pass the requirements of ANSI/UL 1666-2011, Standard Test for Flame Propagation Height of Electrical and Optical-Fiber Cable Installed Vertically in Shafts.

(C) Types OFNG and OFCG.
Types OFNG and OFCG nonconductive and conductive general-purpose optical fiber cables shall be suitable for general-purpose use, with the exception of risers and plenums, and shall also be resistant to the spread of fire.

Informational Note: One method of defining \textit{resistant to the spread of fire} is for the damage (char length) not to exceed 1.5 m (4 ft 11 in.) when performing the CSA vertical flame test — cables in cable trays, as described in CSA C22.2 No. 0.3-M-2001, \textit{Test Methods for Electrical Wires and Cables}.

(D) Types OFN and OFC.

Types OFN and OFC nonconductive and conductive optical fiber cables shall be suitable for general-purpose use, with the exception of risers, plenums, and other spaces used for environmental air, and shall also be resistant to the spread of fire.

Informational Note No. 1: One method of defining \textit{resistant to the spread of fire} is that the cables do not spread fire to the top of the tray in the UL flame exposure, vertical tray flame test in ANSI/UL 1685-2010, \textit{Standard for Safety for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables}. The smoke measurements in the test method are not applicable.

Another method of defining \textit{resistant to the spread of fire} is for the damage (char length) not to exceed 1.5 m (4 ft 11 in.) when performing the CSA vertical flame test — cables in cable trays, as described in CSA C22.2 No. 0.3-M-2001, \textit{Test Methods for Electrical Wires and Cables}.

Informational Note No. 2: Cable types are listed in descending order of fire resistance rating. Within each fire resistance rating, nonconductive cable is listed first because it is often substituted for conductive cable.

\textbf{Table 770.179 Cable Markings}

<table>
<thead>
<tr>
<th>Cable Marking</th>
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<tr>
<td>OFCG</td>
<td>Conductive optical fiber general-purpose cable</td>
</tr>
</tbody>
</table>
OFN  Nonconductive optical fiber general-purpose cable

OFC  Conductive optical fiber general-purpose cable

**(E) Circuit Integrity (CI) Cable or Electrical Circuit Protective System.**

Cables that are used for survivability of critical circuits under fire conditions shall meet either 770.179(E)(1) or (E)(2).

Informational Note: The listing organization provides information for circuit integrity (CI) cable and electrical circuit protective systems, including installation requirements necessary to maintain the fire rating.

**(1) Circuit Integrity (CI) Cables.**

Circuit integrity (CI) cables specified in 770.179(A) through (D), and used for survivability of critical circuits, shall have an additional classification using the suffix “CI.” In order to maintain its listed fire rating, circuit integrity (CI) cable shall only be installed in free air.

Informational Note: One method of defining circuit integrity (CI) cable is by establishing a minimum 2-hour fire resistance rating for the cable when tested in accordance with ANSI/UL 2196-2017, *Standard for Fire Test for Circuit Integrity of Fire-Resistive Power, Instrumentation, Control and Data Cables.*

**(2) Fire-Resistive Cables.**

Cables specified in 770.179(A) through (D) and 770.179(E)(1) that are part of an electrical circuit protective system shall be fire-resistant cable and identified with the protective system number on the product or on the smallest unit container in which the product is packaged and installed in accordance with the listing of the protective system.

Informational Note No. 1: One method of defining an electrical circuit protective system is by establishing a minimum 2-hour fire resistance rating for the system when tested in accordance with UL Subject 1724, *Outline of Investigation for Fire Tests for Electrical Circuit Protective Systems.*

Informational Note No. 2: The listing organization provides information for electrical circuit protective systems (FHIT), including installation requirements for maintaining the fire rating.

**(F) Field-Assembled Optical Fiber Cables.**

Field-assembled optical fiber cable shall comply with 770.179(F)(1) through (F)(4).

1. The specific combination of jacket and optical fibers intended to be installed as a field-assembled optical fiber cable shall be one of the types in 770.179(A), (B), or (D) and shall be marked in accordance with Table 770.179.

2. The jacket of a field-assembled optical fiber cable shall have a surface marking indicating the specific optical fibers with which it is identified for use.
(3) The optical fibers shall have a permanent marking, such as a marker tape, indicating the jacket with which they are identified for use.

(4) The jacket without fibers shall meet the listing requirements for communications raceways in 800.182(A), (B), or (C) in accordance with the cable marking.

(G) Optional Markings.

Cables shall be permitted to be surface marked to indicate special characteristics of the cable materials.

Informational Note: These markings can include, but are not limited to, markings for limited-smoke, halogen-free, low-smoke halogen-free, and sunlight resistance.
Recommended Text if Motion Passes:

**210.24 Branch-Circuit Requirements — Summary.**

The requirements for circuits that have two or more outlets or receptacles, other than the receptacle circuits of 210.11(C)(1), (C)(2), and (C)(3), are summarized in Table 210.24(1) for copper conductors and Table 210.24(2) for aluminum and copper-clad aluminum conductors. Table 210.24(1) and Table 210.24(2) provide only a summary of minimum requirements. See 210.19, 210.20, and 210.21 for the specific requirements applying to branch circuits. . . .

### Table 210.24(2) Summary of Branch-Circuit Requirements — Aluminum and Copper-Clad Aluminum Conductors

<table>
<thead>
<tr>
<th>Circuit Rating</th>
<th>10 A(^1)</th>
<th>15 A</th>
<th>20 A</th>
<th>30 A</th>
<th>40 A</th>
<th>50 A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Conductors (min. size):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Taps</strong></td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Fixture wires and cords</strong></td>
<td>See 240.5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overcurrent Protection</strong></td>
<td><strong>Conductors (min. size):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 A(^1)</td>
<td>15 A</td>
<td>20 A</td>
<td>30 A</td>
<td>40 A</td>
<td>50 A</td>
</tr>
<tr>
<td></td>
<td><strong>Lampholders permitted</strong></td>
<td>Any type</td>
<td>Any type</td>
<td>Any type</td>
<td>Heavy duty</td>
<td>Heavy duty</td>
</tr>
<tr>
<td></td>
<td><strong>Receptacle rating(^{23})</strong></td>
<td>Not applicable(^{23})</td>
<td>15 max. A</td>
<td>15 A or 20 A</td>
<td>30 A</td>
<td>40 A or 50 A</td>
</tr>
<tr>
<td><strong>Maximum Load</strong></td>
<td><strong>Conductors (min. size):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 A(^1)</td>
<td>15 A</td>
<td>20 A</td>
<td>30 A</td>
<td>40 A</td>
<td>50 A</td>
</tr>
<tr>
<td></td>
<td><strong>Permissible load</strong></td>
<td>See 210.23(A). 210.23(B).</td>
<td>See 210.23(B).</td>
<td>See 210.23(C).</td>
<td>See 210.23(D).</td>
<td>See 210.23(D).</td>
</tr>
</tbody>
</table>

\(^1\) Copper-clad aluminum conductors only

\(^{23}\) For receptacle rating of cord-connected electric-discharge luminaires, see 410.62(C).

\(^{23}\) Branch circuits rated 10-amperes shall not supply receptacle outlets.
Recommended Text if Motion Fails:

210.24 Branch-Circuit Requirements — Summary.

The requirements for circuits that have two or more outlets or receptacles, other than the receptacle circuits of 210.11(C)(1), (C)(2), and (C)(3), are summarized in Table 210.24(1) for copper conductors and Table 210.24(2) for aluminum and copper-clad aluminum conductors. Table 210.24(1) and Table 210.24(2) provide only a summary of minimum requirements. See 210.19, 210.20, and 210.21 for the specific requirements applying to branch circuits.

<table>
<thead>
<tr>
<th>Table 210.24(2) Summary of Branch-Circuit Requirements — Aluminum and Copper-Clad Aluminum Conductors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Circuit Rating</strong></td>
</tr>
<tr>
<td><strong>Conductors (min. size):</strong></td>
</tr>
<tr>
<td>Circuit wires</td>
</tr>
<tr>
<td>Taps</td>
</tr>
<tr>
<td>Fixture wires and cords</td>
</tr>
</tbody>
</table>

| **Overcurrent Protection** | **10 A** | **15 A** | **20 A** | **30 A** | **40 A** | **50 A** |
| **Outlet devices:** | | | | | | |
| Lampholders permitted | Any type | Any type | Any type | Heavy duty | Heavy duty | Heavy duty |
| Receptacle rating¹ | Not applicable² | 15 max. A | 15 A or 20 A | 30 A | 40 A or 50 A | 50 A |

| **Maximum Load** | **10 A** | **15 A** | **20 A** | **30 A** | **40 A** | **50 A** |
| **Permissible load** | See 210.23(A). | See 210.23(B). | See 210.23(B). | See 210.23(C). | See 210.23(D). | See 210.23(D). |

¹For receptacle rating of cord-connected electric-discharge luminaires, see 410.62(C).
²Branch circuits rated 10-amperes shall not supply receptacle outlets.
AMENDMENT BALLOT No. 70-60

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-60 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

210.24 Branch-Circuit Requirements — Summary.

The requirements for circuits that have two or more outlets or receptacles, other than the receptacle circuits of 210.11(C)(1), (C)(2), and (C)(3), are summarized in Table 210.24(1) for copper conductors and Table 210.24(2) for aluminum and copper-clad aluminum conductors. Table 210.24(1) and Table 210.24(2) provide only a summary of minimum requirements. See 210.19, 210.20, and 210.21 for the specific requirements applying to branch circuits. . . .

Table 210.24(2) Summary of Branch-Circuit Requirements — Aluminum and Copper-Clad Aluminum Conductors

<table>
<thead>
<tr>
<th>Circuit Rating</th>
<th>10 A</th>
<th>15 A</th>
<th>20 A</th>
<th>30 A</th>
<th>40 A</th>
<th>50 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductors (min. size):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circuit wires</td>
<td>12-14</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Taps</td>
<td>12-14</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Fixture wires and cords</td>
<td>See 240.5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overcurrent Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outlet devices:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lampholders permitted</td>
<td>Any type</td>
<td>Any type</td>
<td>Any type</td>
<td>Heavy duty</td>
<td>Heavy duty</td>
<td>Heavy duty</td>
</tr>
<tr>
<td>Circuit Rating</td>
<td>10 A(^1)</td>
<td>15 A</td>
<td>20 A</td>
<td>30 A</td>
<td>40 A</td>
<td>50 A</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Receptacle rating(^2)</td>
<td>15 max. A</td>
<td>15 A or 20 A</td>
<td>30 A</td>
<td>40 A or 50 A</td>
<td>50 A</td>
<td></td>
</tr>
<tr>
<td>Maximum Load</td>
<td>10 A(^1)</td>
<td>15 A</td>
<td>20 A</td>
<td>30 A</td>
<td>40 A</td>
<td>50 A</td>
</tr>
</tbody>
</table>

\(^1\) Copper-clad aluminum conductors only

\(^2\) For receptacle rating of cord-connected electric-discharge luminaires, see 410.62(C).

Branch circuits rated 10-amperes shall not supply receptacle outlets.

---

**Table 210.24 Summary of Branch-Circuit Requirements**

<table>
<thead>
<tr>
<th>Circuit Rating</th>
<th>15 A</th>
<th>20 A</th>
<th>30 A</th>
<th>40 A</th>
<th>50 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductors (min. size):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circuit wires(^1)</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Taps</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Fixture wires and cords</td>
<td>— see 240.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overcurrent Protection</td>
<td>15 A</td>
<td>20 A</td>
<td>30 A</td>
<td>40 A</td>
<td>50 A</td>
</tr>
<tr>
<td>Outlet devices:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lampholders permitted</td>
<td>Any type</td>
<td>Any type</td>
<td>Heavy duty</td>
<td>Heavy duty</td>
<td>Heavy duty</td>
</tr>
<tr>
<td>Receptacle rating(^2)</td>
<td>15 max. A</td>
<td>15 or 20 A</td>
<td>30 A</td>
<td>40 or 50 A</td>
<td>50 A</td>
</tr>
<tr>
<td>Maximum Load</td>
<td>15 A</td>
<td>20 A</td>
<td>30 A</td>
<td>40 A</td>
<td>50 A</td>
</tr>
<tr>
<td>Permissible load</td>
<td>See 210.23(A)</td>
<td>See 210.23(A)</td>
<td>See 210.23(B)</td>
<td>See 210.23(C)</td>
<td>See 210.23(C)</td>
</tr>
</tbody>
</table>

\(^1\) These gauges are for copper conductors.

\(^2\) For receptacle rating of cord-connected electric-discharge luminaires, see 410.62(C).
## Certified Amending Motion to Accept Public Comment No. 490

<table>
<thead>
<tr>
<th>CAM No.</th>
<th>70-61</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>250.62 Grounding Electrode Conductor Material.</strong></td>
<td></td>
</tr>
<tr>
<td>The grounding electrode conductor shall be of copper, aluminum, copper-clad aluminum, copper-clad steel 40% or the items as permitted in 250.68(C). The material selected shall be resistant to any corrosive condition existing at the installation or shall be protected against corrosion. Conductors of the wire type shall be solid or stranded, insulated, covered, or bare.</td>
<td></td>
</tr>
</tbody>
</table>

| **Recommended Text if Motion Fails:**  |
| **250.62 Grounding Electrode Conductor Material.**  |
| The grounding electrode conductor shall be of copper, aluminum, copper-clad aluminum, or the items as permitted in 250.68(C). The material selected shall be resistant to any corrosive condition existing at the installation or shall be protected against corrosion. Conductors of the wire type shall be solid or stranded, insulated, covered, or bare. |

*Posted: May 2, 2022  Corrected: May 12, 2022*
AMENDMENT BALLOT No. 70-61

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-61 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

250.62 Grounding Electrode Conductor Material.
The grounding electrode conductor shall be of copper, aluminum, copper-clad aluminum, copper-clad steel 40% or the items as permitted in 250.68(C). The material selected shall be resistant to any corrosive condition existing at the installation or shall be protected against corrosion. Conductors of the wire type shall be solid or stranded, insulated, covered, or bare.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-61 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

250.62 Grounding Electrode Conductor Material.
The grounding electrode conductor shall be of copper, aluminum, copper-clad aluminum, or the items as permitted in 250.68(C). The material selected shall be resistant to any corrosive condition existing at the installation or shall be protected against corrosion. Conductors of the wire type shall be solid or stranded, insulated, covered, or bare.
Certified Amending Motion to Accept Public Comment No. 2028

**Recommended Text if Motion Passes:**

334.12 Uses Not Permitted.

(A) Types NM and NMC.

Types NM and NMC cables shall not be permitted as follows:

1. In any dwelling or structure not specifically permitted in 334.10(1), 334.10(2), 334.10(3), and 334.10(5)

2. In any non-sprinklered building or structure exceeding four floors or any sprinklered building or structure exceeding five floors.

3. Exposed within a dropped or suspended ceiling cavity in other than one- and two-family and multifamily dwellings

4. As service-entrance cable

5. In commercial garages having hazardous (classified) locations as defined in 511.3

6. In theaters and similar locations, except where permitted in 518.4(C)

7. In motion picture studios

8. In storage battery rooms

9. In hoistways or on elevators or escalators

10. Embedded in poured cement, concrete, or aggregate

11. In hazardous (classified) locations, except where specifically permitted by other articles in this Code

12. Where subject to physical damage except as permitted by 334.15

13. For direct burial

**Recommended Text if Motion Fails:**

334.12 Uses Not Permitted.

(A) Types NM and NMC.

Types NM and NMC cables shall not be permitted as follows:

1. In any dwelling or structure not specifically permitted in 334.10(1), 334.10(2), 334.10(3), and 334.10(5)

2. Exposed within a dropped or suspended ceiling cavity in other than one- and two-family and multifamily dwellings

3. As service-entrance cable

4. In commercial garages having hazardous (classified) locations as defined in 511.3

5. In theaters and similar locations, except where permitted in 518.4(C)
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(6)</td>
<td>In motion picture studios</td>
</tr>
<tr>
<td>(7)</td>
<td>In storage battery rooms</td>
</tr>
<tr>
<td>(8)</td>
<td>In hoistways or on elevators or escalators</td>
</tr>
<tr>
<td>(9)</td>
<td>Embedded in poured cement, concrete, or aggregate</td>
</tr>
<tr>
<td>(10)</td>
<td>In hazardous (classified) locations, except where specifically permitted by other articles in this <em>Code</em></td>
</tr>
<tr>
<td>(11)</td>
<td>Where subject to physical damage except as permitted by 334.15</td>
</tr>
<tr>
<td>(12)</td>
<td>For direct burial</td>
</tr>
</tbody>
</table>
IF YOU AGREE TO SUPPORT AMENDMENT 70-63 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows *(changes shown legislatively to the Second Draft)*:

334.12 Uses Not Permitted.

(A) Types NM and NMC.

Types NM and NMC cables shall not be permitted as follows:

1. In any dwelling or structure not specifically permitted in 334.10(1), 334.10(2), 334.10(3), and 334.10(5)
2. In any non-sprinklered building or structure exceeding four floors or any sprinklered building or structure exceeding five floors.
3. (2) Exposed within a dropped or suspended ceiling cavity in other than one- and two-family and multifamily dwellings
4. (3) As service-entrance cable
5. (4) In commercial garages having hazardous (classified) locations as defined in 511.3
6. (5) In theaters and similar locations, except where permitted in 518.4(C)
7. (6) In motion picture studios
8. (7) In storage battery rooms
9. (8) In hoistways or on elevators or escalators
10. (9) Embedded in poured cement, concrete, or aggregate
11. (10) In hazardous (classified) locations, except where specifically permitted by other articles in this *Code*
12. (11) Where subject to physical damage except as permitted by 334.15
13. (12) For direct burial
IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-63 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

334.12 Uses Not Permitted.

(A) Types NM and NMC.

Types NM and NMC cables shall not be permitted as follows:

(1) In any dwelling or structure not specifically permitted in 334.10(1), (2), (3), and (5)

(2) Exposed within a dropped or suspended ceiling cavity in other than one- and two-family and multifamily dwellings

(3) As service-entrance cable

(4) In commercial garages having hazardous (classified) locations as defined in 511.3

(5) In theaters and similar locations, except where permitted in 518.4(B)

(6) In motion picture studios

(7) In storage battery rooms

(8) In hoistways or on elevators or escalators

(9) Embedded in poured cement, concrete, or aggregate

(10) In hazardous (classified) locations, except where specifically permitted by other articles in this Code
<table>
<thead>
<tr>
<th>CAM No. 70-64</th>
<th>Certified Amending Motion to Reject Second Revision No. 7731</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>625.54 Ground-Fault Circuit-Interrupter Protection for Personnel.</strong></td>
</tr>
<tr>
<td></td>
<td>All receptacles installed for the connection of electric vehicle charging shall have ground-fault circuit-interrupter protection for personnel in accordance with 210.8.</td>
</tr>
<tr>
<td></td>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>625.54 Ground-Fault Circuit-Interrupter Protection for Personnel.</strong></td>
</tr>
<tr>
<td></td>
<td>All receptacles installed for the connection of electric vehicle charging shall have ground-fault circuit-interrupter protection for personnel.</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 70-64

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-64 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

625.54 Ground-Fault Circuit-Interrupter Protection for Personnel.
All receptacles installed for the connection of electric vehicle charging shall have ground-fault circuit-interrupter protection for personnel in accordance with 210.8.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-64 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

625.54 Ground-Fault Circuit-Interrupter Protection for Personnel.
In addition to the requirements in 210.8, all receptacles installed for the connection of electric vehicle charging shall have ground-fault circuit-interrupter protection for personnel.
### Certified Amending Motion to Reject Second Revision No. 8101

<table>
<thead>
<tr>
<th>CAM No. 70-65</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td><strong>220.57 Electric Vehicle Supply Equipment (EVSE) Load.</strong></td>
</tr>
<tr>
<td>The EVSE load shall be calculated at either 7200 watts (volt-amperes) or the nameplate rating of the equipment, whichever is larger.</td>
</tr>
<tr>
<td>Informational Note: See 625.42 for sizing of an EVSE circuit.</td>
</tr>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td><strong>220.57 Electric Vehicle Supply Equipment (EVSE) Load.</strong></td>
</tr>
<tr>
<td>The EVSE load shall be calculated at either 7200 watts (volt-amperes) or the nameplate rating of the equipment, whichever is larger.</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 70-65

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-65 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

220.57 Electric Vehicle Supply Equipment (EVSE) Load.

The EVSE load shall be calculated at either 7200 watts (volt-amperes) or the nameplate rating of the equipment, whichever is larger.

Informational Note: See 625.42 for sizing of an EVSE circuit.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-65 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
### Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 2020

**Recommended Text if Motion Passes:**

**625.41 Overcurrent Protection**
Overcurrent protection for feeders and branch circuits supplying EVSE and WPTE, including bidirectional EVSE and WPTE, shall be sized for continuous duty and shall have a current rating of not less than 125 percent of the maximum load of the equipment including adjustment in accordance with 625.42(B). Where noncontinuous loads are supplied from the same feeder, the overcurrent device shall have a current rating of not less than the sum of the noncontinuous loads plus 125 percent of the continuous loads.

