### Standards Council Meeting

**Boston Marriott Quincy**  
**1000 Marriott Drive**  
**Quincy, MA 02169**  
**(617) 472-1000**  
**August 5-7, 2019**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>19-8-1</strong></td>
<td>Act on the issuance of NFPA 25, <em>Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems</em>, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with two amendments and no appeals.</td>
</tr>
<tr>
<td><strong>19-8-1-a</strong></td>
<td>CAM 25-4: Accept an Identifiable Part of Public Comment No. 40. CAM 25-4 passed on the floor of the NFPA Technical Meeting. <strong>PASSED</strong> TC Ballot – 34 voting members/24 agree/8 disagree/0 abstained/2 ballots not returned. See Attachment 19-8-1-a</td>
</tr>
<tr>
<td><strong>19-8-1-b</strong></td>
<td>CAM 25-5: Accept Public Comment No. 60. CAM 25-5 passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> TC Ballot – 34 voting members/15 agree/17 disagree/0 abstained/2 ballots not returned. See Attachment 19-8-1-b</td>
</tr>
<tr>
<td><strong>19-8-2</strong></td>
<td>Act on the issuance of NFPA 58, <em>Liquefied Petroleum Gas Code</em>, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with one amendment and no appeals.</td>
</tr>
<tr>
<td><strong>19-8-2-a</strong></td>
<td>CAM 58-1: Reject Second Revision No. 69. CAM 58-1 passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> TC Ballot – 32 voting members/10 agree/18 disagree/0 abstained/4 ballots not returned. See Attachment 19-8-2-a</td>
</tr>
<tr>
<td><strong>19-8-3</strong></td>
<td>Act on the issuance of NFPA 70, <em>National Electrical Code</em>, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with ten amendment and 36 appeals.</td>
</tr>
<tr>
<td><strong>19-8-3-a</strong></td>
<td>Appeal of D. Mikat of Toyota Motor North America, requesting the Standards Council Overturn the Association Action and Reject an Identifiable Part of Second Revision No.7891 (CAM 70-1). This CAM failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-a</td>
</tr>
<tr>
<td><strong>19-8-3-a-1</strong></td>
<td>Comment received by R. Boyce, Chair of Panel 1 of the NEC, regarding appeal on CAM 70-1. See Attachment 19-8-3-a-1</td>
</tr>
<tr>
<td><strong>19-8-3-a-2</strong></td>
<td>Comment received by John Kovacik on behalf of the NEC Correlating Committee regarding appeal on Multiple CAMs. See Attachment 19-8-3-a-2</td>
</tr>
<tr>
<td><strong>19-8-3-a-3</strong></td>
<td>Comment received by S. Cline, Chair of Panel 12 of the NEC, on appeals regarding CAM 70-1. See Attachment 19-8-3-a-3 for comment content.</td>
</tr>
<tr>
<td><strong>19-8-3-b</strong></td>
<td>Appeal of D. Mikat of Toyota Motor North America, requesting the Standards Council Overturn the Association Action and Reject an Identifiable Part of Second Revision No. 7776, including any related portions of First Revision No. 8385 (CAM 70-2). This CAM failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-b</td>
</tr>
<tr>
<td><strong>19-8-3-b-1</strong></td>
<td>Comment received by S. Cline, Chair of Panel 12 of the NEC, on appeals regarding CAM 70-2. See Attachment 19-8-3-a-3 for comment content.</td>
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<tr>
<td>19-8-3-c</td>
<td><strong>APPEAL</strong></td>
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<td>19-8-3-c-1</td>
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<td>19-8-3-d</td>
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<td>19-8-3-f</td>
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<td>19-8-3-k</td>
<td><strong>APPEAL</strong></td>
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<td>Motion Number</td>
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<td>19-8-3-l</td>
<td><strong>APPEAL</strong> Appeal of H. Herndon, PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 8048 (CAM 70-16). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-l (For full Appeal see 19-8-3-i)</td>
</tr>
<tr>
<td>19-8-3-m</td>
<td>CAM 70-22: Accept an Identifiable Part of Public Comment No. 1406. CAM 70-22 passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> Panel Ballot – 13 voting members/4 agree/7 disagree/0 abstained/2 ballots not returned and <strong>PASSING/FAILING</strong> CC Ballot – xx voting members/xx agree/xx disagree/xx abstained/xx ballots not returned). See Attachment 19-8-3-m</td>
</tr>
<tr>
<td>19-8-3-m-1</td>