<table>
<thead>
<tr>
<th>CAM No. 70-66</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td><strong>625.41 Overcurrent Protection</strong></td>
</tr>
<tr>
<td>Overcurrent protection for feeders and branch circuits supplying EVSE and WPTE, including bidirectional EVSE and WPTE, shall be sized for continuous duty and shall have a current rating of not less than 125 percent of the maximum load of the equipment including adjustment in accordance with 625.42(B). Where noncontinuous loads are supplied from the same feeder, the overcurrent device shall have a current rating of not less than the sum of the noncontinuous loads plus 125 percent of the continuous loads.</td>
</tr>
</tbody>
</table>

**Recommended Text if Motion Fails:**

**625.41 Overcurrent Protection**
Overcurrent protection for feeders and branch circuits supplying EVSE and WPTE, including bidirectional EVSE and WPTE, shall be sized for continuous duty and shall have a current rating of not less than 125 percent of the maximum load of the equipment. Where noncontinuous loads are supplied from the same feeder, the overcurrent device shall have a current rating of not less than the sum of the noncontinuous loads plus 125 percent of the continuous loads.
AMENDMENT BALLOT No. 70-66

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-66 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

625.41 Overcurrent Protection

Overcurrent protection for feeders and branch circuits supplying EVSE and WPTE, including bidirectional EVSE and WPTE, shall be sized for continuous duty and shall have a current rating of not less than 125 percent of the maximum load of the equipment including adjustment in accordance with 625.42(B). Where noncontinuous loads are supplied from the same feeder, the overcurrent device shall have a current rating of not less than the sum of the noncontinuous loads plus 125 percent of the continuous loads.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-66 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

625.41 Overcurrent Protection

Overcurrent protection for feeders and branch circuits supplying EVSE, including bidirectional EVSE, and WPTE shall be sized for continuous duty and shall have a rating of not less than 125 percent of the maximum load of the equipment. Where noncontinuous loads are supplied from the same feeder, the overcurrent device shall have a rating of not less than the sum of the noncontinuous loads plus 125 percent of the continuous loads.
### Certified Amending Motion to Accept Public Comment No. 2038

**Recommended Text if Motion Passes:**

**210.8(F) Outdoor Outlets.**

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

- (1) Garages that have floors located at or below grade level
- (2) Accessory buildings
- (3) Boathouses

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

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

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


### Recommended Text if Motion Fails:

**210.8(F) Outdoor Outlets.**

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

- (1) Garages that have floors located at or below grade level
- (2) Accessory buildings
- (3) Boathouses

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

*Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).*
AMENDMENT BALLOT No. 70-69

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-69 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

210.8(F) Outdoor Outlets.

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

(1) Garages that have floors located at or below grade level
(2) Accessory buildings
(3) Boathouses

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

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

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


IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-69 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

210.8(F) Outdoor Outlets.

All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel. This requirement shall become effective on
January 1, 2023 for mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.

Informational Note: Power conversion equipment is the term used to describe the components used in HVAC equipment that is commonly referred to as a variable speed drive. The use of power conversion equipment to control compressor speed differs from multistage compressor speed control.

Exception: Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).
Certified Amending Motion to Accept Public Comment No. 1765

Recommended Text if Motion Passes:

210.12
(B) Dwelling Units.

All 120-volt, single-phase, 10-, 15-, and 20-ampere branch circuits supplying outlets or devices installed in the following locations shall be protected by any of the means described in 210.12(A)(1) through (A)(6):

(1) Kitchens
(2) Family rooms
(3) Dining rooms
(4) Living rooms
(5) Parlors
(6) Libraries
(7) Dens
(8) Bedrooms
(9) Sunrooms
(10) Recreation rooms
(11) Closets
(12) Hallways
(13) Laundry areas
(14) Similar areas
(15) Bathrooms.

Exception No. 1: AFCI protection shall not be required for an individual branch circuit supplying a fire alarm system installed in accordance with 760.41(B) or 760.121(B). The branch circuit shall be installed in a metal raceway, metal auxiliary gutter, steel-armored cable, or Type MC or Type AC cable meeting the applicable requirements of 250.118, with metal boxes, conduit bodies, and enclosures.

Exception No. 2: AFCI protection shall not be required for the individual branch circuit supplying an outlet for arc welding equipment in a dwelling unit until January 1, 2025.

Informational Note No. 1: See NFPA 72-2022, National Fire Alarm and Signaling Code, 29.9.4(5), for information on secondary power source requirements for smoke alarms installed in dwelling units.

Informational Note No. 2: See 760.41(B) and 760.121(B) for power source requirements for fire alarm systems.

Recommended Text if Motion Fails:

210.12
(B) Dwelling Units.

All 120-volt, single-phase, 10-, 15-, and 20-ampere branch circuits supplying outlets or devices installed in the following locations shall be protected by any of the means described in 210.12(A)(1) through (A)(6):

(1) Kitchens
(2) Family rooms
(3) Dining rooms
(4) Living rooms
(5) Parlors
<table>
<thead>
<tr>
<th>Libraries</th>
<th>Dens</th>
<th>Bedrooms</th>
<th>Sunrooms</th>
<th>Recreation rooms</th>
<th>Closets</th>
<th>Hallways</th>
<th>Laundry areas</th>
<th>Similar areas</th>
</tr>
</thead>
</table>

**Exception No. 1:** AFCI protection shall not be required for an individual branch circuit supplying a fire alarm system installed in accordance with 760.41(B) or 760.121(B). The branch circuit shall be installed in a metal raceway, metal auxiliary gutter, steel-armored cable, or Type MC or Type AC cable meeting the applicable requirements of 250.118, with metal boxes, conduit bodies, and enclosures.

**Exception No. 2:** AFCI protection shall not be required for the individual branch circuit supplying an outlet for arc welding equipment in a dwelling unit until January 1, 2025.

**Informational Note No. 1:** See NFPA 72-2022, National Fire Alarm and Signaling Code, 29.9.4(5), for information on secondary power source requirements for smoke alarms installed in dwelling units.

**Informational Note No. 2:** See 760.41(B) and 760.121(B) for power source requirements for fire alarm systems.
AMENDMENT BALLOT No. 70-70

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-70 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

210.12
(B) Dwelling Units.
All 120-volt, single-phase, 10-, 15-, and 20-ampere branch circuits supplying outlets or devices installed in the following locations shall be protected by any of the means described in 210.12(A)(1) through (A)(6):

1. Kitchens
2. Family rooms
3. Dining rooms
4. Living rooms
5. Parlors
6. Libraries
7. Dens
8. Bedrooms
9. Sunrooms
10. Recreation rooms
11. Closets
12. Hallways
13. Laundry areas
14. Similar areas
15. Bathrooms.

Exception No. 1: AFCI protection shall not be required for an individual branch circuit supplying a fire alarm system installed in accordance with 760.41(B) or 760.121(B). The branch circuit shall be installed in a metal raceway, metal auxiliary gutter, steel-armored cable, or Type MC or Type AC cable meeting the applicable requirements of 250.118, with metal boxes, conduit bodies, and enclosures.

Exception No. 2: AFCI protection shall not be required for the individual branch circuit supplying an outlet for arc welding equipment in a dwelling unit until January 1, 2025.

Informational Note No. 1: See NFPA 72-2022, National Fire Alarm and Signaling Code, 29.9.4(5), for information on secondary power source requirements for smoke alarms installed in dwelling units.
Informational Note No. 2: See 760.41(B) and 760.121(B) for power source requirements for fire alarm systems.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-70 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
### Certified Amending Motion to Accept Public Comment No. 351

<table>
<thead>
<tr>
<th>CAM No. 70-72</th>
<th>Recommended Text if Motion Passes:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>708.4(B) Identification of Hazards</strong></td>
</tr>
<tr>
<td></td>
<td>Hazards to be considered at a minimum shall include, but shall not be limited to, the following:</td>
</tr>
<tr>
<td></td>
<td>(1) Naturally occurring hazards (geological, meteorological, and biological)</td>
</tr>
<tr>
<td></td>
<td>(2) Human-caused events (accidental and intentional)</td>
</tr>
<tr>
<td></td>
<td><strong>Informational Note No. 1:</strong> A geomagnetic disturbance (GMD), is an example of a naturally occurring hazard.</td>
</tr>
<tr>
<td></td>
<td><strong>Informational Note No. 2:</strong> An electromagnetic pulse (EMP), and an intentional electromagnetic interference (IEMI) are examples of a human-caused hazards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAM No. 70-72</th>
<th>Recommended Text if Motion Fails:</th>
</tr>
</thead>
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<tr>
<td></td>
<td><strong>708.4(B) Identification of Hazards</strong></td>
</tr>
<tr>
<td></td>
<td>Hazards to be considered at a minimum shall include, but shall not be limited to, the following:</td>
</tr>
<tr>
<td></td>
<td>(1) Naturally occurring hazards (geological, meteorological, and biological)</td>
</tr>
<tr>
<td></td>
<td>(2) Human-caused events (accidental and intentional)</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 70-72

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-72 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

708.4(B) Identification of Hazards

Hazards to be considered at a minimum shall include, but shall not be limited to, the following:

(1) Naturally occurring hazards (geological, meteorological, and biological)
(2) Human-caused events (accidental and intentional)

Informational Note No. 1: A geomagnetic disturbance (GMD), is an example of a naturally occurring hazard.

Informational Note No. 2: An electromagnetic pulse (EMP), and an intentional electromagnetic interference (IEMI), are examples of a human-caused hazards.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-72 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

708.4(B) Identification of Hazards

Hazards to be considered at a minimum shall include, but shall not be limited to, the following:

(1) Naturally occurring hazards (geological, meteorological, and biological)
(2) Human-caused events (accidental and intentional) [1600:5.3.2]
<table>
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<tr>
<th>CAM No. 70-73</th>
<th>Certified Amending Motion to Accept Public Comment No. 350</th>
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<td><strong>Recommended Text if Motion Passes:</strong></td>
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<tr>
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<td>708.32 Cybersecurity, Cyberweapon, Electromagnetic Pulse (EMP), Geomagnetic Disturbance (GMD), and Intentional Electromagnetic Interference (IEMI) Protection.</td>
</tr>
<tr>
<td></td>
<td>COPS shall comply with either of the following:</td>
</tr>
<tr>
<td></td>
<td>(1) The system shall be identified for cybersecurity, cyberweapon, EMP, GMD, and IEMI protection.</td>
</tr>
<tr>
<td></td>
<td>(2) A cybersecurity, cyberweapon, EMP, GMD, and IEMI protection failure modes effects analysis assessment shall be conducted to determine system vulnerabilities.</td>
</tr>
<tr>
<td></td>
<td>The identification or assessment shall be reviewed when the system configuration changes and at not more than 5-year intervals. Documentation of the identification or assessment shall be made available to those authorized to inspect, operate, and maintain the system.</td>
</tr>
<tr>
<td></td>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
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<td><em>No text recommended.</em></td>
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</table>
AMENDMENT BALLOT No. 70-73

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-73 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

708.32 Cybersecurity, Cyberweapon, Electromagnetic Pulse (EMP), Geomagnetic Disturbance (GMD), and Intentional Electromagnetic Interference (IEMI) Protection.

COPS shall comply with either of the following:

(1) The system shall be identified for cybersecurity, cyberweapon, EMP, GMD, and IEMI protection.

(2) A cybersecurity, cyberweapon, EMP, GMD, and IEMI protection failure modes effects analysis assessment shall be conducted to determine system vulnerabilities.

The identification or assessment shall be reviewed when the system configuration changes and at not more than 5-year intervals. Documentation of the identification or assessment shall be made available to those authorized to inspect, operate, and maintain the system.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-73 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No Previous Edition Text
Recommended Text if Motion Passes:

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C). . . .

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) Marking.
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

   (1) Maximum current setting
   (2) Date of calculation and setting
   (3) Identification of loads and sources associated with the current limiting feature
   (4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"
The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

**Recommended Text if Motion Fails:**

**750.30 Load Management.**
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C) . . .

**(C) Capacity of Branch Circuit, Feeder, or Service.**
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

**(1) Current Setpoint.**
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

1. For calculating the connected load per 220.70
2. For the maximum source current permitted by EMS control

**(2) System Malfunction.**
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

**(3) Settings.**
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

1. Located behind removable and sealable covers over the adjustment means
2. Located behind a cover or door that requires the use of a tool to open
3. Located behind locked doors accessible only to qualified personnel
4. Password protected with password accessible only to qualified personnel
5. Software that has password protected access to the adjusting means accessible to qualified personnel only

**(4) Marking.**
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

1. Maximum current setting
2. Date of calculation and setting
3. Identification of loads and sources associated with the current limiting feature
4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.
AMENDMENT BALLOT No. 70-74

Technical Committee on National Electrical Code®
NFPA 70, National Electrical Code®
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-74 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C). . .

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

(1) For calculating the connected load per 220.70
(2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

(1) Located behind removable and sealable covers over the adjustment means
(2) Located behind a cover or door that requires the use of a tool to open
(3) Located behind locked doors accessible only to qualified personnel
(4) Password protected with password accessible only to qualified personnel
(5) Software that has password protected access to the adjusting means accessible to qualified personnel only
(4) Marking.

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

(1) Maximum current setting
(2) Date of calculation and setting
(3) Identification of loads and sources associated with the current limiting feature
(4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-74 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads unless restricted in accordance with 750.30(A) through (C) . . . .

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded at any time.
**Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 8070**

**Recommended Text if Motion Passes:**

**750.30 Load Management.**

Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C). . . .

(C) **Capacity of Branch Circuit, Feeder, or Service.**

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) **Current Setpoint.**

A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

1. For calculating the connected load per 220.70
2. For the maximum source current permitted by EMS control

(2) **System Malfunction.**

The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) **Settings.**

Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

1. Located behind removable and sealable covers over the adjustment means
2. Located behind a cover or door that requires the use of a tool to open
3. Located behind locked doors accessible only to qualified personnel
4. Password protected with password accessible only to qualified personnel
5. Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) **Marking.**

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

1. Maximum current setting
2. Date of calculation and setting
3. Identification of loads and sources associated with the current limiting feature
4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"
Recommended Text if Motion Fails:

**750.30 Load Management.**

Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C) . . .

(C) **Capacity of Branch Circuit, Feeder, or Service.**

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) **Current Setpoint.**

A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

- (1) For calculating the connected load per 220.70
- (2) For the maximum source current permitted by EMS control

(2) **System Malfunction.**

The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) **Settings.**

Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

- (1) Located behind removable and sealable covers over the adjustment means
- (2) Located behind a cover or door that requires the use of a tool to open
- (3) Located behind locked doors accessible only to qualified personnel
- (4) Password protected with password accessible only to qualified personnel
- (5) Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) **Marking.**

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

- (1) Maximum current setting
- (2) Date of calculation and setting
- (3) Identification of loads and sources associated with the current limiting feature
- (4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.
IF YOU AGREE TO SUPPORT AMENDMENT 70-75 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows *(changes shown legislatively to the Second Draft)*:

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C) . . . .

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

(1) For calculating the connected load per 220.70
(2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

(1) Located behind removable and sealable covers over the adjustment means
(2) Located behind a cover or door that requires the use of a tool to open
(3) Located behind locked doors accessible only to qualified personnel
(4) Password protected with password accessible only to qualified personnel
(5) Software that has password protected access to the adjusting means accessible to qualified personnel only
(4) Marking.

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

(1) Maximum current setting
(2) Date of calculation and setting
(3) Identification of loads and sources associated with the current limiting feature
(4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-75 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads unless restricted in accordance with 750.30(A) through (C). . . .

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded at any time.
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 8070

Recommended Text if Motion Passes:

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C). . . .

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) Marking.
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

   (1) Maximum current setting
   (2) Date of calculation and setting
   (3) Identification of loads and sources associated with the current limiting feature
Recommended Text if Motion Fails:

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C) . . .

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) Marking.
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

   (1) Maximum current setting
   (2) Date of calculation and setting
   (3) Identification of loads and sources associated with the current limiting feature
   (4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.
AMENDMENT BALLOT No. 70-76

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-76 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C).

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded at any time. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) Marking.
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

1. Maximum current setting
2. Date of calculation and setting
3. Identification of loads and sources associated with the current limiting feature
4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

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IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-76 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads unless restricted in accordance with 750.30(A) through (C).

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded at any time.
Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 2024

Recommended Text if Motion Passes:

*Note: Public Comment 2024 was made on text that existed in Section 625.42(B) in the First Draft Report. The text from 625.42(B) was deleted and relocated to 750.30(C)(3) by Second Revisions (SCR 10 and SR 8070).

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C).

(A) Load Shedding Controls.

An energy management system shall not override the load shedding controls put in place to ensure the minimum electrical capacity for the following:

1. Fire pumps
2. Emergency systems
3. Legally required standby systems
4. Critical operations power systems

(B) Disconnection of Power.

An energy management system shall not cause disconnection of power to the following:

1. Elevators, escalators, moving walks, or stairway lift chairs
2. Positive mechanical ventilation for hazardous (classified) locations
3. Ventilation used to exhaust hazardous gas or reclassify an area
4. Circuits supplying emergency lighting
5. Essential electrical systems in health care facilities

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.

A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

1. For calculating the connected load per 220.70
2. For the maximum source current permitted by EMS control

(2) System Malfunction.

The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.

Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:
(1) Located behind removable and sealable covers over the adjustment means

(2) Located behind a cover or door that requires the use of a tool to open or that can be locked or sealed shut

(3) Located behind locked doors accessible only to qualified personnel

(4) Password protected with password accessible only to qualified personnel

(5) Commissioning software that has password protected with a password that is obtained from the manufacturer access to the adjusting means accessible to qualified personnel only

(4) Marking.

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

(1) Maximum current setting

(2) Date of calculation and setting

(3) Identification of loads and sources associated with the current limiting feature

(4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

Recommended Text if Motion Fails:

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C).

(A) Load Shedding Controls.

An energy management system shall not override the load shedding controls put in place to ensure the minimum electrical capacity for the following:

(1) Fire pumps

(2) Emergency systems

(3) Legally required standby systems

(4) Critical operations power systems

(B) Disconnection of Power.

An energy management system shall not cause disconnection of power to the following:

(1) Elevators, escalators, moving walks, or stairway lift chairs

(2) Positive mechanical ventilation for hazardous (classified) locations

(3) Ventilation used to exhaust hazardous gas or reclassify an area

(4) Circuits supplying emergency lighting

(5) Essential electrical systems in health care facilities

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

**1) Current Setpoint.**

A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

1. For calculating the connected load per 220.70
2. For the maximum source current permitted by EMS control

**2) System Malfunction.**

The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

**3) Settings.**

Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

1. Located behind removable and sealable covers over the adjustment means
2. Located behind a cover or door that requires the use of a tool to open
3. Located behind locked doors accessible only to qualified personnel
4. Password protected with password accessible only to qualified personnel
5. Software that has password protected access to the adjusting means accessible to qualified personnel only

**4) Marking.**

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

1. Maximum current setting
2. Date of calculation and setting
3. Identification of loads and sources associated with the current limiting feature
4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.
AMENDMENT BALLOT No. 70-77

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-77 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

*Note: Public Comment 2024 was made on text that existed in Section 625.42(B) in the First Draft Report. The text from 625.42(B) was deleted and relocated to 750.30(C)(3) by Second Revisions (SCR 10 and SR 8070).

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C).

(A) Load Shedding Controls.
An energy management system shall not override the load shedding controls put in place to ensure the minimum electrical capacity for the following:

1. Fire pumps
2. Emergency systems
3. Legally required standby systems
4. Critical operations power systems

(B) Disconnection of Power.
An energy management system shall not cause disconnection of power to the following:

1. Elevators, escalators, moving walks, or stairway lift chairs
2. Positive mechanical ventilation for hazardous (classified) locations
3. Ventilation used to exhaust hazardous gas or reclassify an area
4. Circuits supplying emergency lighting
5. Essential electrical systems in health care facilities

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

1. For calculating the connected load per 220.70
2. For the maximum source current permitted by EMS control

(2) System Malfunction.

The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.

Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

1. Located behind removable and sealable covers over the adjustment means
2. Located behind a cover or door that requires the use of a tool to open or that can be locked or sealed shut
3. Located behind locked doors accessible only to qualified personnel
4. Password protected with password accessible only to qualified personnel

(2) (5) Commissioning software that has password protected with a password that is obtained from the manufacturer access to the adjusting means accessible to qualified personnel only

(4) Marking.

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

1. Maximum current setting
2. Date of calculation and setting
3. Identification of loads and sources associated with the current limiting feature
4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-77 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

*Note: Public Comment 2024 was made on text that existed in Section 625.42(B) in the First Draft Report. The text from 625.42(B) was deleted and relocated to 750.30(C)(3) by Second Revisions (SCR 10 and SR 8070). The previous edition text is shown for both affected sections for complete transparency should the committee not agree with the motion passed by the floor.
625.42 Rating.

The power transfer equipment shall have sufficient rating to supply the load served. Electric vehicle charging loads shall be considered to be continuous loads for the purposes of this article. Service and feeder shall be sized in accordance with the product ratings. Where an automatic load management system is used, the maximum equipment load on a service and feeder shall be the maximum load permitted by the automatic load management system.

Adjustable settings shall be permitted on fixed-in-place equipment only. If adjustments have an impact on the rating label, those changes shall be in accordance with manufacturer’s instructions, and the adjusted rating shall appear with sufficient durability to withstand the environment involved on the rating label. Electric vehicle supply equipment with restricted access to an ampere adjusting means shall be permitted to have ampere ratings that are equal to the adjusted current setting. Sizing the service and feeder to match the adjusting means shall be permitted. Restricted access shall prevent the user from gaining access to the adjusting means. Restricted access shall be accomplished by at least one of the following:

1. A cover or door that requires the use of a tool to open
2. Locked doors accessible only to qualified personnel
3. Password protected commissioning software accessible only to qualified personnel

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750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads unless restricted in accordance with 750.30(A) through (C).

(A) Load Shedding Controls.

An energy management system shall not override the load shedding controls put in place to ensure the minimum electrical capacity for the following:

1. Fire pumps
2. Emergency systems
3. Legally required standby systems
4. Critical operations power systems

(B) Disconnection of Power.

An energy management system shall not be permitted to cause disconnection of power to the following:
(1) Elevators, escalators, moving walks, or stairway lift chairs

(2) Positive mechanical ventilation for hazardous (classified) locations

(3) Ventilation used to exhaust hazardous gas or reclassify an area

(4) Circuits supplying emergency lighting

(5) Essential electrical systems in health care facilities

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded at any time.
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 8070

**Recommended Text if Motion Passes:**

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C). . . .

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

1. **Current Setpoint.**

A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   1. For calculating the connected load per 220.70
   2. For the maximum source current permitted by EMS control

2. **System Malfunction.**

The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

3. **Settings.**

Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   1. Located behind removable and sealable covers over the adjustment means
   2. Located behind a cover or door that requires the use of a tool to open
   3. Located behind locked doors accessible only to qualified personnel
   4. Password protected with password accessible only to qualified personnel
   5. Software that has password protected access to the adjusting means accessible to qualified personnel only

4. **Marking.**

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

   1. Maximum current setting
   2. Date of calculation and setting
   3. Identification of loads and sources associated with the current limiting feature
   4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"
The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

Recommended Text if Motion Fails:

**750.30 Load Management.**
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C). . . .

**(C) Capacity of Branch Circuit, Feeder, or Service.**
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

**(1) Current Setpoint.**
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

1. For calculating the connected load per 220.70
2. For the maximum source current permitted by EMS control

**(2) System Malfunction.**
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

**(3) Settings.**
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

1. Located behind removable and sealable covers over the adjustment means
2. Located behind a cover or door that requires the use of a tool to open
3. Located behind locked doors accessible only to qualified personnel
4. Password protected with password accessible only to qualified personnel
5. Software that has password protected access to the adjusting means accessible to qualified personnel only

**(4) Marking.**
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

1. Maximum current setting
2. Date of calculation and setting
3. Identification of loads and sources associated with the current limiting feature
4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.
AMENDMENT BALLOT No. 70-78

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-78 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C). . . .

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only
(4) Marking.

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

1. Maximum current setting
2. Date of calculation and setting
3. Identification of loads and sources associated with the current limiting feature
4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

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IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-78 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads unless restricted in accordance with 750.30(A) through (C) . . .

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded at any time.
**Certified Amending Motion to Reject Second Correlating Revision No. 46**

<table>
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**Recommended Text if Motion Passes:**

*Note: The revision to return the term “Type IM” to “Type P” throughout the standard will occur in the following sections (some of which have been renumbered due to other, unrelated revisions during this cycle):*

- Article 100
- Table 305.3
- 501.10(A)(1)(8)
- 501.10(A)(2)(4)
- 501.10(B)(1)(9)
- 501.10(B)(2)(8)
- 501.15(D)(1)
- 501.141(B)(1)
- 502.10(A)(1)(7)
- 502.10(A)(2)(8)
- 502.10(B)(1)(10)
- 503.10(A)(1)(6)
- 503.10(A)(3)(7)
- 505.15(B)(1)(10)
- 505.15(B)(2)(4)
- 505.15(C)(1)(10)
- 505.15(C)(2)(4)

**Recommended Text if Motion Fails:**

*Note: “Type P” revised to “Type “IM” globally (i.e. throughout the standard)*
AMENDMENT BALLOT No. 70-82

Technical Committee on National Electrical Code®
NFPA 70, National Electrical Code®
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-82 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

*Note: The revision to return the term “Type IM” to “Type P” throughout the standard will occur in the following sections (some of which have been renumbered due to other, unrelated revisions during this cycle):

Article 100
Table 305.3
501.10(A)(1)(8)
501.10(A)(2)(4)
501.10(B)(1)(9)
501.10(B)(2)(8)
501.15(D)(1)
501.141(B)(1)
502.10(A)(1)(7)
502.10(A)(2)(8)
502.10(B)(1)(10)
503.10(A)(1)(6)
503.10(A)(3)(7)
505.15(B)(1)(10)
505.15(B)(2)(4)
505.15(C)(1)(10)
505.15(C)(2)(4)
IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-82 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

*Note: The following previous edition locations contain the term “Type P”:

501.10(A)(1)(7)
501.10(A)(2)(4)
501.10(B)(1)(9)
501.15(D)(1)
501.141(B)(1)
501.15(B)(1)(7)
501.15(D)(2)(8)
502.10(B)(1)(10)
505.15(B)(1)(10)
505.15(B)(2)(4)
505.15(C)(1)(10)
505.15(C)(2)(4)
Certified Amending Motion to Reject Second Revision No. 8298 and any related portions of First Revisions and First Correlating Revisions

Recommended Text if Motion Passes:

Article 337 Industrial-Mobile Type P Cable ; Type IM

Part I. General

337.1 Scope.

This article covers the use, installation, and construction specifications for up through 2000 volt drilling rig cable, industrial mobile Type P - Type IM (armored and unarmored).

337.6 Listing Requirements.

Type IM P cables and associated fittings shall be listed.

Part II. Installation

337.10 Uses Permitted.

Type IM P cable shall be permitted to be used as follows:

(1) Under engineering supervision in industrial installations where conditions of maintenance and supervision ensure that only qualified persons monitor and service the system.

(2) In hazardous (classified) locations where specifically permitted by other articles in this Code.

337.12 Uses Not Permitted.

Type IM P cable shall not be installed or used for the following:

(1) Where it will be exposed to physical damage

(2) Where not specifically permitted by other articles in the Code

337.24 Bending Radius.

The minimum bending radii during installations and handling in service shall be adequate to prevent damage to the cable.

337.30 Securing and Supporting.

Type IM P cable shall be supported and secured by cable ties listed and identified for securement and support; straps, hangers, or similar fittings; or other approved means designed and installed so as not to damage the cable.

337.31 Single Conductors.

Where single-conductor cables are used, the installation shall comply with 300.20.

337.80 Ampacity.

The ampacity of Type IM P cable shall be determined in accordance with 310.14(A) or (B) for 14 AWG and larger conductors. For 18 AWG and 16 AWG conductors, the ampacities shall be determined in accordance with Table 402.5 or 310.14(B). When installed in cable tray, the ampacities shall be permitted to be...
determined in accordance with 392.80. The installation shall not exceed the temperature ratings of terminations and equipment.

Part III. Construction Specifications

337.104 Conductors.
Conductors shall be of tinned copper. Conductors shall employ flexible stranding. The minimum conductor size shall be 18 AWG.

337.108 Equipment Grounding Conductor.
An equipment grounding conductor complying with 250.122 shall be provided within multiconductor Type IM P cable.

337.112 Insulation.
Insulated conductors shall be a thermoset type identified for use in Type IM P cable. All conductors shall be suitable for wet locations. The minimum wall thickness shall be 0.76 mm (30 mils).

337.114 Shield.
Metallic shield(s) shall be permitted over a single conductor or groups of conductors.

337.115 Jacket.
Multiconductor cables shall have an overall nonmetallic jacket that is impervious to moisture, corrosion resistant, and sunlight resistant. When installed external to an enclosure or industrial machinery, single conductor cables shall have an overall nonmetallic jacket that is impervious to moisture, corrosion resistant, and sunlight resistant. Single conductor cables rated 2000 volts with conductor sizes equal to or larger than 4/0 AWG shall be permitted to use an increased insulation thickness in lieu of using a separate cable jacket. When the increased insulation thickness is used, the insulation material shall be sunlight resistant.

337.116 Armor.
Armor shall be permitted over the jacket. If provided, the armor or metallic covering shall be a braided basket weave type consisting of wire laid closely together, flat and parallel, and forming a basket weave that shall firmly grip the cable. The wire shall be commercial bronze, tinned copper, stainless steel, or aluminum. The armor shall not be used as a current-carrying conductor or as an equipment grounding conductor. A nonmetallic jacket that conforms to 337.115 shall be provided over the armor.

337.120 Marking.
Type IM P cable shall be marked in accordance with 310.8. When an armor is provided, the cable shall be marked accordingly.

Recommended Text if Motion Fails:
Article 337 Industrial Mobile Cable: Type IM

Part I. General

337.1 Scope.
This article covers the use, installation, and construction specifications for up through 2000 volt industrial mobile cable, Type IM (armored and unarmored).

337.6 Listing Requirements.
Type IM cables and associated fittings shall be listed.
Part II. Installation

337.10 Uses Permitted.
Type IM cable shall be permitted to be used as follows:

(1) Under engineering supervision in industrial installations where conditions of maintenance and supervision ensure that only qualified persons monitor and service the system.
(2) In hazardous (classified) locations where specifically permitted by other articles in this Code.

337.12 Uses Not Permitted.
Type IM cable shall not be installed or used for the following:

(1) Where it will be exposed to physical damage
(2) Where not specifically permitted by other articles in the Code

337.24 Bending Radius.
The minimum bending radii during installations and handling in service shall be adequate to prevent damage to the cable.

337.30 Securing and Supporting.
Type IM cable shall be supported and secured by cable ties listed and identified for securement and support; straps, hangers, or similar fittings; or other approved means designed and installed so as not to damage the cable.

337.31 Single Conductors.
Where single-conductor cables are used, the installation shall comply with 300.20.

337.80 Ampacity.
The ampacity of Type IM cable shall be determined in accordance with 310.14(A) or (B) for 14 AWG and larger conductors. For 18 AWG and 16 AWG conductors, the ampacities shall be determined in accordance with Table 402.5 or 310.14(B). When installed in cable tray, the ampacities shall be permitted to be determined in accordance with 392.80. The installation shall not exceed the temperature ratings of terminations and equipment.

Part III. Construction Specifications

337.104 Conductors.
Conductors shall be of tinned copper. Conductors shall employ flexible stranding. The minimum conductor size shall be 18 AWG.

337.108 Equipment Grounding Conductor.
An equipment grounding conductor complying with 250.122 shall be provided within multiconductor Type IM cable.

337.112 Insulation.
Insulated conductors shall be a thermoset type identified for use in Type IM cable. All conductors shall be suitable for wet locations. The minimum wall thickness shall be 0.76 mm (30 mils).

337.114 Shield.
Metallic shield(s) shall be permitted over a single conductor or groups of conductors.
### 337.115 Jacket.

Multiconductor cables shall have an overall nonmetallic jacket that is impervious to moisture, corrosion resistant, and sunlight resistant. When installed external to an enclosure or industrial machinery, single conductor cables shall have an overall nonmetallic jacket that is impervious to moisture, corrosion resistant, and sunlight resistant. Single conductor cables rated 2000 volts with conductor sizes equal to or larger than 4/0 AWG shall be permitted to use an increased insulation thickness in lieu of using a separate cable jacket. When the increased insulation thickness is used, the insulation material shall be sunlight resistant.

### 337.116 Armor.

Armor shall be permitted over the jacket. If provided, the armor or metallic covering shall be a braided basket weave type consisting of wire laid closely together, flat and parallel, and forming a basket weave that shall firmly grip the cable. The wire shall be commercial bronze, tinned copper, stainless steel, or aluminum. The armor shall not be used as a current-carrying conductor or as an equipment grounding conductor. A nonmetallic jacket that conforms to 337.115 shall be provided over the armor.

### 337.120 Marking.

Type IM cable shall be marked in accordance with 310.8. When an armor is provided, the cable shall be marked accordingly.
### Certified Amending Motion to Accept Public Comment No. 1438

**Recommended Text if Motion Passes:**

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

1. Garages that have floors located at or below grade level
2. Accessory buildings
3. Boathouses

This requirement shall become effective January 1, 2026 for heating/ventilating/air-conditioning (HVAC) equipment.

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

*Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).*

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**Recommended Text if Motion Fails:**

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

1. Garages that have floors located at or below grade level
2. Accessory buildings
3. Boathouses

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

*Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).*
AMENDMENT BALLOT No. 70-84

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-84 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

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

(1) Garages that have floors located at or below grade level
(2) Accessory buildings
(3) Boathouses

This requirement shall become effective January 1, 2026 for heating/ventilating/air-conditioning (HVAC) equipment.

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

Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-84 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

210.8(F) Outdoor Outlets.
All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel. This requirement shall become effective on January 1, 2023 for mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.
Informational Note: Power conversion equipment is the term used to describe the components used in HVAC equipment that is commonly referred to as a variable speed drive. The use of power conversion equipment to control compressor speed differs from multistage compressor speed control.

Exception: Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).
### Certified Amending Motion to Reject Second Revision No. 8133 and any related portions of First Revision and First Correlating Revisions

<table>
<thead>
<tr>
<th>CAM No.</th>
<th>Recommended Text if Motion Passes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>70-85</td>
<td><strong>353.48 Joints.</strong>&lt;br&gt;All joints between lengths of conduit, and between conduit and couplings, fittings, and boxes shall be made by an approved method identified by the manufacturer. Heat fusion or butt fusion joints shall not be permitted.</td>
</tr>
<tr>
<td></td>
<td><strong>Informational Note:</strong> HDPE conduit can be joined using either heat fusion, electrofusion, or mechanical fittings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Text if Motion Fails:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>353.48 Joints.</strong>&lt;br&gt;All joints between lengths of conduit, fittings, and boxes shall be made by a method identified by the manufacturer. Heat fusion or butt fusion joints shall not be permitted.</td>
</tr>
<tr>
<td>CAM No. 70-88</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td><strong>Certified Amending Motion to Accept Public Comment No. 583</strong></td>
</tr>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td>225.42 (E) <strong>Ratings.</strong></td>
</tr>
<tr>
<td>SPDs shall have a nominal discharge current rating (I_n) of not less than 10kA.</td>
</tr>
<tr>
<td><em>Note: The Informational Note following (E) is not specific to (E) and will be retained to follow (D) should this Motion pass on the floor of Tech Session. Because motion seeks to return to previous edition text, no ballot is required.</em></td>
</tr>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td>225.42 (E) <strong>Ratings.</strong></td>
</tr>
<tr>
<td>SPDs shall have a nominal discharge current rating (I_n) of not less than 10kA.</td>
</tr>
<tr>
<td>CAM No. 70-89</td>
</tr>
<tr>
<td>---------------</td>
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<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td>215.18 (E) Ratings.</td>
</tr>
<tr>
<td>SPDs shall have a nominal discharge current rating (In) of not less than 10kA.</td>
</tr>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td>215.18 (E) Ratings.</td>
</tr>
<tr>
<td>SPDs shall have a nominal discharge current rating (In) of not less than 10kA.</td>
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</table>
Certified Amending Motion to Accept Public Comment No. 522

<table>
<thead>
<tr>
<th>CAM No. 70-90</th>
<th>Recommended Text if Motion Passes:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>230.67(E) Ratings.</strong></td>
</tr>
<tr>
<td></td>
<td>SPDs shall have a nominal discharge current rating (I&lt;sub&gt;n&lt;/sub&gt;) of not less than 10kA.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Text if Motion Fails:</th>
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<tbody>
<tr>
<td><strong>230.67 (E) Ratings.</strong></td>
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<tr>
<td>SPDs shall have a nominal discharge current rating (I&lt;sub&gt;n&lt;/sub&gt;) of not less than 10kA.</td>
</tr>
</tbody>
</table>
## Recommended Text if Motion Passes:

**210.8 (F) Outdoor Outlets.**

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

1. Garages that have floors located at or below grade level
2. Accessory buildings
3. Boathouses

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

*Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).*

## Recommended Text if Motion Fails:

**210.8 (F) Outdoor Outlets.**

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

1. Garages that have floors located at or below grade level
2. Accessory buildings
3. Boathouses

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

*Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).*
AMENDMENT BALLOT No. 70-91

Technical Committee on National Electrical Code®
NFPA 70, National Electrical Code®
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-91 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

210.8(F) Outdoor Outlets.
For dwellings, all outdoor outlets, other than those covered in 210.8(A), Exception No. 1, including outlets installed in the following locations, and supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, shall be provided with GFCI protection:
1. Garages that have floors located at or below grade level
2. Accessory buildings
3. Boathouses
If equipment supplied by an outlet covered under the requirements of this section is replaced, the outlet shall be supplied with GFCI protection.

Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-91 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

210.8(F) Outdoor Outlets.
All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel. This requirement shall become effective on January 1, 2023 for mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.

Informational Note: Power conversion equipment is the term used to describe the components used in HVAC equipment that is commonly referred to as a variable speed drive. The use of power conversion equipment to control compressor speed differs from multistage compressor speed control.

Exception: Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).
Certified Amending Motion to Reject Second Revision No. 7956

**Recommended Text if Motion Passes:**

**210.8**  
(A) ** Dwelling Units.**  
All 125-volt through 250-volt receptacles installed in the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

1. Bathrooms  
2. Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use  
3. Outdoors  
4. Crawl spaces — at or below grade level  
5. Basements  
6. Kitchens — where the receptacles are installed to serve the countertop surfaces  
7. Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking  
8. Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink  
9. Boathouses  
10. Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall  
11. Laundry areas  
12. Indoor damp and wet locations

*Exception No. 1:* Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

*Exception No. 2:* A receptacle supplying only a permanently installed premises security system shall be permitted to omit ground-fault circuit-interrupter protection.

*Exception No. 3:* Listed weight-supporting ceiling receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WSAF) installed for the purpose of supporting a ceiling luminaire or ceiling-suspended fan shall be permitted to omit ground-fault circuit-interrupter protection. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.

*Exception No. 4:* Factory-installed receptacles that are not readily accessible and are mounted internally to bathroom exhaust fan assemblies shall not require GFCI protection unless required by the installation instructions or listing.

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems.

---

**Recommended Text if Motion Fails:**

**210.8**  
(A) ** Dwelling Units.**
All 125-volt through 250-volt receptacles installed in the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

(1) Bathrooms
(2) Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use
(3) Outdoors
(4) Crawl spaces — at or below grade level
(5) Basements
(6) Kitchens
(7) Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking
(8) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
(9) Boathouses
(10) Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall
(11) Laundry areas
(12) Indoor damp and wet locations

Exception No. 1: Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

Exception No. 2: A receptacle supplying only a permanently installed premises security system shall be permitted to omit ground-fault circuit-interrupter protection.

Exception No. 3: Listed weight-supporting ceiling receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WSAF) installed for the purpose of supporting a ceiling luminaire or ceiling-suspended fan shall be permitted to omit ground-fault circuit-interrupter protection. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.

Exception No. 4: Factory-installed receptacles that are not readily accessible and are mounted internally to bathroom exhaust fan assemblies shall not require GFCI protection unless required by the installation instructions or listing.

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems.
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 7966

<table>
<thead>
<tr>
<th>Recommended Text if Motion Passes:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>210.8</strong></td>
</tr>
<tr>
<td><em>(D) Specific Appliances.</em></td>
</tr>
<tr>
<td>GFCI protection shall be provided for the branch circuit or outlet supplying the following appliances rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase:</td>
</tr>
<tr>
<td>1. Automotive vacuum machines</td>
</tr>
<tr>
<td>2. Drinking water coolers and bottle fill stations</td>
</tr>
<tr>
<td>3. High-pressure spray washing machines</td>
</tr>
<tr>
<td>4. Tire inflation machines</td>
</tr>
<tr>
<td>5. Vending machines</td>
</tr>
<tr>
<td>6. Sump pumps</td>
</tr>
<tr>
<td>7. Dishwashers</td>
</tr>
<tr>
<td><em>(8) Electric ranges</em></td>
</tr>
<tr>
<td><em>(9) Wall-mounted ovens</em></td>
</tr>
<tr>
<td><em>(10) Counter-mounted cooking units</em></td>
</tr>
<tr>
<td><em>(11) Clothes dryers</em></td>
</tr>
<tr>
<td><em>(12) Microwave ovens</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Text if Motion Fails:</th>
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</thead>
<tbody>
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<td><strong>210.8</strong></td>
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<td><em>(D) Specific Appliances.</em></td>
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<td>GFCI protection shall be provided for the branch circuit or outlet supplying the following appliances rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase:</td>
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<tr>
<td><em>(11) Clothes dryers</em></td>
</tr>
<tr>
<td><em>(12) Microwave ovens</em></td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 70-95

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-95 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

210.8

(D) Specific Appliances.

GFCI protection shall be provided for the branch circuit or outlet supplying the following appliances rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase:

(1) Automotive vacuum machines
(2) Drinking water coolers and bottle fill stations
(3) High-pressure spray washing machines
(4) Tire inflation machines
(5) Vending machines
(6) Sump pumps
(7) Dishwashers
(8) Electric ranges
(9) Wall-mounted ovens
(10) Counter mounted cooking units
(11) Clothes dryers
(12) Microwave ovens

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-95 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

210.8

(D) Specific Appliances.