<td><strong>APPEAL</strong> Appeal of C. Hunter of Cerro Wire, requesting the NFPA Standards Council return to second draft text and not previous edition text. (CAM 70-22). This Motion passed on the floor of the NFPA Technical Meeting and has not achieved the 2/3 majority vote of the Panel needed to recommend approval of the Association Action. The results of the panel ballot not receiving the 2/3 majority vote is that the text returns to previous edition text. See Attachment 19-8-3-m-1</td>
</tr>
<tr>
<td>19-8-3-m-2</td>
<td><strong>APPEAL</strong> Appeal of P. Graser of Copperweld, requesting the NFPA Standards Council overturn the Panel Ballot and Accept an Identifiable Part of Public Comment No. 1406 (CAM 70-22). The panel ballot did not achieve the 2/3 majority vote needed to recommend approval of the Association Action. See Attachment 19-8-3-m-2</td>
</tr>
<tr>
<td>19-8-3-n</td>
<td><strong>APPEAL</strong> Appeal of P. Graser of Copperweld, requesting the NFPA Standards Council overturn the Association Action and Accept an Identifiable Part of Public Comment No. 1382 (CAM 70-24). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-n</td>
</tr>
<tr>
<td>19-8-3-o</td>
<td><strong>APPEAL</strong> Appeal of H. Herndon of PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 8187 (CAM 70-27). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-o (For full Appeal see 19-8-3-i)</td>
</tr>
<tr>
<td>19-8-3-p</td>
<td><strong>APPEAL</strong> Appeal of H. Herndon of PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 8189 (CAM 70-28). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-p (For full Appeal see 19-8-3-i)</td>
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<tr>
<td>19-8-3-q</td>
<td><strong>APPEAL</strong> Appeal of H. Herndon of PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 8172 (CAM 70-30). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-q (For full Appeal see 19-8-3-i)</td>
</tr>
<tr>
<td>19-8-3-q-1</td>
<td>Comment received by D. Humphrey, Chair of Panel 9 of the NEC, on appeals regarding reconditioned equipment. See Attachment 19-8-3-q-1</td>
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<tr>
<td>19-8-3-r</td>
<td><strong>APPEAL</strong> Appeal of C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 8162 (CAM 70-31). This Motion was not pursued on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-r (For full Appeal see 19-8-3-i)</td>
</tr>
<tr>
<td>19-8-3-s</td>
<td><strong>APPEAL</strong> Appeal of C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 8164 (CAM 70-32). This Motion was not pursued on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-s (For full Appeal see 19-8-3-i)</td>
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<td>19-8-3-v-8</td>
<td>Appeal of D. Mulvaney, Kampgrounds of America, requesting the NFPA Standards Council overturn the Association Action and Accept Second Correlating Revision No. 30 (CAM 70-36). This Motion passed the floor of the NFPA Technical Meeting and failed panel ballot. 19-8-3-v-8</td>
</tr>
<tr>
<td>19-8-3-v-9</td>
<td>Appeal of R. Gingras, Sutton Falls Camping Area, Inc., requesting the NFPA Standards Council overturn the Association Action and Accept Second Correlating Revision No. 30 (CAM 70-36). This Motion passed the floor of the NFPA Technical Meeting and failed panel ballot. 19-8-3-v-9</td>
</tr>
<tr>
<td>19-8-3-v-10</td>
<td>Appeal of R. Miller of Future Owner of Small Country Campground, requesting the NFPA Standards Council overturn the Association Action and Accept Second Correlating Revision No. 30 (CAM 70-36). This Motion passed the floor of the NFPA Technical Meeting and failed panel ballot. See Attachment 19-8-3-v-10</td>
</tr>
<tr>
<td>19-8-3-v-11</td>
<td>Appeal of F. Hartwell of Hartwell Electrical Services, Inc., requesting the NFPA Standards Council overturn the Association Action and Accept Second Correlating Revision No. 30 (CAM 70-36). This Motion passed the floor of the NFPA Technical Meeting and failed panel ballot. See Attachment 19-8-3-v-11</td>
</tr>
<tr>
<td>19-8-3-v-11-a</td>
<td>Comment received by K. Lofland, Chair of Panel 7 of the NEC, on appeal regarding CAM 70-36. See Attachment 19-8-3-v-11-a</td>
</tr>
<tr>
<td>19-8-3-v-12</td>
<td>Appeal of J. Mickelson, J&amp;H RV Park, requesting the NFPA Standards Council overturn the Association Action and Accept Second Correlating Revision No. 30 (CAM 70-36). This Motion passed the floor of the NFPA Technical Meeting and failed panel ballot. See Attachment 19-8-3-v-12</td>
</tr>
<tr>
<td>19-8-3-w</td>