Unless GFCI protection is provided in accordance with 422.5(B)(3) through (B)(5), the outlets supplying the appliances specified in 422.5(A) shall have GFCI protection in accordance with 422.5(B)(1) or (B)(2).

Where the appliance is a vending machine as specified in 422.5(A)(5) and GFCI protection is not provided in accordance with 422.5(B)(3) or (B)(4), branch circuits supplying vending machines shall have GFCI protection in accordance with 422.5(B)(1) or (B)(2).
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 8070

**Recommended Text if Motion Passes:**

**750.30 Load Management.**
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C).

(C) **Capacity of Branch Circuit, Feeder, or Service.**
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

1. **Current Setpoint.**
   A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:
   1. For calculating the connected load per 220.70
   2. For the maximum source current permitted by EMS control

2. **System Malfunction.**
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

3. **Settings.**
   Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:
   1. Located behind removable and sealable covers over the adjustment means
   2. Located behind a cover or door that requires the use of a tool to open
   3. Located behind locked doors accessible only to qualified personnel
   4. Password protected with password accessible only to qualified personnel
   5. Software that has password protected access to the adjusting means accessible to qualified personnel only

4. **Marking.**
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:
   1. Maximum Current setting
   2. Date of calculation and setting
   3. Identification of loads and sources associated with the current limiting feature
   4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"
The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

Recommended Text if Motion Fails:

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C) . . .

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) Marking.
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

   (1) Maximum current setting
   (2) Date of calculation and setting
   (3) Identification of loads and sources associated with the current limiting feature
   (4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.
AMENDMENT BALLOT No. 70-96

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-96 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C).

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) Marking.
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

1. Maximum Current setting
2. Date of calculation and setting
3. Identification of loads and sources associated with the current limiting feature
4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-96 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads unless restricted in accordance with 750.30(A) through (C). . . .

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded at any time.
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 8070

Recommended Text if Motion Passes:

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C) . . .

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:

   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:

   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only

(4) Marking.
The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

   (1) Maximum Current setting
   (2) Date of calculation and setting
   (3) Identification of loads and sources associated with the current limiting feature
   (4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"
The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

**Recommended Text if Motion Fails:**

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C).

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

1. **Current Setpoint.**
   A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:
   1. For calculating the connected load per 220.70
   2. For the maximum source current permitted by EMS control

2. **System Malfunction.**
   The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

3. **Settings.**
   Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:
   1. Located behind removable and sealable covers over the adjustment means
   2. Located behind a cover or door that requires the use of a tool to open
   3. Located behind locked doors accessible only to qualified personnel
   4. Password protected with password accessible only to qualified personnel
   5. Software that has password protected access to the adjusting means accessible to qualified personnel only

4. **Marking.**
   The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:
   1. Maximum current setting
   2. Date of calculation and setting
   3. Identification of loads and sources associated with the current limiting feature
   4. The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.
IF YOU AGREE TO SUPPORT AMENDMENT 70-97 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

750.30 Load Management.
Energy management systems shall be permitted to monitor and control electrical loads and sources in accordance with 750.30(A) through (C) . . .

(C) Capacity of Branch Circuit, Feeder, or Service.
An energy management system shall not cause a branch circuit, feeder, or service to be overloaded. If an EMS is used to limit the current on a conductor, 750.30(C)(1) through (C)(4) shall apply:

(1) Current Setpoint.
A single value equal to the maximum ampere setpoint of the EMS shall be permitted for one or more of the following:
   (1) For calculating the connected load per 220.70
   (2) For the maximum source current permitted by EMS control

(2) System Malfunction.
The EMS shall use monitoring and controls to automatically cease current flow upon malfunction of the EMS.

(3) Settings.
Adjustable settings shall be permitted if access to the settings is accomplished by at least one of the following:
   (1) Located behind removable and sealable covers over the adjustment means
   (2) Located behind a cover or door that requires the use of a tool to open
   (3) Located behind locked doors accessible only to qualified personnel
   (4) Password protected with password accessible only to qualified personnel
   (5) Software that has password protected access to the adjusting means accessible to qualified personnel only
(4) Marking.

The equipment that supplies the branch circuit, feeder, or service shall be field marked with the following information:

(1) Maximum Current setting

(2) Date of calculation and setting

(3) Identification of loads and sources associated with the current limiting feature

(3) (4) The following or equivalent wording: "The setting for the EMS current limiting feature shall not be bypassed"

The markings shall meet the requirements in 110.21(B) and shall be located such that they are clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

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IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-97 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

750.30 Load Management.

Energy management systems shall be permitted to monitor and control electrical loads unless restricted in accordance with 750.30(A) through (C). . . .

(C) Capacity of Branch Circuit, Feeder, or Service.

An energy management system shall not cause a branch circuit, feeder, or service to be overloaded at any time.
Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 1425

<table>
<thead>
<tr>
<th>CAM No.</th>
<th>70-101</th>
</tr>
</thead>
</table>

**Recommended Text if Motion Passes:**

**210.8(F) Outdoor Outlets.**

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

1. Garages that have floors located at or below grade level
2. Accessory buildings
3. Boathouses

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

*Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).*

**Recommended Text if Motion Fails:**

**210.8(F) Outdoor Outlets.**

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

1. Garages that have floors located at or below grade level
2. Accessory buildings
3. Boathouses

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

*Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).*
IF YOU AGREE TO SUPPORT AMENDMENT 70-101 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

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

(1) Garages that have floors located at or below grade level
(2) Accessory buildings
(3) Boathouses

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

Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-101 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

210.8(F) Outdoor Outlets.
All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel. This requirement shall become effective on January 1, 2023 for mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.

Informational Note: Power conversion equipment is the term used to describe the components used in HVAC equipment that is commonly referred to as a variable speed drive. The use of power conversion equipment to control compressor speed differs from multistage compressor speed control.

Exception: Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).
Certified Amending Motion to Accept Committee Comment No. 8204

<table>
<thead>
<tr>
<th>Recommended Text if Motion Passes:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>210.12</strong></td>
</tr>
<tr>
<td><em>(B) Dwelling Units.</em></td>
</tr>
<tr>
<td>All 120-volt, single-phase, 10-, 15-, and 20-ampere branch circuits supplying outlets or devices installed in the following locations shall be protected by any of the means described in 210.12(A)(1) through (A)(6):</td>
</tr>
<tr>
<td>(1) Kitchens</td>
</tr>
<tr>
<td>(2) Family rooms</td>
</tr>
<tr>
<td>(3) Dining rooms</td>
</tr>
<tr>
<td>(4) Living rooms</td>
</tr>
<tr>
<td>(5) Parlors</td>
</tr>
<tr>
<td>(6) Libraries</td>
</tr>
<tr>
<td>(7) Dens</td>
</tr>
<tr>
<td>(8) Bedrooms</td>
</tr>
<tr>
<td>(9) Sunrooms</td>
</tr>
<tr>
<td>(10) Recreation rooms</td>
</tr>
<tr>
<td>(11) Closets</td>
</tr>
<tr>
<td>(12) Hallways</td>
</tr>
<tr>
<td>(13) Laundry areas</td>
</tr>
<tr>
<td>(14) Similar areas</td>
</tr>
<tr>
<td>(15) Bathrooms. This requirement shall become effective January 1, 2025.</td>
</tr>
</tbody>
</table>

*Exception No. 1: AFCI protection shall not be required for an individual branch circuit supplying a fire alarm system installed in accordance with 760.41(B) or 760.121(B). The branch circuit shall be installed in a metal raceway, metal auxiliary gutter, steel-armored cable, or Type MC or Type AC cable meeting the applicable requirements of 250.118, with metal boxes, conduit bodies, and enclosures.*

*Exception No. 2: AFCI protection shall not be required for the individual branch circuit supplying an outlet for arc welding equipment in a dwelling unit until January 1, 2025.*

*Informational Note No. 1: See NFPA 72-2022, National Fire Alarm and Signaling Code, 29.9.4(5), for information on secondary power source requirements for smoke alarms installed in dwelling units.*

*Informational Note No. 2: See 760.41(B) and 760.121(B) for power source requirements for fire alarm systems.*

<table>
<thead>
<tr>
<th>Recommended Text if Motion Fails:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>210.12</strong></td>
</tr>
<tr>
<td><em>(B) Dwelling Units.</em></td>
</tr>
<tr>
<td>All 120-volt, single-phase, 10-, 15-, and 20-ampere branch circuits supplying outlets or devices installed in the following locations shall be protected by any of the means described in 210.12(A)(1) through (A)(6):</td>
</tr>
<tr>
<td>(1) Kitchens</td>
</tr>
<tr>
<td>(2) Family rooms</td>
</tr>
<tr>
<td>(3) Dining rooms</td>
</tr>
<tr>
<td>(4) Living rooms</td>
</tr>
<tr>
<td>(5) Parlors</td>
</tr>
</tbody>
</table>
(6) Libraries
(7) Dens
(8) Bedrooms
(9) Sunrooms
(10) Recreation rooms
(11) Closets
(12) Hallways
(13) Laundry areas
(14) Similar areas

Exception No. 1: AFCI protection shall not be required for an individual branch circuit supplying a fire alarm system installed in accordance with 760.41(B) or 760.121(B). The branch circuit shall be installed in a metal raceway, metal auxiliary gutter, steel-armored cable, or Type MC or Type AC cable meeting the applicable requirements of 250.118, with metal boxes, conduit bodies, and enclosures.

Exception No. 2: AFCI protection shall not be required for the individual branch circuit supplying an outlet for arc welding equipment in a dwelling unit until January 1, 2025.

Informational Note No. 1: See NFPA 72-2022, National Fire Alarm and Signaling Code, 29.9.4(5), for information on secondary power source requirements for smoke alarms installed in dwelling units.

Informational Note No. 2: See 760.41(B) and 760.121(B) for power source requirements for fire alarm systems.
IF YOU AGREE TO SUPPORT AMENDMENT 70-105 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

210.12
(B) Dwelling Units.
All 120-volt, single-phase, 10-, 15-, and 20-ampere branch circuits supplying outlets or devices installed in the following locations shall be protected by any of the means described in 210.12(A)(1) through (A)(6):

1. Kitchens
2. Family rooms
3. Dining rooms
4. Living rooms
5. Parlors
6. Libraries
7. Dens
8. Bedrooms
9. Sunrooms
10. Recreation rooms
11. Closets
12. Hallways
13. Laundry areas
14. Similar areas
15. Bathrooms. This requirement shall become effective January 1, 2025.

Exception No. 1: AFCI protection shall not be required for an individual branch circuit supplying a fire alarm system installed in accordance with 760.41(B) or 760.121(B). The branch circuit shall be installed in a metal raceway, metal auxiliary gutter, steel-armored cable, or Type MC or Type AC cable meeting the applicable requirements of 250.118, with metal boxes, conduit bodies, and enclosures.

Exception No. 2: AFCI protection shall not be required for the individual branch circuit supplying an outlet for arc welding equipment in a dwelling unit until January 1, 2025.

Informational Note No. 1: See NFPA 72-2022, National Fire Alarm and Signaling Code, 29.9.4(5), for information on secondary power source requirements for smoke alarms installed in dwelling units.
Informational Note No. 2: See 760.41(B) and 760.121(B) for power source requirements for fire alarm systems.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-105 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
Certified Amending Motion to Reject Second Revision No. 8036

Recommended Text if Motion Passes:

708.7 Cybersecurity.
COPS that are connected to a communication network and have the capability to permit control of any portion of the premises COPS shall comply with either of the following:

(1) The ability to control the system is limited to a direct connection through a local nonnetworked interface.
(2) It is connected through a networked interface complying with one of the following methods:
   (a) The system and associated software are identified as being evaluated for cybersecurity.
   (b) A cybersecurity assessment is conducted on the connected system to determine vulnerabilities to cyberattacks.

The cybersecurity assessment shall be conducted when the system configuration changes and at not more than 5-year intervals.

Documentation of the evaluation, assessment, and certification shall be made available to those authorized to inspect, operate, and maintain the system.

Informational Note No. 1: See ANSI/ISA 62443, Cybersecurity Standards series; UL 2900, Cybersecurity Standards series; or the NIST Framework for Improving Critical infrastructure Cybersecurity, Version 1.1, for assessment requirements.

Informational Note No. 2: Examples of the commissioning certification used to demonstrate the system has been investigated for cybersecurity vulnerabilities could be one of the following:
   (1) The ISA Security Compliance Institute (ISCI) conformity assessment program
   (2) Certification of compliance by a nationally recognized test laboratory
   (3) Manufacturer certification for the specific type and brand of system provided

Recommended Text if Motion Fails:

No text recommended
AMENDMENT BALLOT No. 70-107

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-107 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

708.7 Cybersecurity.
COPS that are connected to a communication network and have the capability to permit control of any portion of the premises COPS shall comply with either of the following:

(1) The ability to control the system is limited to a direct connection through a local nonnetworked interface.
(2) It is connected through a networked interface complying with one of the following methods:
   (a) The system and associated software are identified as being evaluated for cybersecurity.
   (b) A cybersecurity assessment is conducted on the connected system to determine vulnerabilities to cyberattacks.

The cybersecurity assessment shall be conducted when the system configuration changes and at not more than 5-year intervals.

Documentation of the evaluation, assessment, and certification shall be made available to those authorized to inspect, operate, and maintain the system.

Informational Note No. 1: See ANSI/ISA 62443, Cybersecurity Standards series; UL 2900, Cybersecurity Standards series; or the NIST Framework for Improving Critical infrastructure Cybersecurity, Version 1.1, for assessment requirements.

Informational Note No. 2: Examples of the commissioning certification used to demonstrate the system has been investigated for cybersecurity vulnerabilities could be one of the following:
   (1) The ISA Security Compliance Institute (ISCI) conformity assessment program
   (2) Certification of compliance by a nationally recognized test laboratory
   (3) Manufacturer certification for the specific type and brand of system provided

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-107 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is
shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
**Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 1918**

<table>
<thead>
<tr>
<th>CAM No. 70-109</th>
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<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td>215.18 (E) Ratings.</td>
</tr>
<tr>
<td>SPDs shall have a nominal discharge current rating (In) of not less than 10kA.</td>
</tr>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td>215.18 (E) Ratings.</td>
</tr>
<tr>
<td>SPDs shall have a nominal discharge current rating (In) of not less than 10kA.</td>
</tr>
</tbody>
</table>
Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 1824

**Recommended Text if Motion Passes:**

### 495.4 Flexible Cords and Flexible Cable Types.

Flexible cords and flexible cables over 1000 volts shall conform to the description in Table 495.4. The use of flexible cords and flexible cables other than those in Table 495.4 shall require permission by the authority having jurisdiction.

#### Table 495.4 Flexible Cords and Flexible Cables

<table>
<thead>
<tr>
<th>CAM No.</th>
<th>Portable power cable</th>
<th>Nominal Insulation Thickness</th>
<th>Braid on Each Conductor</th>
<th>Outer Covering</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>70-115</td>
<td>Portable power cable</td>
<td>1.52</td>
<td>60 =</td>
<td>Oil-resistant thermoset</td>
<td>Portable and extra-hard usage</td>
</tr>
<tr>
<td></td>
<td>Portable power cable</td>
<td>1.52</td>
<td>60 =</td>
<td>Oil-resistant thermoset</td>
<td>Portable and extra-hard usage</td>
</tr>
<tr>
<td></td>
<td>Portable power cable</td>
<td>1.52</td>
<td>60 =</td>
<td>Oil-resistant thermoset</td>
<td>Portable and extra-hard usage</td>
</tr>
</tbody>
</table>

*Types G, G-GC, S, SC, SCE, SCT, SE, SEO, SEO, SEW, SET, SEOW, SO, SOO, SOW, SOOW, ST, STO, STO, STW, STOW, STOOW, PPE, and W shall be permitted for use on theater stages, in garages, and elsewhere where flexible cords are permitted by this Code.*

**Recommended Text if Motion Fails:**
495.4 Flexible Cords and Flexible Cable Types.

Flexible cords and flexible cables over 1000 volts shall conform to the description in Table 495.4. The use of flexible cords and flexible cables other than those in Table 495.4 shall require permission by the authority having jurisdiction.

Table 495.4 Flexible Cords and Flexible Cables

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>Type Letter</th>
<th>Voltage</th>
<th>AWG or kcmil</th>
<th>Number of Conductors</th>
<th>Insulation</th>
<th>AWG or kcmil</th>
<th>Braid on Each Conductor</th>
<th>Outer Covering</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portable power cable G</td>
<td>2000</td>
<td>12–500</td>
<td>2–6 plus equipment grounding conductor(s)</td>
<td>Thermoset</td>
<td>12–2</td>
<td>1–4/0 250–500</td>
<td>1.52 2.03 2.41</td>
<td>—</td>
<td>Oil-resistant thermostet</td>
</tr>
<tr>
<td>Portable power cable G-GC</td>
<td>2000</td>
<td>12–500</td>
<td>3–6 plus equipment grounding conductors and 1 ground check conductor</td>
<td>Thermoset</td>
<td>12–2</td>
<td>1–4/0 250–500</td>
<td>1.52 2.03 2.41</td>
<td>—</td>
<td>Oil-resistant thermostet</td>
</tr>
<tr>
<td>Portable power cable PPE</td>
<td>2000</td>
<td>12–500</td>
<td>1–6 plus optional equipment grounding conductor(s)</td>
<td>Thermoplastic elastomer</td>
<td>12–2</td>
<td>1–4/0 250–500</td>
<td>1.52 2.03 2.41</td>
<td>—</td>
<td>Oil-resistant thermoplastic elastomer</td>
</tr>
<tr>
<td>Portable power cable W</td>
<td>2000</td>
<td>12–500</td>
<td>1–6</td>
<td>Thermosit</td>
<td>12–2</td>
<td>1–4/0 250–500</td>
<td>1.52 2.03 2.41</td>
<td>—</td>
<td>Oil-resistant thermostet</td>
</tr>
</tbody>
</table>

*Types G, G-GC, S, SC, SCE, SCT, SE, SEO, SEOO, SEW, SEOOW, SO, SOO, SOW, SOOW, ST, STO, STO0, STW, STOW, STOOW, PPE, and W shall be permitted for use on theater stages, in garages, and elsewhere where flexible cords are permitted by this Code.
AMENDMENT BALLOT No. 70-115

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-115 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

495.4 Flexible Cords and Flexible Cable Types.

Flexible cords and flexible cables over 1000 volts shall conform to the description in Table 495.4. The use of flexible cords and flexible cables other than those in Table 495.4 shall require permission by the authority having jurisdiction.

Table 495.4 Flexible Cords and Flexible Cables

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>Type Letter</th>
<th>Voltage</th>
<th>Number of Conductors</th>
<th>Nominal Insulation Thickness</th>
<th>AWG or kcmil</th>
<th>Braid on Each Conductor</th>
<th>Outer Covering</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portable power cable</td>
<td>G</td>
<td>2000</td>
<td>2–6 plus equipment grounding conductor(s)</td>
<td>Thermoset</td>
<td>12–2</td>
<td>1.52</td>
<td>60</td>
<td>Oil-resistant thermoset</td>
</tr>
<tr>
<td>Portable power cable</td>
<td>G- GC*</td>
<td>2000</td>
<td>3–6 plus equipment grounding conductors and 1 ground check conductor</td>
<td>Thermoset</td>
<td>12–2</td>
<td>1.52</td>
<td>60</td>
<td>Oil-resistant thermoset</td>
</tr>
<tr>
<td>Portable power cable</td>
<td>PPE*</td>
<td>2000</td>
<td>1–6 plus optional equipment grounding conductor(s)</td>
<td>Thermoplastic elastomer</td>
<td>12–2</td>
<td>1.52</td>
<td>60</td>
<td>Oil-resistant thermoplastic elastomer</td>
</tr>
<tr>
<td>Portable power cable</td>
<td>W*</td>
<td>2000</td>
<td>1–6</td>
<td>Thermoset</td>
<td>12–2</td>
<td>1.52</td>
<td>60</td>
<td>Oil-resistant thermoset</td>
</tr>
</tbody>
</table>
Types G, G GC, S, SC, SCE, SCT, SE, SEO, SEO0, SEW, SEOW, SEOW, SO, SOO, SOW, SOOW, ST, STO, STOO, STW, STOW, STOOW, PPE, and W shall be permitted for use on theater stages, in garages, and elsewhere where flexible cords are permitted by this Code.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-115 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
<table>
<thead>
<tr>
<th>CAM No. 70-116</th>
<th>Certified Amending Motion to Accept Public Comment No. 2161</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td></td>
<td>230.67(E) Ratings.</td>
</tr>
<tr>
<td></td>
<td>SPDs shall have a nominal discharge current rating (In) of not less than 10kA.</td>
</tr>
<tr>
<td></td>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td></td>
<td>230.67(E) Ratings.</td>
</tr>
<tr>
<td></td>
<td>SPDs shall have a nominal discharge current rating (In) of not less than 10kA.</td>
</tr>
</tbody>
</table>
Certified Amending Motion to Accept Public Comment No. 2058

Recommended Text if Motion Passes:

680.26(B)

(2) Perimeter Surfaces.

The perimeter surface to be bonded shall be considered to extend for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall include unpaved surfaces and other types of paving. Perimeter surfaces separated from the pool by a permanent wall or building 1.5 m (5 ft) in height or more shall require equipotential bonding only on the pool side of the permanent wall or building. Bonding to perimeter surfaces shall be provided as specified in 680.26(B)(2)(a), (B)(2)(b), or (B)(2)(c) and shall be attached to the pool reinforcing steel or copper conductor grid at a minimum of four points uniformly spaced around the perimeter of the pool. For nonconductive pool shells, bonding at four points shall not be required.

(a) \textit{Structural Reinforcing Steel}. Structural reinforcing steel shall be bonded in accordance with 680.26(B)(1)(a).

(b) \textit{Copper Ring}. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be used where the following requirements are met:

(1) At least one minimum 8 AWG bare solid copper conductor shall be provided.

(2) The conductors shall follow the contour of the perimeter surface.

(3) Only listed splicing devices or exothermic welding shall be permitted.

(4) The required conductor shall be 450 mm to 600 mm (18 in. to 24 in.) from the inside walls of the pool.

(5) The required conductor shall be secured within or below a paved surface, but no more than 150 mm (6 in.) below finished grade, or below an unpaved surface between 100 mm to 150 mm (4 in. to 6 in.) below finished grade.

\textit{This method shall only be permitted for above-ground pools}

(c) \textit{Copper Grid}. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, copper grid shall be used where the following requirements are met:

(1) The copper grid shall be constructed of 8 AWG solid bare copper and be arranged in accordance with 680.26(B)(1)(b)(3).

(2) The copper grid shall follow the contour of the perimeter surface extending 1 m (3 ft) horizontally beyond the inside walls of the pool.

(3) Only listed splicing devices or exothermic welding shall be permitted.

The copper grid shall be secured within or below a paved surface, but no more than 150 mm (6 in.) below finished grade, or below an unpaved surface between 100 mm to 150 mm (4 in. to 6 in.) below finished grade.
Recommended Text if Motion Fails:

680.26(B)
(2) Perimeter Surfaces.

The perimeter surface to be bonded shall be considered to extend for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall include unpaved surfaces and other types of paving. Perimeter surfaces separated from the pool by a permanent wall or building 1.5 m (5 ft) in height or more shall require equipotential bonding only on the pool side of the permanent wall or building. Bonding to perimeter surfaces shall be provided as specified in 680.26(B)(2)(a), (B)(2)(b), or (B)(2)(c) and shall be attached to the pool reinforcing steel or copper conductor grid at a minimum of four points uniformly spaced around the perimeter of the pool. For nonconductive pool shells, bonding at four points shall not be required.

(a) *Structural Reinforcing Steel.* Structural reinforcing steel shall be bonded in accordance with 680.26(B)(1)(a).

(b) *Copper Ring.* Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be used where the following requirements are met:

1. At least one minimum 8 AWG bare solid copper conductor shall be provided.
2. The conductors shall follow the contour of the perimeter surface.
3. Only listed splicing devices or exothermic welding shall be permitted.
4. The required conductor shall be 450 mm to 600 mm (18 in. to 24 in.) from the inside walls of the pool.
5. The required conductor shall be secured within or below a paved surface, but no more than 150 mm (6 in.) below finished grade, or below an unpaved surface between 100 mm to 150 mm (4 in. to 6 in.) below finished grade.

(c) *Copper Grid.* Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, copper grid shall be used where the following requirements are met:

1. The copper grid shall be constructed of 8 AWG solid bare copper and be arranged in accordance with 680.26(B)(1)(b)(3).
2. The copper grid shall follow the contour of the perimeter surface extending 1 m (3 ft) horizontally beyond the inside walls of the pool.
3. Only listed splicing devices or exothermic welding shall be permitted.
4. The copper grid shall be secured within or below a paved surface, but no more than 150 mm (6 in.) below finished grade, or below an unpaved surface between 100 mm to 150 mm (4 in. to 6 in.) below finished grade.
AMENDMENT BALLOT No. 70-117

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-117 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

680.26(B)
(2) Perimeter Surfaces.
The perimeter surface to be bonded shall be considered to extend for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall include unpaved surfaces and other types of paving. Perimeter surfaces separated from the pool by a permanent wall or building 1.5 m (5 ft) in height or more shall require equipotential bonding only on the pool side of the permanent wall or building. Bonding to perimeter surfaces shall be provided as specified in 680.26(B)(2)(a), (B)(2)(b), or (B)(2)(c) and shall be attached to the pool reinforcing steel or copper conductor grid at a minimum of four points uniformly spaced around the perimeter of the pool. For nonconductive pool shells, bonding at four points shall not be required.

(a) Structural Reinforcing Steel. Structural reinforcing steel shall be bonded in accordance with 680.26(B)(1)(a).

(b) Copper Ring. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be used where the following requirements are met:

(1) At least one minimum 8 AWG bare solid copper conductor shall be provided.
(2) The conductors shall follow the contour of the perimeter surface.
(3) Only listed splicing devices or exothermic welding shall be permitted.
(4) The required conductor shall be 450 mm to 600 mm (18 in. to 24 in.) from the inside walls of the pool.
(5) The required conductor shall be secured within or below a paved surface, but no more than 150 mm (6 in.) below finished grade, or below an unpaved surface between 100 mm to 150 mm (4 in. to 6 in.) below finished grade.

This method shall only be permitted for above-ground pools

(c) Copper Grid. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, copper grid shall be used where the following requirements are met:
(1) The copper grid shall be constructed of 8 AWG solid bare copper and be arranged in accordance with 680.26(B)(1)(b)(3).

(2) The copper grid shall follow the contour of the perimeter surface extending 1 m (3 ft) horizontally beyond the inside walls of the pool.

(3) Only listed splicing devices or exothermic welding shall be permitted.

(4) The copper grid shall be secured within or below a paved surface, but no more than 150 mm (6 in.) below finished grade, or below an unpaved surface between 100 mm to 150 mm (4 in. to 6 in.) below finished grade.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-117 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

680.26(B)

(2) Perimeter Surfaces.

The perimeter surface to be bonded shall be considered to extend for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall include unpaved surfaces and other types of paving. Perimeter surfaces separated from the pool by a permanent wall or building 1.5 m (5 ft) in height or more shall require equipotential bonding only on the pool side of the permanent wall or building. Bonding to perimeter surfaces shall be provided as specified in 680.26(B)(2)(a), (B)(2)(b), or (B)(2)(c) and shall be attached to the pool reinforcing steel or copper conductor grid at a minimum of four points uniformly spaced around the perimeter of the pool. For nonconductive pool shells, bonding at four points shall not be required.

(a) Structural Reinforcing Steel. Structural reinforcing steel shall be bonded in accordance with 680.26(B)(1)(a).

(b) Copper Ring. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be utilized where the following requirements are met:

(1) At least one minimum 8 AWG bare solid copper conductor shall be provided.

(2) The conductors shall follow the contour of the perimeter surface.

(3) Only listed splicing devices or exothermic welding shall be permitted.

(4) The required conductor shall be 450 mm to 600 mm (18 in. to 24 in.) from the inside walls of the pool.

(5) The required conductor shall be secured within or under the perimeter surface 100 mm to 150 mm (4 in. to 6 in.) below the subgrade.

(c) Copper Grid. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, copper grid shall be utilized where the following requirements are met:

(1) The copper grid shall be constructed of 8 AWG solid bare copper and be arranged in accordance with 680.26(B)(1)(b)(3).
(2) The copper grid shall follow the contour of the perimeter surface extending 1 m (3 ft) horizontally beyond the inside walls of the pool.
(3) Only listed splicing devices or exothermic welding shall be permitted.
(4) The copper grid shall be secured within or under the deck or unpaved surfaces between 100 mm to 150 mm (4 in. to 6 in.) below the subgrade.
Certified Amending Motion to Reject Second Revision No. 7952

Recommended Text if Motion Passes:

700.5
(B) Bypass Isolation Transfer Switches.

Means shall be permitted to bypass and isolate the transfer equipment. Where bypass isolation transfer switches are used, inadvertent parallel operation shall be prevented. Where emergency loads are supplied by a single automatic transfer switch, the automatic transfer switch shall include a bypass isolation function to facilitate maintenance as required in 700.3(C) without jeopardizing continuity of power. When the automatic transfer switch has been bypassed to facilitate maintenance, the bypass switch shall automatically transfer the load between power sources upon loss of the connected power source, or it shall remain actively supervised by a qualified person who can manually initiate a transfer of the load between power sources. Where bypass isolation switches are used, inadvertent parallel operation shall be avoided.

Exception: The requirement for a bypass isolation transfer switch shall not apply where any of the following conditions exists:

1. All processes that rely on the emergency system source are capable of being disabled during maintenance or repair activities.
2. The building or structure is unoccupied and fire protection systems are fully functional and do not require an alternate power source.
3. Other temporary means shall be permitted to be substituted for the emergency system.
4. A permanent switching means to bypass the transfer equipment is provided to supply the connected load. The written procedures for bypassing the transfer equipment and ensuring operation by qualified persons shall be made available to the authority having jurisdiction. Where the switching means is not capable of automatically starting and transferring the load to the emergency source, the switching means shall be supervised and provisions for manually performing these functions shall be provided.
5. A written emergency plan that includes mitigation actions and responsibilities for qualified persons to address the recognized site hazards for the duration of the maintenance or repair activities shall be developed and implemented. The emergency plan shall be made available to the authority having jurisdiction.

(C) Automatic Transfer Switches.
Automatic transfer switches shall be electrically operated and mechanically held.

(D) Redundant Transfer Equipment.
If emergency loads are supplied by a single feeder, the emergency power system shall include redundant transfer equipment or a bypass isolation transfer switch to facilitate maintenance as required in 700.3(C) without jeopardizing continuity of power. If the redundant transfer equipment or bypass isolation transfer switch is manual (or nonautomatic), then it shall be actively supervised by a qualified person when the primary (automatic) transfer equipment is disabled for maintenance or repair.
Exception: The requirement for redundancy with the transfer equipment shall not apply where any of the following conditions exists:

1. All processes that rely on the emergency system source are capable of being disabled during maintenance or repair activities without jeopardizing the safety to human life.
2. The building or structure is unoccupied and fire protection systems are fully functional and do not require an alternate power source.
3. Other temporary means shall be permitted to be substituted for the emergency system.
4. A written emergency plan that includes mitigation actions and responsibilities for qualified persons to address the recognized site hazards for the duration of the maintenance or repair activities shall be developed and implemented. The emergency plan shall be made available to the authority having jurisdiction.

(D) (E) Use.
Transfer equipment shall supply only emergency loads.
Informational Note: Transfer equipment that supplies emergency loads provides separation of this load type from any others and is independent of any equipment used to combine or parallel sources.

(E) (F) Documentation.
The short-circuit current rating of the transfer equipment, based on the specific overcurrent protective device type and settings protecting the transfer equipment, shall be field marked on the exterior of the transfer equipment.

5) *Note: Section 700.5(C) was modified by Second Revision No. 7929 and is independent of the action by this motion.

Recommended Text if Motion Fails:

700.5
(B) Bypass Isolation Transfer Switches.
Means shall be permitted to bypass and isolate the transfer equipment. Where bypass isolation transfer switches are used, inadvertent parallel operation shall be prevented.

(C) Automatic Transfer Switches.
Automatic transfer switches shall be electrically operated and mechanically held.

(D) Redundant Transfer Equipment.
If emergency loads are supplied by a single feeder, the emergency power system shall include redundant transfer equipment or a bypass isolation transfer switch to facilitate maintenance as required in 700.3(C) without jeopardizing continuity of power. If the redundant transfer equipment or bypass isolation transfer switch is manual (or nonautomatic), then it shall be actively supervised by a qualified person when the primary (automatic) transfer equipment is disabled for maintenance or repair.

Exception: The requirement for redundancy with the transfer equipment shall not apply where any of the following conditions exists:

1) All processes that rely on the emergency system source are capable of being disabled during maintenance or repair activities without jeopardizing the safety to human life.
2) The building or structure is unoccupied and fire protection systems are fully functional and do not require an alternate power source.
3) Other temporary means shall be permitted to be substituted for the emergency system.
(4) A written emergency plan that includes mitigation actions and responsibilities for qualified persons to address the recognized site hazards for the duration of the maintenance or repair activities shall be developed and implemented. The emergency plan shall be made available to the authority having jurisdiction.

(E) Use.
Transfer equipment shall supply only emergency loads.
Informational Note: Transfer equipment that supplies emergency loads provides separation of this load type from any others and is independent of any equipment used to combine or parallel sources.

(F) Documentation.
The short-circuit current rating of the transfer equipment, based on the specific overcurrent protective device type and settings protecting the transfer equipment, shall be field marked on the exterior of the transfer equipment.

*NOTE: Section 700.5(C) was modified by Second Revision No. 7929 and is independent of the action by this motion.*
AMENDMENT BALLOT No. 70-118

Technical Committee on National Electrical Code®

NFPA 70, *National Electrical Code®*

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-118 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows *(changes shown legislatively to the Second Draft)*:

700.5  
(B) Bypass Isolation Transfer Switches.  
Means shall be permitted to bypass and isolate the transfer equipment. Where bypass isolation transfer switches are used, inadvertent parallel operation shall be prevented. Where emergency loads are supplied by a single automatic transfer switch, the automatic transfer switch shall include a bypass isolation function to facilitate maintenance as required in 700.3(C) without jeopardizing continuity of power. When the automatic transfer switch has been bypassed to facilitate maintenance, the bypass switch shall automatically transfer the load between power sources upon loss of the connected power source, or it shall remain actively supervised by a qualified person who can manually initiate a transfer of the load between power sources. Where bypass isolation switches are used, inadvertent parallel operation shall be avoided.  

*Exception: The requirement for a bypass isolation transfer switch shall not apply where any of the following conditions exist:*  

1. All processes that rely on the emergency system source are capable of being disabled during maintenance or repair activities.  
2. The building or structure is unoccupied and fire protection systems are fully functional and do not require an alternate power source.  
3. Other temporary means shall be permitted to be substituted for the emergency system.  
4. A permanent switching means to bypass the transfer equipment is provided to supply the connected load. The written procedures for bypassing the transfer equipment and ensuring operation by qualified persons shall be made available to the authority having jurisdiction. Where the switching means is not capable of automatically starting and transferring the load to the emergency source, the switching means shall be supervised and provisions for manually performing these functions shall be provided.  
5. A written emergency plan that includes mitigation actions and responsibilities for qualified persons to address the recognized site hazards for the duration of the maintenance or repair.
activities shall be developed and implemented. The emergency plan shall be made available to
the authority having jurisdiction.

(C) Automatic Transfer Switches.
Automatic transfer switches shall be electrically operated and mechanically held.

(D) Redundant Transfer Equipment.

If emergency loads are supplied by a single feeder, the emergency power system shall include redundant
transfer equipment or a bypass isolation transfer switch to facilitate maintenance as required
in 700.3(C) without jeopardizing continuity of power. If the redundant transfer equipment or bypass
isolation transfer switch is manual (or nonautomatic), then it shall be actively supervised by a qualified
person when the primary (automatic) transfer equipment is disabled for maintenance or repair.

Exception: The requirement for redundancy with the transfer equipment shall not apply where any of the
following conditions exist:

1. All processes that rely on the emergency system source are capable of being disabled during
   maintenance or repair activities without jeopardizing the safety to human life.
2. The building or structure is unoccupied and fire protection systems are fully functional and do
   not require an alternate power source.
3. Other temporary means shall be permitted to be substituted for the emergency system.
4. A written emergency plan that includes mitigation actions and responsibilities for qualified
   persons to address the recognized site hazards for the duration of the maintenance or repair
   activities shall be developed and implemented. The emergency plan shall be made available to
   the authority having jurisdiction.

(D) (E) Use.
Transfer equipment shall supply only emergency loads.
Informational Note: Transfer equipment that supplies emergency loads provides separation of this load
type from any others and is independent of any equipment used to combine or parallel sources.

(E) (F) Documentation.
The short-circuit current rating of the transfer equipment, based on the specific overcurrent protective
device type and settings protecting the transfer equipment, shall be field marked on the exterior of the
transfer equipment.

*Note: Section 700.5(C) was modified by Second Revision No. 7929 and is independent of the action by
this motion.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-118 by the
NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is
shown clean below. If no previous edition text exists, the text supported by the membership vote is
simply deleted.
700.5

(B) Bypass Isolation Switches.
Means shall be permitted to bypass and isolate the transfer equipment. Where bypass isolation switches are used, inadvertent parallel operation shall be avoided.

(C) Automatic Transfer Switches.
Automatic transfer switches shall be electrically operated and mechanically held.

(D) Use.
Transfer equipment shall supply only emergency loads.

(E) Documentation.
The short-circuit current rating of the transfer equipment, based on the specific overcurrent protective device type and settings protecting the transfer equipment, shall be field marked on the exterior of the transfer equipment.

*Note: Section 700.5(C) was modified by Second Revision No. 7929 and is independent of the action to return to previous edition text if the ballot of the motion fails.
Certified Amending Motion to Accept Public Comment No. 1461

<table>
<thead>
<tr>
<th>Recommended Text if Motion Passes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>210.8 (F) Outdoor Outlets.</td>
</tr>
<tr>
<td>For dwellings, all outdoor outlets, other than those covered in 210.8(A), Exception No. 1, including outlets installed in the following locations, and supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, shall be provided with GFCI protection:</td>
</tr>
<tr>
<td>(1) Garages that have floors located at or below grade level</td>
</tr>
<tr>
<td>(2) Accessory buildings</td>
</tr>
<tr>
<td>(3) Boathouses</td>
</tr>
<tr>
<td>If equipment supplied by an outlet covered under the requirements of this section is replaced, the outlet shall be supplied with GFCI protection.</td>
</tr>
</tbody>
</table>

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

**Exception No. 2:** Ductless mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.

<table>
<thead>
<tr>
<th>Recommended Text if Motion Fails:</th>
</tr>
</thead>
<tbody>
<tr>
<td>210.8 (F) Outdoor Outlets.</td>
</tr>
<tr>
<td>For dwellings, all outdoor outlets, other than those covered in 210.8(A), Exception No. 1, including outlets installed in the following locations, and supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, shall be provided with GFCI protection:</td>
</tr>
<tr>
<td>(1) Garages that have floors located at or below grade level</td>
</tr>
<tr>
<td>(2) Accessory buildings</td>
</tr>
<tr>
<td>(3) Boathouses</td>
</tr>
<tr>
<td>If equipment supplied by an outlet covered under the requirements of this section is replaced, the outlet shall be supplied with GFCI protection.</td>
</tr>
</tbody>
</table>

**Exception:** GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).
IF YOU AGREE TO SUPPORT AMENDMENT 70-119 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

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

   (1) Garages that have floors located at or below grade level
   (2) Accessory buildings
   (3) Boathouses

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

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

Exception No. 2: Ductless mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-119 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

210.8(F) Outdoor Outlets.
All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have
ground-fault circuit-interrupter protection for personnel. This requirement shall become effective on January 1, 2023 for mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.

Informational Note: Power conversion equipment is the term used to describe the components used in HVAC equipment that is commonly referred to as a variable speed drive. The use of power conversion equipment to control compressor speed differs from multistage compressor speed control.

Exception: Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).
**Certified Amending Motion to Accept Public Comment No. 2198**

### Recommended Text if Motion Passes:

**422.5 GFCI Protection**

(A) **General.**

The following appliances rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase, shall be provided with GFCI protection. Multiple GFCI protective devices shall be permitted but shall not be required.

1. Automotive vacuum machines
2. Drinking water coolers, drinking water fountains, and bottle fill stations
3. Cord-and-plug-connected high-pressure spray washing machines
4. Tire inflation machines
5. Vending machines
6. Sump pumps
7. Dishwashers
8. Tank and tankless water heaters

**Informational Note:** See 210.8, which specifies requirements for GFCI protection for the branch-circuit outlet where the covered location warrants such protection.

### Recommended Text if Motion Fails:

**422.5 GFCI Protection**

(A) **General.**

The following appliances rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase, shall be provided with GFCI protection. Multiple GFCI protective devices shall be permitted but shall not be required.

1. Automotive vacuum machines
2. Drinking water coolers, drinking water fountains, and bottle fill stations
3. Cord-and-plug-connected high-pressure spray washing machines
4. Tire inflation machines
5. Vending machines
6. Sump pumps
7. Dishwashers

**Informational Note:** See 210.8, which specifies requirements for GFCI protection for the branch-circuit outlet where the covered location warrants such protection.
AMENDMENT BALLOT No. 70-120

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-120 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

422.5 GFCI Protection

(A) General.
The following appliances rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase, shall be provided with GFCI protection. Multiple GFCI protective devices shall be permitted but shall not be required.

1. Automotive vacuum machines
2. Drinking water coolers, drinking water fountains, and bottle fill stations
3. Cord-and-plug-connected high-pressure spray washing machines
4. Tire inflation machines
5. Vending machines
6. Sump pumps
7. Dishwashers
8. Tank and tankless water heaters

Informational Note: See 210.8, which specifies requirements for GFCI protection for the branch-circuit outlet where the covered location warrants such protection.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-120 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

422.5 GFCI Protection

(A) General.
Appliances identified in 422.5(A)(1) through (A)(7) rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase, shall be provided with Class A protection for personnel. Multiple Class A protective devices shall be permitted but shall not be required.

1. Automotive vacuum machines
2. Drinking water coolers and bottle fill stations
3. Cord-and-plug-connected high-pressure spray washing machines
4. Tire inflation machines
5. Vending machines
6. Sump pumps
7. Dishwashers

Informational Note: Section 210.8 specifies requirements for GFCI protection for the branch-circuit outlet where the covered location warrants such protection.
<table>
<thead>
<tr>
<th>CAM No. 70-121</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Certified Amending Motion to Reject Second Revision No. 8041</strong></td>
</tr>
</tbody>
</table>

**Recommended Text if Motion Passes:**

708.24  

**(B) Bypass Isolation Transfer Switches.**  
Means shall be permitted to bypass and isolate the transfer equipment. **If** bypass isolation transfer switches are used, inadvertent parallel operation shall be avoided.

**(C) Automatic Transfer Switches.**  
**If used** with sources that are not inherently synchronized, automatic transfer switches shall comply with the following:

1. Automatic transfer switches shall be listed for emergency use.  
2. Automatic transfer switches shall be electrically operated and mechanically held.

**(D) Bypass Isolation Automatic Transfer Switches Redundant Transfer Equipment.**  
**If** loads are supplied by a single feeder **only one automatic transfer switch**, the COPS automatic transfer switch shall include redundant transfer equipment or a bypass isolation transfer switch to facilitate maintenance as required in 708.6(C) without jeopardizing continuity of power. **If** the redundant transfer equipment or bypass isolation transfer switch is in the bypass mode, either it shall automatically initiate transfer between power sources upon loss of the connected power source or it shall remain manual (or nonautomatic) and it shall be actively supervised by a qualified person who can manually initiate a transfer between power sources when the primary (automatic) transfer equipment is disabled for maintenance or repair.

**Recommended Text if Motion Fails:**

708.24  

**(B) Bypass Isolation Transfer Switches.**  
Means shall be permitted to bypass and isolate the transfer equipment. **If** bypass isolation transfer switches are used, inadvertent parallel operation shall be avoided.

**(C) Automatic Transfer Switches.**  
**If used** with sources that are not inherently synchronized, automatic transfer switches shall comply with the following:

1. Automatic transfer switches shall be listed for emergency use.  
2. Automatic transfer switches shall be electrically operated and mechanically held.

**(D) Redundant Transfer Equipment.**  
**If** loads are supplied by a single feeder, the COPS shall include redundant transfer equipment or a bypass isolation transfer switch to facilitate maintenance as required in 708.6(C) without jeopardizing continuity of power. **If** the redundant transfer equipment or bypass isolation transfer switch is manual (or nonautomatic), then it shall be actively supervised by a qualified person when the primary (automatic) transfer equipment is disabled for maintenance or repair.
IF YOU AGREE TO SUPPORT AMENDMENT 70-121 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

708.24

(B) Bypass Isolation Transfer Switches.
Means shall be permitted to bypass and isolate the transfer equipment. If where bypass isolation transfer switches are used, inadvertent parallel operation shall be avoided.

(C) Automatic Transfer Switches.
If where used with sources that are not inherently synchronized, automatic transfer switches shall comply with the following:

(1) Automatic transfer switches shall be listed for emergency use.

(2) Automatic transfer switches shall be electrically operated and mechanically held.

(D) Bypass Isolation Automatic Transfer Switches Redundant Transfer Equipment.
If COPS where loads are supplied by a single feeder only one automatic transfer switch, the COPS automatic transfer switch shall include redundant transfer equipment or a bypass isolation transfer switch to facilitate maintenance as required in 708.6(C) without jeopardizing continuity of power. If when the redundant transfer equipment or bypass isolation transfer switch is in the bypass mode, either it shall automatically initiate transfer between power sources upon loss of the connected power source or it shall remain manual (or nonautomatic) then it shall be actively supervised by a qualified person who can manually initiate a transfer between power sources when the primary (automatic) transfer equipment is disabled for maintenance or repair.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-121 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

708.24

(B) Bypass Isolation Switches.
Means shall be permitted to bypass and isolate the transfer equipment. Where bypass isolation switches are used, inadvertent parallel operation shall be avoided.

**C) Automatic Transfer Switches.**
Where used with sources that are not inherently synchronized, automatic transfer switches shall comply with 708.24(C)(1) and (C)(2).

1. Automatic transfer switches shall be listed for emergency use.

2. Automatic transfer switches shall be electrically operated and mechanically held.

**D) Bypass Isolation Automatic Transfer Switches.**
Where loads are supplied by only one automatic transfer switch, the automatic transfer switch shall include a bypass isolation switch to facilitate maintenance as required in 708.6(C) without jeopardizing continuity of power. When the bypass isolation transfer switch is in the bypass mode, either it shall automatically initiate transfer between power sources upon loss of the connected power source or it shall remain actively supervised by a qualified person who can manually initiate a transfer between power sources.
Recommended Text if Motion Passes:

220.110  Receptacle Loads.
Receptacle loads calculated in accordance with 220.14(H) and (I) and supplied by branch circuits not exceeding 150 volts to ground shall be permitted to be subjected to the demand factors provided in Table 220.110(1) and Table 220.110(2) for health care facilities.

Informational Note No. 1: See Article 100 for the definitions of patient care space categories.
Informational Note No. 2: See 220.14(I) for the calculation of receptacle outlet loads.

Table 220.110(1) Demand Factors for Receptacles Supplied by General-Purpose Branch Circuits in Category 1 and Category 2 Patient Care Spaces

<table>
<thead>
<tr>
<th>Portion of Receptacle Load to Which Demand Factor Applies (Volt-Amperes)</th>
<th>Demand Factor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 5000 or less</td>
<td>100</td>
</tr>
<tr>
<td>From 5001 to 10,000</td>
<td>50</td>
</tr>
<tr>
<td>Remainder over 10,000</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 220.110(2) Demand Factors for Receptacles Supplied by General-Purpose Branch Circuits in Category 3 and Category 4 Patient Care Spaces

<table>
<thead>
<tr>
<th>Portion of Receptacle Load to Which Demand Factor Applies (Volt-Amperes)</th>
<th>Demand Factor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 10,000 or less</td>
<td>100</td>
</tr>
<tr>
<td>Remainder over 10,000</td>
<td>50</td>
</tr>
</tbody>
</table>

*NOTE: The recommendation of this motion deletes this table and the related table resulting from First Revision 9189 from Article 220.*

Recommended Text if Motion Fails:

220.110  Receptacle Loads.
Receptacle loads calculated in accordance with 220.14(H) and (I) and supplied by branch circuits not exceeding 150 volts to ground shall be permitted to be subjected to the demand factors provided in Table 220.110(1) and Table 220.110(2) for health care facilities.

Informational Note No. 1: See Article 100 for the definitions of patient care space categories.
Informational Note No. 2: See 220.14(I) for the calculation of receptacle outlet loads.

Table 220.110(1) Demand Factors for Loads Receptacles Supplied by General-Purpose Branch Circuits in Category 1 and Category 2 Patient Care Spaces

<table>
<thead>
<tr>
<th>Portion of Receptacle Load to Which Demand Factor Applies (Volt-Amperes)</th>
<th>Demand Factor (%)</th>
</tr>
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<td>First 5000 or less</td>
<td>100</td>
</tr>
<tr>
<td>From 5001 to 10,000</td>
<td>50</td>
</tr>
<tr>
<td>Portion of Receptacle Load to Which Demand Factor Applies (Volt-Ampere)</td>
<td>Demand Factor (%)</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>First 10,000 or less</td>
<td>100</td>
</tr>
<tr>
<td>Remainder over 10,000</td>
<td>50</td>
</tr>
</tbody>
</table>

Table 220.110(2) Demand Factors for Receptacles Supplied by General-Purpose Branch Circuits in Category 3 and Category 4 Patient Care Spaces
Certified Amending Motion to Reject Second Correlating Revision No. 35

Recommended Text if Motion Passes:

517.22  Demand Factors.

Demand factors for general-use receptacles and individual branch circuits not exceeding 150 volts to ground shall be permitted to be applied in accordance with 517.22(A) and (B).

(A)  General-Use Receptacles.

In addition to demand factors allowed by other sections of this Code, the demand factor for general-use receptacles shall be permitted to be calculated in accordance with Table 517.22(A).

Table 517.22(A) Demand Factors for General-Use Receptacles in Health Care Facilities

<table>
<thead>
<tr>
<th>Portion of Receptacle Load to Which Demand Factor Applies</th>
<th>Demand Factor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 5.0 kVA or less</td>
<td>100</td>
</tr>
<tr>
<td>Second 5.0 kVA to 10kVA</td>
<td>50</td>
</tr>
<tr>
<td>Remainder over 10 kVA</td>
<td>25</td>
</tr>
</tbody>
</table>

Informational Note: See 220.14(I) for the calculation of general-use receptacle loads.

(B)  Receptacles for Designated Equipment.

Individual branch circuits supplying receptacles for equipment shall be permitted to be calculated in accordance with Table 517.22(B).

Table 517.22(B) Demand Factors for Equipment Supplied by Individual Branch Circuits in Health Care Facilities

<table>
<thead>
<tr>
<th>Equipment Supplied by Individual Branch Circuits</th>
<th>Demand Factor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest five connected loads</td>
<td>100</td>
</tr>
<tr>
<td>Six or more connected loads</td>
<td>50</td>
</tr>
</tbody>
</table>

Informational Note: See 220.60 for noncoincident load calculations.

Recommended Text if Motion Fails:

517.22  Demand Factors.

Demand factors for receptacle loads supplied by branch circuits not exceeding 150 volts to ground and installed in Category 1, Category 2, Category 3, and Category 4 patient care spaces shall be in accordance with 220.110.

Informational Note: See Article 100 for the definitions of patient care space categories.
AMENDMENT BALLOT No. 70-124

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-124 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

517.22 Demand Factors.

Demand factors for general-use receptacles and individual branch circuits not exceeding 150 volts to ground shall be permitted to be applied in accordance with 517.22(A) and (B).

(A) General-Use Receptacles.

In addition to demand factors allowed by other sections of this Code, the demand factor for general-use receptacles shall be permitted to be calculated in accordance with Table 517.22(A).

Table 517.22(A) Demand Factors for General-Use Receptacles in Health Care Facilities

<table>
<thead>
<tr>
<th>Portion of Receptacle Load to Which Demand Factor Applies</th>
<th>Demand Factor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 5.0 kVA or less</td>
<td>100</td>
</tr>
<tr>
<td>Second 5.0 kVA to 10kVA</td>
<td>50</td>
</tr>
<tr>
<td>Remainder over 10 kVA</td>
<td>25</td>
</tr>
</tbody>
</table>

Informational Note: See 220.14(I) for the calculation of general-use receptacle loads.

(B) Receptacles for Designated Equipment.

Individual branch circuits supplying receptacles for equipment shall be permitted to be calculated in accordance with Table 517.22(B).

Table 517.22(B) Demand Factors for Equipment Supplied by Individual Branch Circuits in Health Care Facilities

<table>
<thead>
<tr>
<th>Equipment Supplied by Individual Branch Circuits</th>
<th>Demand Factor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest five connected loads</td>
<td>100</td>
</tr>
<tr>
<td>Six or more connected loads</td>
<td>50</td>
</tr>
</tbody>
</table>

Informational Note: See 220.60 for noncoincident load calculations.
IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-124 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
Certified Amending Motion to Accept an Identifiable Part of Committee Comment (FR No. 8371 that failed reballoting at Second Draft Stage)

<table>
<thead>
<tr>
<th>CAM No. 70-126</th>
</tr>
</thead>
</table>

**Recommended Text if Motion Passes:**

310.3  
(A) Minimum Size of Conductors.  
The minimum size of conductors for voltage ratings up to and including 2000 volts shall be 14 AWG copper or copper-clad aluminum or 12 AWG aluminum or copper-clad aluminum, except as permitted elsewhere in this Code.

**Recommended Text if Motion Fails:**

310.3  
(A) Minimum Size of Conductors.  
The minimum size of conductors for voltage ratings up to and including 2000 volts shall be 14 AWG copper or 12 AWG aluminum or copper-clad aluminum, except as permitted elsewhere in this Code.

*Note: Recommended text is previous edition text as all revisions proposed failed ballot during revision cycle.*
AMENDMENT BALLOT No. 70-126

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-126 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

310.3
(A) Minimum Size of Conductors.
The minimum size of conductors for voltage ratings up to and including 2000 volts shall be 14 AWG copper or copper-clad aluminum or 12 AWG aluminum or copper-clad aluminum, except as permitted elsewhere in this Code.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-126 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

310.3
(A) Minimum Size of Conductors.
The minimum size of conductors for voltage ratings up to and including 2000 volts shall be 14 AWG copper or 12 AWG aluminum or copper-clad aluminum, except as permitted elsewhere in this Code.
Certified Amending Motion to Accept an Identifiable Part of Committee Comment (FR No. 8435 that failed reballot at Second Draft stage)

<table>
<thead>
<tr>
<th>CAM No.</th>
<th>70-127</th>
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<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>334.104 Conductors.</strong></td>
<td></td>
</tr>
<tr>
<td>The 600-volt insulated power conductors shall be sizes 14 AWG through 2 AWG copper or copper-clad aluminum conductors or sizes 12 AWG through 2 AWG aluminum or copper-clad aluminum conductors. Control and signaling conductors minimum conductor sizes shall be no smaller than 18 AWG copper, and 14 AWG copper-clad aluminum, and 12 AWG aluminum.</td>
<td></td>
</tr>
</tbody>
</table>

| **Recommended Text if Motion Fails:** |
| **334.104 Conductors.** |
| The 600-volt insulated power conductors shall be sizes 14 AWG through 2 AWG copper conductors or sizes 12 AWG through 2 AWG aluminum or copper-clad aluminum conductors. Control and signaling conductors shall be no smaller than 18 AWG copper. |

*Note: Recommended text is previous edition text as all revisions proposed failed ballot during revision cycle.*
IF YOU AGREE TO SUPPORT AMENDMENT 70-127 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

334.104 Conductors.
The 600-volt insulated power conductors shall be sizes 14 AWG through 2 AWG copper conductors or sizes 12 AWG through 2 AWG aluminum or copper-clad aluminum conductors. For ungrounded, grounded and equipment grounding conductors, the conductors shall be sizes 14 AWG through 2 AWG copper or copper-clad aluminum conductors or sizes 12 AWG through 2 AWG aluminum or copper-clad aluminum conductors. For control and signaling conductors minimum conductor sizes shall be no smaller than 18 AWG copper, and 14 AWG copper-clad aluminum, and 12 AWG aluminum.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-127 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

334.104 Conductors.
The 600-volt insulated power conductors shall be sizes 14 AWG through 2 AWG copper conductors or sizes 12 AWG through 2 AWG aluminum or copper-clad aluminum conductors. Control and signaling conductors shall be no smaller than 18 AWG copper.
Certified Amending Motion to Accept an Identifiable Part of Committee Comment (FR No. 8427 that failed reballoting at Second Draft Stage)

Recommended Text if Motion Passes:

Table 310.16 Ampacities of Insulated Conductors with Not More Than Three Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried)

<table>
<thead>
<tr>
<th>Temperature Rating of Conductor [See Table 310.4(A)]</th>
<th>60°C (140°F)</th>
<th>75°C (167°F)</th>
<th>90°C (194°F)</th>
<th>60°C (140°F)</th>
<th>75°C (167°F)</th>
<th>90°C (194°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types TW, UF, THW, THWN, XHHW, XHWN, USE, ZW</td>
<td>Types TBS, SA, SIS, FEP, FEPB, MI, PFA, RHH, RH-2, THHN, THHW, THW-2, THWN-2, USE-2, XHH, XHHW, XHHW-2, XHWN-2, XHHN, Z, ZW-2</td>
<td>Types RHW, THHW, THW, THWN, XHHW, XHWN, USE, ZW</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPPER</td>
<td>ALUMINUM OR COPPER-CLAD ALUMINUM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size AWG or kcmil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>18*</td>
<td>—</td>
<td>—</td>
<td>14</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>16*</td>
<td>—</td>
<td>—</td>
<td>18</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>14*</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>10^T</td>
<td>15^T</td>
<td>20^T</td>
</tr>
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<td>75</td>
</tr>
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<td>3</td>
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<td>100</td>
<td>115</td>
<td>65</td>
<td>75</td>
<td>85</td>
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<td>95</td>
<td>115</td>
<td>130</td>
<td>75</td>
<td>90</td>
<td>100</td>
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<td>1</td>
<td>110</td>
<td>130</td>
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<td>85</td>
<td>100</td>
<td>115</td>
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<td>150</td>
<td>170</td>
<td>100</td>
<td>120</td>
<td>135</td>
</tr>
<tr>
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<td>145</td>
<td>175</td>
<td>195</td>
<td>115</td>
<td>135</td>
<td>150</td>
</tr>
<tr>
<td>3/0</td>
<td>165</td>
<td>200</td>
<td>225</td>
<td>130</td>
<td>155</td>
<td>175</td>
</tr>
<tr>
<td>4/0</td>
<td>195</td>
<td>230</td>
<td>260</td>
<td>150</td>
<td>180</td>
<td>205</td>
</tr>
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<td>250</td>
<td>215</td>
<td>255</td>
<td>290</td>
<td>170</td>
<td>205</td>
<td>230</td>
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<td>260</td>
<td>310</td>
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<td>400</td>
<td>280</td>
<td>335</td>
<td>380</td>
<td>225</td>
<td>270</td>
<td>305</td>
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<td>500</td>
<td>320</td>
<td>380</td>
<td>430</td>
<td>260</td>
<td>310</td>
<td>350</td>
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<td>600</td>
<td>350</td>
<td>420</td>
<td>475</td>
<td>285</td>
<td>340</td>
<td>385</td>
</tr>
</tbody>
</table>
Table 310.17 Ampacities of Single-Insulated Conductors in Free Air

<table>
<thead>
<tr>
<th>Size AWG or kcmil</th>
<th>COPPER</th>
<th>ALUMINUM OR COPPER-CLAD ALUMINUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>—</td>
<td>18</td>
</tr>
<tr>
<td>16</td>
<td>—</td>
<td>16</td>
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<tr>
<td>14*</td>
<td>25</td>
<td>25*</td>
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<td>12*</td>
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<td>2</td>
<td>140</td>
<td>110</td>
</tr>
<tr>
<td>1</td>
<td>165</td>
<td>130</td>
</tr>
<tr>
<td>1/0</td>
<td>195</td>
<td>150</td>
</tr>
<tr>
<td>2/0</td>
<td>225</td>
<td>175</td>
</tr>
<tr>
<td>3/0</td>
<td>260</td>
<td>200</td>
</tr>
<tr>
<td>4/0</td>
<td>300</td>
<td>235</td>
</tr>
</tbody>
</table>

Notes:
1. Section 310.15(B) shall be referenced for ampacity correction factors where the ambient temperature is other than 30°C (86°F).
2. Section 310.15(C)(1) shall be referenced for more than three current-carrying conductors.
3. Section 310.16 shall be referenced for conditions of use.
4. Section 240.4(D) shall be referenced for conductor overcurrent protection limitations, except as modified elsewhere in the Code.
5. Applicable only to copper-clad aluminum conductors.

Types
- TW, UF
- Types RHW, THHW, THW, THWN, XHHW, XHWN, ZW
- Types TBS, SA, SIS, FEP, FEPB, MI, PFA, RHH, RHW-2, THHN, THHW, THW-2, THWN-2, USE-2, XHH, XHHW, XHHW-2, XHWN-2, XHHN

Temperature Rating of Conductor [See Table 310.4(A)]

<table>
<thead>
<tr>
<th>60°C (140°F)</th>
<th>75°C (167°F)</th>
<th>90°C (194°F)</th>
<th>60°C (140°F)</th>
<th>75°C (167°F)</th>
<th>90°C (194°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types TW, UF</td>
<td>Types RHW, THHW, THW, THWN, XHHW, XHWN, ZW</td>
<td>Types TBS, SA, SIS, FEP, FEPB, MI, PFA, RHH, RHW-2, THHN, THHW, THW-2, THWN-2, USE-2, XHH, XHHW, XHHW-2, XHWN-2, XHHN, Z, ZW-2</td>
<td>Types TW, UF</td>
<td>Types RHW, THHW, THW, THWN, XHHW, XHWN</td>
<td>Types TBS, SA, SIS, THHN, THHW, THW-2, THWN-2, RHH, RHW-2, USE-2, XHH, XHHW, XHHW-2, XHWN-2, XHHN</td>
</tr>
</tbody>
</table>
### Table 310.16 Ampacities of Insulated Conductors with Not More Than Three Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried)

<table>
<thead>
<tr>
<th>Size AWG or kcmil</th>
<th>COPPER</th>
<th>ALUMINUM OR COPPER-CLAD ALUMINUM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Rating of Conductor [See Table 310.4(A)]</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60°C (140°F)</td>
<td>75°C (167°F)</td>
</tr>
<tr>
<td></td>
<td>Types</td>
<td>Types</td>
</tr>
<tr>
<td>Types TW, UF</td>
<td>Types RW, THHW, THW, THWN, XHHW, XHWN, USE, ZW</td>
<td>Types RW, THHW, THW, THWN, XHHW, XHWN, USE</td>
</tr>
<tr>
<td><strong>18</strong></td>
<td>14</td>
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<tr>
<td><strong>16</strong></td>
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<td><strong>10</strong></td>
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</tr>
<tr>
<td><strong>8</strong></td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>

Notes:
1. Section 310.15(B) shall be referenced for ampacity correction factors where the ambient temperature is other than 30°C (86°F).
2. Section 310.17 shall be referenced for conditions of use.
3. Section 240.4(D) shall be referenced for conductor overcurrent protection limitations, except as modified elsewhere in the Code.
4. Applicable only to copper-clad aluminum conductors.

**Recommended Text if Motion Fails:**

Table 310.16 Ampacities of Insulated Conductors with Not More Than Three Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried)
<table>
<thead>
<tr>
<th>Currents</th>
<th>1/0</th>
<th>2/0</th>
<th>3/0</th>
<th>4/0</th>
<th>1/0</th>
<th>2/0</th>
<th>3/0</th>
<th>4/0</th>
</tr>
</thead>
<tbody>
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<td>6</td>
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<td>65</td>
<td>75</td>
<td>40</td>
<td>50</td>
<td>55</td>
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<td>85</td>
<td>100</td>
<td>115</td>
<td>65</td>
<td>75</td>
<td>85</td>
<td>115</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>95</td>
<td>115</td>
<td>130</td>
<td>75</td>
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<td>100</td>
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<td>100</td>
<td>115</td>
<td>115</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Currents</th>
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<th>2/0</th>
<th>3/0</th>
<th>4/0</th>
<th>1/0</th>
<th>2/0</th>
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<tr>
<td>195</td>
<td>145</td>
<td>175</td>
<td>195</td>
<td>115</td>
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<td>175</td>
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<td>3/0</td>
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<td>260</td>
<td>195</td>
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<td>150</td>
<td>180</td>
<td>205</td>
<td>4/0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Currents</th>
<th>1/0</th>
<th>2/0</th>
<th>3/0</th>
<th>4/0</th>
<th>1/0</th>
<th>2/0</th>
<th>3/0</th>
<th>4/0</th>
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<tbody>
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<td>215</td>
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**Notes:**
1. Section 310.15(B) shall be referenced for ampacity correction factors where the ambient temperature is other than 30°C (86°F).
2. Section 310.15(C){(1)} shall be referenced for more than three current-carrying conductors.
3. Section 310.16 shall be referenced for conditions of use.
4. Section 240.4(D) shall be referenced for conductor overcurrent protection limitations, except as modified elsewhere in the Code.
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IF YOU AGREE TO SUPPORT AMENDMENT 70-128 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

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<th>Temperature Rating of Conductor [See Table 310.4(A)]</th>
<th>60°C (140°F)</th>
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<th>90°C (194°F)</th>
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1. Section 310.15(B) shall be referenced for ampacity correction factors where the ambient temperature is other than 30°C (86°F).
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3. Section 310.16 shall be referenced for conditions of use.
*Section 240.4(D) shall be referenced for conductor overcurrent protection limitations, except as modified elsewhere in the Code.
Ϯ Applicable only to copper-clad aluminum conductors.

### Table 310.17 Ampacities of Single-Insulated Conductors in Free Air

<table>
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<th>Temperature Rating of Conductor [See Table 310.4(A)]</th>
<th>60°C (140°F)</th>
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*Posted: May 2, 2022*  
*Corrected: May 12, 2022*
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<td>2000</td>
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</table>

Notes:

1. Section 310.15(B) shall be referenced for ampacity correction factors where the ambient temperature is other than 30°C (86°F).
2. Section 310.17 shall be referenced for conditions of use.
*Section 240.4(D) shall be referenced for conductor overcurrent protection limitations, except as modified elsewhere in the Code.
†Applicable only to copper-clad aluminum conductors.
IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-128 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

### Table 310.16 Ampacities of Insulated Conductors with Not More Than Three Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried)

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<tr>
<th>Temperature Rating of Conductor [See Table 310.4(A)]</th>
<th>60°C (140°F)</th>
<th>75°C (167°F)</th>
<th>90°C (194°F)</th>
<th>60°C (140°F)</th>
<th>75°C (167°F)</th>
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<td>Types TW, UF</td>
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<td>Types THHW, THW, THWN, USE</td>
<td>Types THHW, THW, THWN, USE</td>
<td>Types TBS, SA, SIS, THHN, RHH, RW-2, USE-2, XHH, XHHW, XHHW-2, XHWN, XHWN-2, XHHN</td>
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Notes:
1. Section 310.15(B) shall be referenced for ampacity correction factors where the ambient temperature is other than 30°C (86°F).
2. Section 310.15(C)(1) shall be referenced for more than three current-carrying conductors.
3. Section 310.16 shall be referenced for conditions of use.

*Section 240.4(D) shall be referenced for conductor overcurrent protection limitations, except as modified elsewhere in the Code.
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Notes:
1. Section 310.15(B) shall be referenced for ampacity correction factors where the ambient temperature is other than 30°C (86°F).
2. Section 310.17 shall be referenced for conditions of use.
*Section 240.4(D) shall be referenced for conductor overcurrent protection limitations, except as modified elsewhere in the Code.*
**Certified Amending Motion to Accept an Identifiable Part of Committee Comment (FR No. 8420 that failed reballoting at Second Draft Stage)**

<table>
<thead>
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<th>CAM No.</th>
<th>70-129</th>
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| **Recommended Text if Motion Passes:** | 330.104 Conductors.  
For ungrounded, grounded, and equipment grounding conductors, the minimum conductor sizes shall be 14 AWG copper, nickel, or nickel-coated copper and 12 AWG aluminum, or copper-clad aluminum and 12 AWG aluminum.  
For control and signal conductors, minimum conductor sizes shall be 18 AWG copper, nickel, or nickel-coated copper, 14 AWG copper-clad aluminum, and 12 AWG aluminum. |
| **Recommended Text if Motion Fails:** | 330.104 Conductors.  
For ungrounded, grounded, and equipment grounding conductors, the minimum conductor sizes shall be 14 AWG copper, nickel, or nickel-coated copper and 12 AWG aluminum or copper-clad aluminum.  
For control and signal conductors, minimum conductor sizes shall be 18 AWG copper, nickel, or nickel-coated copper, 14 AWG copper-clad aluminum, and 12 AWG aluminum. |
AMENDMENT BALLOT No. 70-129

Technical Committee on National Electrical Code®

NFPA 70, National Electrical Code®

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 70-129 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

330.104 Conductors.

For ungrounded, grounded, and equipment grounding conductors, the minimum conductor sizes shall be 14 AWG copper, nickel, or nickel-coated copper and 12 AWG aluminum, or copper-clad aluminum and 12 AWG aluminum.

For control and signal conductors, minimum conductor sizes shall be 18 AWG copper, nickel, or nickel-coated copper, 14 AWG copper-clad aluminum, and 12 AWG aluminum.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-129 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

330.104 Conductors.

For ungrounded, grounded, and equipment grounding conductors, the minimum conductor sizes shall be 14 AWG copper, nickel, or nickel-coated copper and 12 AWG aluminum or copper-clad aluminum.

For control and signal conductors, minimum conductor sizes shall be 18 AWG copper, nickel, or nickel-coated copper, 14 AWG copper-clad aluminum, and 12 AWG aluminum.
Recommended Text if Motion Passes:

5.3.1*
The work chamber of Class A ovens that require safety ventilation Fuel-fired furnaces and furnaces that contain flammable liquids, gases, or combustible dusts shall be equipped with unobstructed explosion relief for freely relieving internal explosion pressures except in the following cases:

(1) Explosion relief shall not be required on furnaces with shell construction having 3/16 in. (4.8 mm) or heavier steel plate shells reinforced with structural steel beams and buckstays that support and retain refractory or insulating materials that are required for temperature endurance, which makes them unsuitable for the installation of explosion relief.

(2) Explosion relief shall not be required for low-oxygen atmosphere ovens designed and protected in accordance with Section 11.7.

(3) The requirements for explosion relief shall not apply to thermal oxidizers.

(4) The requirements for explosion relief shall not apply to Class D furnaces.

(2)(5) Explosion relief shall not be required in the heating chamber of indirect-fired ovens where it is demonstrated by calculation that the combustible concentration in the heating chamber cannot exceed 25 percent of the lower flammable limit (LFL) under any operating conditions.

(4)(6)* Explosion relief shall not be required in the heating chamber of direct-fired ovens where all of the following conditions are met:

(a) It is demonstrated by calculation that the combustible concentration in the heating chamber cannot exceed 25 percent of the LFL under any operating conditions.

(b) The LFL aspirating detection is provided to monitor flammable concentrations in each direct-fired combustion chamber and interlocked to prevent start-up or initiate a safety shutdown upon detecting a concentration greater than 10 percent of the LFL.

(c) Where recirculating direct-fired systems are implemented, the LFL aspirating detection system is calibrated for all possible flammable gases that could be present as a result of the process or incomplete combustion.

(d) The LFL aspirating detection sensing intake ports are located in the region of each combustion chamber that is most likely to accumulate flammable gases as a result of a gas leak or incomplete combustion.

(e) Documentation of the LFL aspirating detection system calibration is maintained and posted at each system.

(f) The calibration of the LFL aspirating detection systems are calibrated at least annually or more often if recommended by the manufacturer for intended service is performed in accordance with the manufacturer’s instructions.

(g) The calibration of the LFL aspirating detection systems is performed at least once per month.

(4)(7) *Explosion relief shall not be required for the combustion chamber of an indirect-fired oven that incorporates a single combustion airflow path through the heat exchanger and does not recirculate the products of combustion.
**Recommended Text if Motion Fails:**

**5.3.1**

The work chamber of Class A ovens that require safety ventilation shall be equipped with unobstructed explosion relief for freely relieving internal explosion pressures except in the following cases:

1. Explosion relief shall not be required for low-oxygen atmosphere ovens designed and protected in accordance with Section 11.7.

2. Explosion relief shall not be required in the heating chamber of indirect-fired ovens where it is demonstrated by calculation that the combustible concentration in the heating chamber cannot exceed 25 percent of the lower flammable limit (LFL) under any operating conditions.

3. *Explosion relief shall not be required in the heating chamber of direct-fired ovens where all of the following conditions are met:

   a. It is demonstrated by calculation that the combustible concentration in the heating chamber cannot exceed 25 percent of the LFL under any operating conditions.

   b. The LFL aspirating detection is provided to monitor flammable concentrations in each direct-fired combustion chamber and interlocked to prevent start-up or initiate a safety shutdown upon detecting a concentration greater than 10 percent of the LFL.

   c. Where recirculating direct-fired systems are implemented, the LFL aspirating detection system is calibrated for all possible flammable gases that could be present as a result of the process or incomplete combustion.

   d. The LFL aspirating detection sensing intake ports are located in the region of each combustion chamber that is most likely to accumulate flammable gases as a result of a gas leak or incomplete combustion.

   e. Documentation of the LFL aspirating detection system calibration is maintained and posted at each system.

   f. The calibration of the LFL aspirating detection systems is performed in accordance with the manufacturer’s instructions.

   g. The calibration of the LFL aspirating detection systems is performed at least once per month.

4. *Explosion relief shall not be required for the combustion chamber of an indirect-fired oven that incorporates a single combustion airflow path through the heat exchanger and does not recirculate the products of combustion.
IF YOU AGREE TO SUPPORT AMENDMENT 86-6 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

5.3.1*

The working chamber of Class A ovens that require safety ventilation. Fuel-fired furnaces and furnaces that contain flammable liquids, gases, or combustible dusts shall be equipped with unobstructed explosion relief for freely relieving internal explosion pressures except in the following cases:

1) Explosion relief shall not be required on furnaces with shell construction having 3/6 in. (4.8 mm) or heavier steel plate shells reinforced with structural steel beams and backstays that support and retain refractory or insulating materials that are required for temperature endurance, which makes them unsuitable for the installation of explosion relief.

2) Explosion relief shall not be required for low-oxygen atmosphere ovens designed and protected in accordance with Section 11.7.

3) The requirements for explosion relief shall not apply to thermal oxidizers.

4) The requirements for explosion relief shall not apply to Class D furnaces.

2(5) Explosion relief shall not be required in the heating chamber of indirect-fired ovens where it is demonstrated by calculation that the combustible concentration in the heating chamber cannot exceed 25 percent of the lower flammable limit (LFL) under any operating conditions.

2(6)* Explosion relief shall not be required in the heating chamber of direct-fired ovens where all of the following conditions are met:

(a) It is demonstrated by calculation that the combustible concentration in the heating chamber cannot exceed 25 percent of the LFL under any operating conditions.

(b) The LFL aspirating detection is provided to monitor flammable concentrations in each direct-fired combustion chamber and interlocked to prevent start-up or initiate a safety shutdown upon detecting a concentration greater than 10 percent of the LFL.

(c) Where recirculating direct-fired systems are implemented, the LFL aspirating detection system is calibrated for all possible flammable gases that could be present as a result of the process or incomplete combustion.
(d) The LFL aspirating detection sensing intake ports are located in the region of each combustion chamber that is most likely to accumulate flammable gases as a result of a gas leak or incomplete combustion.

(e) Documentation of the LFL aspirating detection system calibration is maintained and posted at each system.

(f) The calibration of the LFL aspirating detection systems are calibrated at least annually or more often if recommended by the manufacturer for intended service is performed in accordance with the manufacturer’s instructions.

(g) The calibration of the LFL aspirating detection systems is performed at least once per month.

(4)(7)* Explosion relief shall not be required for the combustion chamber of indirect-fired oven that incorporates a single combustion airflow path through the heat exchanger and does not recirculate the products of combustion.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 86-6 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below.

5.3.1*
Fuel-fired furnaces and furnaces that contain flammable liquids, gases, or combustible dusts shall be equipped with unobstructed explosion relief for freely relieving internal explosion pressures except in the following cases:

(1) Explosion relief shall not be required on furnaces with a shell construction having a minimum 3/16 in. (4.8 mm) steel plate or equivalent strength construction reinforced with structural steel beams and buckstays that support and retain refractory or insulating materials that are required for temperature endurance, which makes them unsuitable for the installation of explosion relief.

(2) Explosion relief shall not be required for low-oxygen atmosphere ovens designed and protected in accordance with Section 11.7.

(3) The requirements for explosion relief shall not apply to thermal oxidizers.

(4) The requirements for explosion relief shall not apply to Class D furnaces.

(5) Explosion relief shall not be required in the heating chamber of indirect-fired ovens where it is demonstrated by calculation that the combustible concentration in the heating chamber cannot exceed 25 percent of the lower flammable limit (LFL) under any operating conditions.

(6)* Explosion relief shall not be required in the heating chamber of direct-fired ovens where all of the following conditions are met:
(a) It is demonstrated by calculation that the combustible concentration in the heating chamber cannot exceed 25 percent of the LFL under any operating conditions.

(b) LFL aspirating detection is provided to monitor flammable concentrations in each direct-fired combustion chamber and interlocked to prevent start-up or initiate a safety shutdown upon detecting a concentration greater than 10 percent of the LFL.

(c) Where recirculating direct-fired systems are implemented, the LFL aspirating detection system is calibrated for all possible flammable gases that could be present as a result of the process or incomplete combustion.

(d) LFL aspirating detection sensing intake ports are located in the region of each combustion chamber that is most likely to accumulate flammable gases as a result of a gas leak or incomplete combustion.

(e) Documentation of LFL aspirating detection system calibration is maintained and posted at each system.

(f) LFL aspirating detection systems are calibrated at least annually or more often if recommended by the manufacturer for intended service.

(7)* Explosion relief shall not be required for the combustion chamber of an indirect-fired oven that incorporates a single combustion airflow path through the heat exchanger and does not recirculate the products of combustion.
### Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 6

**CAM No. 130-2**

<table>
<thead>
<tr>
<th><strong>Recommended Text if Motion Passes:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>12.2.2*</td>
</tr>
<tr>
<td>The requirements of 12.2.1 are not applicable where wires and cables comply with one of the following:</td>
</tr>
<tr>
<td>(1)* Circuits are contained in circuits encased in concrete having a thickness of at least 50 mm (2 in.)</td>
</tr>
<tr>
<td>(2) Circuits are located in open stations or open trainways</td>
</tr>
<tr>
<td><strong>A.12.2.2(4)</strong></td>
</tr>
<tr>
<td>The term circuits is intended to include the wires, cables, and insulated conductors that are routed through a raceway that is encased in concrete.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Recommended Text if Motion Fails:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>12.2.2</td>
</tr>
<tr>
<td>The requirements of 12.2.1 are not applicable where wires and cables comply with one of the following:</td>
</tr>
<tr>
<td>(1)* Circuits are encased in concrete having a thickness of at least 50 mm (2 in.)</td>
</tr>
<tr>
<td>(2) Circuits are located in open stations or open trainways</td>
</tr>
<tr>
<td><strong>A.12.2.2(1)</strong></td>
</tr>
<tr>
<td>The term circuits is intended to include the wires, cables, and insulated conductors that are routed through a raceway that is encased in concrete.</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 130-2

Technical Committee on Fixed Guideway Transit and Passenger Rail Systems

NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems

June 8-9, 2022

---

IF YOU AGREE TO SUPPORT AMENDMENT 130-2 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

12.2.2*
The requirements of 12.2.1 are not applicable where wires and cables comply with one of the following:
(1)* Circuits contained in circuits encased in concrete having a thickness of at least 50 mm (2 in.)
(2) Circuits are located in open stations or open trainways

A.12.2.2(1)
The term circuits is intended to include the wires, cables, and insulated conductors that are routed through a raceway that is encased in concrete.

---

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 130-2 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
<table>
<thead>
<tr>
<th>CAM No. 130-3</th>
<th>Certified Amending Motion to Reject Second Revision No. 19 and any Related Portions of First Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td>A.8.6.7.1.2 This paragraph does not apply to communication and Ethernet cables including but not limited to CAT 5, CAT 5E, CAT 6, CAT 6A, CAT 7, MVB, WTB, CANBUS, and RS-485. Communication and Ethernet cables use thin insulation and jackets that do not comply with the thickness and performance requirements of the standards listed in 8.6.7.1.2. In addition, some communication cables use foam insulation, which is not addressed by the referenced standards.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>If motion is successful, asterisk attached to Section 8.6.7.1.2 will be editorially removed.</td>
</tr>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
<td>A.8.6.7.1.2 This paragraph does not apply to communication and Ethernet cables including but not limited to CAT 5, CAT 5E, CAT 6, CAT 6A, CAT 7, MVB, WTB, CANBUS, and RS-485. Communication and Ethernet cables use thin insulation and jackets that do not comply with the thickness and performance requirements of the standards listed in 8.6.7.1.2. In addition, some communication cables use foam insulation, which is not addressed by the referenced standards.</td>
</tr>
</tbody>
</table>
Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 11

<table>
<thead>
<tr>
<th>CAM No. 130-5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td>A.8.6.7.1.3</td>
</tr>
<tr>
<td>The electrical properties of data and communication cables should comply with the requirements for the applicable cable category or with the applicable local electrical requirements. Different system authorities specify data and communication cables that have specific electrical requirements other than voltage. Some examples of designations for cables potentially used in rail transportation vehicles include CAT 5, CAT 5E, CAT 6, CAT 6A, CAT 7, MVB, WTB, CANBUS, and RS-485.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAM No. 130-5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td>A.8.6.7.1.3</td>
</tr>
<tr>
<td>The electrical properties of data and communication cables should comply with the requirements for the applicable cable category or with the applicable local electrical requirements. Different system authorities specify data and communication cables that have specific electrical requirements other than voltage. Some examples of designations for cables potentially used in rail transportation vehicles include CAT 5, CAT 5E, CAT 6, CAT 6A, CAT 7, MVB, WTB, CANBUS, and RS-485.</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 130-5

Technical Committee on Fixed Guideway Transit and Passenger Rail Systems

NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 130-5 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

A.8.6.7.1.3

The electrical properties of data and communication cables should comply with the requirements for the applicable cable category or with the applicable local electrical requirements. Different system authorities specify data and communication cables that have specific electrical requirements other than voltage. Some examples of designations for cables potentially used in rail transportation vehicles include CAT 5, CAT 5E, CAT 6, CAT 6A, CAT 7, MVB, WTB, CANBUS, and RS-485.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 130-5 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below.

A.8.6.7.1.3

The electrical properties of data and communication cables should comply with requirements for category cable or local electrical requirements. Different system authorities specify data and communication cables that have specific electrical requirements other than voltage. Some examples of designations for cables potentially used in rail transportation vehicles include CAT 5, CAT 5E, CAT 6, CAT 7, MVB, WTB, CANBUS, and RS-485.
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 16

Recommended Text if Motion Passes:

<table>
<thead>
<tr>
<th>Table 8.4.1 Fire Test Procedures and Performance Criteria for Materials and Assemblies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light diffusers, windows, and transparent plastic windscreens</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

*aSee 8.4.1.1.
*bSee 8.4.1.2. . . .
*iSee 8.4.1.9. . . .

*Note: This motion seeks to remove footnote “a” as applicable to Light diffusers, windows, and transparent plastic windscreens. Footnote “a” reads: *See 8.4.1.1.
No other amendments to Table 8.4.1 are being sought as part of this motion.

Recommended Text if Motion Fails:

<table>
<thead>
<tr>
<th>Table 8.4.1 Fire Test Procedures and Performance Criteria for Materials and Assemblies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light diffusers, windows, and transparent plastic windscreens</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

*aSee 8.4.1.1.
*bSee 8.4.1.2. . . .
*iSee 8.4.1.9. . . .
AMENDMENT BALLOT No. 130-9

Technical Committee on Fixed Guideway Transit and Passenger Rail Systems
NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 130-9 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

Table 8.4.1 Fire Test Procedures and Performance Criteria for Materials and Assemblies

<table>
<thead>
<tr>
<th>Light diffusers, windows, and transparent plastic windscreens</th>
<th>ASTM E162</th>
<th>Is ≤ 100</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ASTM E662</td>
<td>Ds (1.5) ≤ 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ds (4.0) ≤ 200</td>
</tr>
</tbody>
</table>

*a*See 8.4.1.1.

*b*See 8.4.1.2....

*i*See 8.4.1.9....

*Note: This motion seeks to remove footnote “a” as applicable to Light diffusers, windows, and transparent plastic windscreens. Footnote “a” reads: *See 8.4.1.1. No other amendments to Table 8.4.1 are being sought as part of this motion.*

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 130-9 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below.
### Table 8.4.1 Fire Test Procedures and Performance Criteria for Materials and Assemblies

<table>
<thead>
<tr>
<th>Light diffusers, windows, and transparent plastic windscreens&lt;sup&gt;b,i&lt;/sup&gt;</th>
<th>ASTM E162</th>
<th>Is = 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM E662</td>
<td>Ds (1.5) = 100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ds (4.0) = 200</td>
<td></td>
</tr>
</tbody>
</table>

<sup>b</sup>See 8.4.1.2. . . .

<sup>i</sup>See 8.4.1.9. . . .

*Note: The “=” in the final column that appeared in previous edition text was a clerical error which has been identified and corrected to “≤” per errata in the 2020 edition.
### Certified Amending Motion to Accept Public Comment No. 12

<table>
<thead>
<tr>
<th>CAM No. 502-2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3.3.45 Noncombustible Material.</strong></td>
<td></td>
</tr>
<tr>
<td>A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat. (See 4.8).</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> Section 3.3.44 is renumbered to 3.3.45 in the proposed 2023 edition due to an added section.</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3.3.45 Noncombustible Material.</strong></td>
<td></td>
</tr>
<tr>
<td>A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat.</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> Section 3.3.44 is renumbered to 3.3.45 in the proposed 2023 edition due to an added section.</td>
<td></td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 502-2

Technical Committee on Road Tunnel and Highway Fire Protection

NFPA 502, Standard for Road Tunnels, Bridges, and Other Limited Access Highways

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 502-2 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

3.3.45 Noncombustible Material.

A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat. (See 4.8).

*Note: Section 3.3.44 is renumbered to 3.3.45 in the proposed 2023 edition due to an added section.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 502-2 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below.

3.3.44* Noncombustible Material.

See Section 4.8

A.3.3.44 Noncombustible Material.

Standards other than ASTM E136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C, exist that are used to assess noncombustibility of materials. They include: ASTM E2652, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C with a Cone-Shaped Airflow Stabilizer; ISO 1182, Reaction to fire tests for products — Non-combustibility test; and BS 476-4, Fire tests on building materials and structures, Non-combustibility test for materials.
### Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 13

**Recommended Text if Motion Passes:**

4.8* Noncombustible Material.

A material that complies with any one of the following shall be considered a noncombustible material:

1. The material, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat.

2. The material is reported as passing ASTM E136, *Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C*.

3. The material is reported as complying with the pass/fail criteria of either of the following:
   - EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*, in relation to ISO 1182, *Reaction to fire tests for products — Non-combustibility test* and ISO 1716, *Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value)*.
   - BS 476-4, *Fire tests on building materials and structures – Part 4: Noncombustibility test for materials*.

**Recommended Text if Motion Fails:**

4.8* Noncombustible Material.

A material that complies with any one of the following shall be considered a noncombustible material:

1. The material is reported as passing ASTM E136, *Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C*.

2. The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, *Standard Test Method for Assessing Combustibility of Materials Using a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*.

3. The material is reported as complying with the pass/fail criteria of either of the following:
   - EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*, in relation to ISO 1182, *Reaction to fire tests for products — Non-combustibility test* and ISO 1716, *Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value)*.
   - BS 476-4, *Fire tests on building materials and structures – Part 4: Noncombustibility test for materials*.
AMENDMENT BALLOT No. 502-4

Technical Committee on Road Tunnel and Highway Fire Protection

NFPA 502, Standard for Road Tunnels, Bridges, and Other Limited Access Highways

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 502-4 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

4.8* Noncombustible Material.

A material that complies with any one of the following shall be considered a noncombustible material:

(1) The material, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat.

(2) The material is reported as passing ASTM E136, Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C.

(3) The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, Standard Test Method for Assessing Combustibility of Materials Using a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C.

(4) The material is reported as complying with the pass/fail criteria of either of the following:

(a) EN 13501-1, Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests, in relation to ISO 1182, Reaction to fire tests for products — Non-combustibility test and ISO 1716, Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value).

(b) BS 476-4, Fire tests on building materials and structures – Part 4: Noncombustibility test for materials.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 502-4 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below.

4.8* Noncombustible Material.

A material that complies with any one of the following shall be considered a noncombustible material:
(1) The material, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat.

(2) The material is reported as passing ASTM E136, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C*.

(3) The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, *Standard Test Method for Behavior of Materials in a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*.

(4)* The material is reported as complying with the pass/fail criteria of EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*, in relation to ISO 1182, *Reaction to fire tests for products — Non-combustibility test*. 
## Certified Amending Motion to Accept Public Comment No. 17

<table>
<thead>
<tr>
<th>CAM No.</th>
<th>502-5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>7.3.3</strong></td>
<td></td>
</tr>
<tr>
<td>During a 120-minute period of fire exposure or other time that is acceptable to the AHJ, but of no less than 120 min., the following failure criteria shall be satisfied:</td>
<td></td>
</tr>
<tr>
<td>(1) Regardless of the material the primary structural element is made of, irreversible damage and deformation leading to progressive structural collapse shall be prevented.</td>
<td></td>
</tr>
<tr>
<td>(2)* Tunnels with concrete structural elements shall be designed such that fire-induced spalling, which leads to progressive structural collapse, is prevented.</td>
<td></td>
</tr>
</tbody>
</table>

| **Recommended Text if Motion Fails:** | |
| **7.3.3** | |
| During a 120-minute period of fire exposure or other time that is acceptable to the AHJ, the following failure criteria shall be satisfied: | |
| (1) Regardless of the material the primary structural element is made of, irreversible damage and deformation leading to progressive structural collapse shall be prevented. | |
| (2)* Tunnels with concrete structural elements shall be designed such that fire-induced spalling, which leads to progressive structural collapse, is prevented. | |
AMENDMENT BALLOT No. 502-5

Technical Committee on Road Tunnel and Highway Fire Protection
NFPA 502, Standard for Road Tunnels, Bridges, and Other Limited Access Highways
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 502-5 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

7.3.3

During a 120-minute period of fire exposure period or other time that is acceptable to the AHJ, but of no less than 120 min., the following failure criteria shall be satisfied:

(1) Regardless of the material the primary structural element is made of, irreversible damage and deformation leading to progressive structural collapse shall be prevented.

(2)* Tunnels with concrete structural elements shall be designed such that fire-induced spalling, which leads to progressive structural collapse, is prevented.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 502-5 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below.

7.3.3

During a 120-minute period of fire exposure or other time that is acceptable to the AHJ, the following failure criteria shall be satisfied:

(1) Regardless of the material the primary structural element is made of, irreversible damage and deformation leading to progressive structural collapse shall be prevented.

(2)* Tunnels with concrete structural elements shall be designed such that fire-induced spalling, which leads to progressive structural collapse, is prevented.
<table>
<thead>
<tr>
<th>CAM No. 502-7</th>
<th></th>
</tr>
</thead>
</table>

**Recommended Text if Motion Passes:**

**7.3.2*  
**The structure shall be capable of withstanding the temperature exposure represented by the Rijkswaterstaat (RWS) time-temperature curve or other recognized standard time-temperature curve that is acceptable to the AHJ, following an engineering analysis comply with the transmission of heat and spalling requirements from applying the time-temperature curve in ASTM E3134, unless an engineering analysis, as required in Chapter 4, that is acceptable to the AHJ, demonstrates that an alternate time-temperature curve is suitable.**

**Recommended Text if Motion Fails:**

**7.3.2*  
**The structure shall be capable of withstanding the temperature exposure represented by the Rijkswaterstaat (RWS) time-temperature curve or other recognized standard time-temperature curve that is acceptable to the AHJ, following an engineering analysis as required in Chapter 4.
AMENDMENT BALLOT No. 502-7

Technical Committee on Road Tunnel and Highway Fire Protection

NFPA 502, Standard for Road Tunnels, Bridges, and Other Limited Access Highways

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 502-7 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

7.3.2*
The structure shall be capable of withstanding the temperature exposure represented by the Rijkswaterstaat (RWS) time-temperature curve or other recognized standard time-temperature curve that is acceptable to the AHJ, following an engineering analysis comply with the transmission of heat and spalling requirements from applying the time-temperature curve in ASTM E3134, unless an engineering analysis, as required in Chapter 4, that is acceptable to the AHJ, demonstrates that an alternate time-temperature curve is suitable.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 502-7 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below.

7.3.2*
The structure shall be capable of withstanding the temperature exposure represented by the Rijkswaterstaat (RWS) time-temperature curve or other recognized standard time-temperature curve that is acceptable to the AHJ, following an engineering analysis as required in Chapter 4.
Certified Amending Motion to Accept an Identifiable Part of Public Comment No. 13

**Recommended Text if Motion Passes:**

4.8* Noncombustible Material.
A material that complies with any one of the following shall be considered a noncombustible material:

(1) The material is reported as passing ASTM E136, *Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C*.

(2) The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, *Standard Test Method for Assessing Combustibility of Materials Using a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*.

(3)* The material is reported as complying with the pass/fail criteria for Class A1 of either of the following:
   (a) EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*, in relation to ISO 1182, *Reaction to fire tests for products — Non-combustibility test* and ISO 1716, *Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value)*.
   (b) BS 476-4, *Fire tests on building materials and structures – Part 4: Non-combustibility test for materials*.

**Recommended Text if Motion Fails:**

4.8* Noncombustible Material.
A material that complies with any one of the following shall be considered a noncombustible material:

(1) The material is reported as passing ASTM E136, *Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C*.

(2) The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, *Standard Test Method for Assessing Combustibility of Materials Using a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*.

(3)* The material is reported as complying with the pass/fail criteria of either of the following:
   (a) EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*, in relation to ISO 1182, *Reaction to fire tests for products — Non-combustibility test* and ISO 1716, *Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value)*.
   (b) BS 476-4, *Fire tests on building materials and structures – Part 4: Non-combustibility test for materials*.
IF YOU AGREE TO SUPPORT AMENDMENT 502-9 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

4.8* Noncombustible Material.

A material that complies with any one of the following shall be considered a noncombustible material:

(1) The material is reported as passing ASTM E136, *Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C*.

(2) The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, *Standard Test Method for Assessing Combustibility of Materials Using a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*.

(3)* The material is reported as complying with the pass/fail criteria for Class A1 of either of the following:

(a) EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*, in relation to ISO 1182, *Reaction to fire tests for products — Non-combustibility test* and ISO 1716, *Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value)*.

(b) BS 476-4, *Fire tests on building materials and structures – Part 4: Non-combustibility test for materials*.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 502-9 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below.

4.8* Noncombustible Material.

A material that complies with any one of the following shall be considered a noncombustible material:
(1) The material, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat.

(2) The material is reported as passing ASTM E136, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C*.

(3) The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, *Standard Test Method for Behavior of Materials in a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*.

(4) The material is reported as complying with the pass/fail criteria of EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*, in relation to ISO 1182, *Reaction to fire tests for products — Non-combustibility test*. 

*The material is reported as complying with the pass/fail criteria of EN 13501-1, Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests, in relation to ISO 1182, Reaction to fire tests for products — Non-combustibility test.*
### Certified Amending Motion to Accept Public Comment No. 71

<table>
<thead>
<tr>
<th>CAM No.</th>
<th>855-3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td></td>
</tr>
<tr>
<td><em><em>1.1</em> Scope.</em>*</td>
<td></td>
</tr>
<tr>
<td><strong>1.1.1 Covered.</strong> This standard applies to the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary energy storage systems (ESS), including mobile and portable ESS installed in a stationary situation and the storage of lithium metal or lithium-ion batteries.</td>
<td></td>
</tr>
</tbody>
</table>

| **1.1.2 Not Covered.** This standard does not cover ESS installations under the exclusive control of an electric utility where such installations are installed in accordance with the IEEE National Electrical Safety Code, ANSI C2. | |

| **Recommended Text if Motion Fails:** | |
| **1.1* Scope.** | |
| This standard applies to the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary energy storage systems (ESS), including mobile and portable ESS installed in a stationary situation and the storage of lithium metal or lithium-ion batteries. | |
AMENDMENT BALLOT No. 855-3

Technical Committee on Energy Storage Systems
NFPA 855, Standard for the Installation of Stationary Energy Storage Systems
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 855-3 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

1.1* Scope.

1.1.1 Covered. This standard applies to the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary energy storage systems (ESS), including mobile and portable ESS installed in a stationary situation and the storage of lithium metal or lithium-ion batteries.

1.1.2 Not Covered. This standard does not cover ESS installations under the exclusive control of an electric utility where such installations are installed in accordance with the IEEE National Electrical Safety Code, ANSI C2.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 855-3 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

1.1 Scope. (Reserved)
### Certified Amending Motion to Accept Public Comment No. 72

**Recommended Text if Motion Passes:**

1.1* Scope.

1.1.1 Covered. This standard applies to the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary energy storage systems (ESS), including mobile and portable ESS installed in a stationary situation and the storage of lithium metal or lithium-ion batteries.

1.1.2 Not Covered. This standard does not cover installations under the exclusive control of an electric utility where such installations

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

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

c. Are located in legally established easements or rights-of-way, or

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

**Recommended Text if Motion Fails:**

1.1* Scope.

This standard applies to the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary energy storage systems (ESS), including mobile and portable ESS installed in a stationary situation and the storage of lithium metal or lithium-ion batteries.
AMENDMENT BALLOT No. 855-4

Technical Committee on Energy Storage Systems

NFPA 855, Standard for the Installation of Stationary Energy Storage Systems

June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 855-4 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

1.1* Scope.

1.1.1 Covered. This standard applies to the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary energy storage systems (ESS), including mobile and portable ESS installed in a stationary situation and the storage of lithium metal or lithium-ion batteries.

1.1.2 Not Covered. This standard does not cover installations under the exclusive control of an electric utility where such installations

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

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

c. Are located in legally established easements or rights-of-way, or

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

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 855-4 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

1.1 Scope. (Reserved)
<table>
<thead>
<tr>
<th>CAM No. 855-5</th>
<th>Certified Amending Motion to Accept Public Comment No. 177</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td></td>
<td>4.4.4.4.3</td>
</tr>
<tr>
<td></td>
<td>Where approved by the AHJ, listed energy storage systems, less than 20kWh each, complying with fire and explosion testing requirements in 4.1.5, which demonstrate no flaming outside the ESS, shall not be required to comply with the requirements in 4.4.4.4.2.</td>
</tr>
<tr>
<td></td>
<td><em>Note: If successfully recommended, the text will be renumbered (to 9.5.3.1.1.3), and references included will be updated to reflect second revisions which relocated and renamed the host section.</em></td>
</tr>
<tr>
<td></td>
<td><strong>Recommended Text if Motion Fails:</strong></td>
</tr>
<tr>
<td></td>
<td>No text recommended</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 855-5

Technical Committee on Energy Storage Systems
NFPA 855, Standard for the Installation of Stationary Energy Storage Systems
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 855-5 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

4.4.4.4.3

Where approved by the AHJ, listed energy storage systems, less than 20kWh each, complying with fire and explosion testing requirements in 4.1.5, which demonstrate no flaming outside the ESS, shall not be required to comply with the requirements in 4.4.4.4.2.

*Note: If successfully recommended, the text will be renumbered (to 9.5.3.1.1.3), and references included will be updated to reflect second revisions which relocated and renamed the host section.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 855-5 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text
### Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 7 and any Related Portion of First Revision No. 15

<table>
<thead>
<tr>
<th>CAM No. 285-7</th>
<th>Recommended Text if Motion Passes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B.8.5.1.1.2 It is permissible to determine a worst-case SPF formulation via testing to ASTM E1354. The worst case is to be tested in the NFPA 285 test wall assembly to facilitate extension to other SPFs within that manufacturer’s brand.</td>
</tr>
</tbody>
</table>

*Note: All of Annex B as shown in the Second Draft will remain except for section B.8.5.1.1.2 and the remaining Annex B sections will be renumbered accordingly.

<table>
<thead>
<tr>
<th>CAM No. 285-7</th>
<th>Recommended Text if Motion Fails:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B.8.5.1.1.2 It is permissible to determine a worst-case SPF formulation via testing to ASTM E1354. The worst case is to be tested in the NFPA 285 test wall assembly to facilitate extension to other SPFs within that manufacturer’s brand.</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 285-7
Technical Committee on Fire Tests
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 285-7 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

B.8.5.1.1.2 It is permissible to determine a worst case SPF formulation via testing to ASTM E1354. The worst case is to be tested in the NFPA 285 test wall assembly to facilitate extension to other SPFs within that manufacturer’s brand.

*Note: If 285-7 is supported by vote of the responsible committee, all of Annex B as shown in the Second Draft will remain except for section B.8.5.1.1.2 and the remaining Annex B sections will be renumbered accordingly.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 285-7 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text exists therefore all of Annex B is deleted.
## Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 7 and Any Related Portion of First Revision No. 15

**CAM No. 285-12**

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
<td></td>
</tr>
<tr>
<td>B.8.5.1.1.3 It is typically not permissible for the SPF of one manufacturer to be used in an NFPA 285 test based on data from another manufacturer.</td>
<td></td>
</tr>
</tbody>
</table>

*Note: All of Annex B as shown in the Second Draft will remain except for section B.8.5.1.1.3 and remaining section B.8.5.1.1.4 will be renumbered accordingly to B.8.5.1.1.3.*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Fails:</strong></td>
<td></td>
</tr>
<tr>
<td>B.8.5.1.1.3 It is typically not permissible for the SPF of one manufacturer to be used in an NFPA 285 test based on data from another manufacturer.</td>
<td></td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT No. 285-12

Technical Committee on Fire Tests


June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 285-12 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

B.8.5.1.1.3 It is typically not permissible for the SPF of one manufacturer to be used in an NFPA 285 test based on data from another manufacturer.

*Note: If 285-12 is supported by vote of the responsible committee, all of Annex B as shown in the Second Draft will remain except for section B.8.5.1.1.3 and remaining section B.8.5.1.1.4 will be renumbered accordingly to B.8.5.1.1.3.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 285-12 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text exists therefore all of Annex B is deleted.
Certified Amending Motion to Reject an Identifiable Part of Second Revision No. 7 and Any Related Portion of First Revision No. 15

<table>
<thead>
<tr>
<th>CAM No. 285-13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Text if Motion Passes:</strong></td>
</tr>
<tr>
<td>B.8.5.1.2.1 It is typically not permissible to allow a manufacturer’s SPF to be substituted based on fire performance data from another manufacturer’s product.</td>
</tr>
<tr>
<td><em>Note: All of Annex B as shown in the Second Draft will remain except for section B.8.5.1.2.1 and remaining section B.8.5.1.2.2 will be renumbered to B.8.5.1.2.1 accordingly.</em>*</td>
</tr>
</tbody>
</table>

| **Recommended Text if Motion Fails:** |
| B.8.5.1.2.1 It is typically not permissible to allow a manufacturer’s SPF to be substituted based on fire performance data from another manufacturer's product. |
AMENDMENT BALLOT No. 285-13
Technical Committee on Fire Tests
June 8-9, 2022

IF YOU AGREE TO SUPPORT AMENDMENT 285-13 as recommended by the NFPA membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

B.8.5.1.2.1 It is typically not permissible to allow a manufacturer’s SPF to be substituted based on fire performance data from another manufacturer’s product.

*Note: If 285-13 is supported by vote of the responsible committee, all of Annex B as shown in the Second Draft will remain except for section B.8.5.1.2.1 and remaining section B.8.5.1.2.2 will be renumbered to B.8.5.1.2.1 accordingly.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 285-13 by the NFPA membership by vote at Tech Session, the recommended text (i.e. previous edition text) is shown clean below. If no previous edition text exists, the text supported by the membership vote is simply deleted.

No previous edition text exists therefore all of Annex B is deleted.