<td>Appeal of D. Liu of American Honda Motor Co., Inc. (on behalf of 23 Automotive Manufacturers, the Automotive Alliance, Global Automakers, and SAE International, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 7783, including any related portions of First Revision No. 8597 (CAM 70-37). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-w</td>
</tr>
<tr>
<td>19-8-3-w-1</td>
<td>Comment received by S. Cline, Chair of Panel 12 of the NEC, on appeals regarding CAM 70-37. See Attachment 19-8-3-a-3 for comment content.</td>
</tr>
<tr>
<td>19-8-3-x</td>
<td>Appeal of D. Burkett of Ford Motor Company, (on behalf of 23 Automotive Manufacturers, the Automotive Alliance, Global Automakers, and SAE International), requesting the NFPA Standards Council overturn the Association Action and Accept Public Comment No. 1590 (CAM 70-38). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-x</td>
</tr>
<tr>
<td>19-8-3-x-1</td>
<td>Comment received by S. Cline, Chair of Panel 12 of the NEC, on appeals regarding CAM 70-38. See Attachment 19-8-3-a-3 for comment content.</td>
</tr>
<tr>
<td>19-8-3-y</td>
<td>Appeal of D. Liu, American Honda Motor Co., Inc. (on behalf of 23 Automotive Manufacturers, the Automotive Alliance, Global Automakers, and SAE International), requesting the NFPA Standards Council overturn the Association Action and Accept an Identifiable Part of Public Comment No. 1480. (CAM 70-40). This Motion was not pursued on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-y</td>
</tr>
<tr>
<td>19-8-3-y-1</td>
<td>Comment received by S. Cline, Chair of Panel 12 of the NEC, on appeals regarding CAM 70-40. See Attachment 19-8-3-a-3 for comment content.</td>
</tr>
<tr>
<td>19-8-3-z</td>
<td>Appeal of H. Herndon of PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 7522 (CAM 70-41).</td>
</tr>
<tr>
<td>19-8-3-aa APPEAL</td>
<td>Appeal of H. Herndon of PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 7584 (CAM 70-42). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-aa (For full Appeal see 19-8-3-i)</td>
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<tr>
<td>19-8-3-bb APPEAL</td>
<td>Appeal of H. Herndon of PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 7586 (CAM 70-43). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-bb (For full Appeal see 19-8-3-i)</td>
</tr>
<tr>
<td>19-8-3-cc APPEAL</td>
<td>Appeal of H. Herndon of PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject an Identifiable Part of Second Revision No. 7588 (CAM 70-44). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-cc (For full Appeal see 19-8-3-i)</td>
</tr>
<tr>
<td>19-8-3-dd APPEAL</td>
<td>CAM 70-45: Reject Second Revision No. 8159 and any Related Portion of First Revision No. 8608. CAM 70-45 passed on the floor of the NFPA Technical Meeting. <strong>No Ballot Necessary</strong> See Attachment 19-8-3-dd</td>
</tr>
<tr>
<td>19-8-3-dd-1 APPEAL</td>
<td>Appeal of Jason Fisher of Solar Energy Industries Association, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 8159 and any related portions of First Revision No. 8608 (CAM 70-45). This Motion passed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-dd-1</td>
</tr>
<tr>
<td>19-8-3-dd-1-a</td>
<td>Two comments were received on the Appeal of J. Fisher (CAM 70-45)(1 Support, 1 Opposed) See Attachment 19-8-3-dd-1-a</td>
</tr>
<tr>
<td>19-8-3-ee APPEAL</td>
<td>CAM 70-46: Accept an Identifiable Part of Public Comment No. 315. (CAM 70-46) passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> Panel Ballot – 18 voting members/4 agree/11 disagree/0 abstained/3 ballots not returned and <strong>PASSING/FAILING</strong> CC Ballot – xx voting members/xx agree/xx disagree/xx abstained/xx ballots not returned). See Attachment 19-8-3-ee</td>
</tr>
<tr>
<td>19-8-3-ee-1 APPEAL</td>
<td>Appeal of Jason Fisher of Solar Energy Industries Association, requesting the NFPA Standards Council overturn the Association Action and Accept an Identifiable Part of Public Comment No. 315 CAM 70-46. This Motion passed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-ee-1</td>
</tr>
<tr>
<td>19-8-3-ee-1-a</td>
<td>Comment on Appeal of J. Fisher (CAM 70-46) (1 Oppose). See Attachment 19-8-3-ee-1-a</td>
</tr>
<tr>
<td>19-8-3-ff APPEAL</td>
<td>Appeal of H. Herndon of PEARL and C. Hunter of Cerro Wire, requesting the NFPA Standards Council overturn the Association Action and Reject Second Revision No. 7517 (CAM 70-47). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-3-ff (For full Appeal see 19-8-3-i)</td>
</tr>
<tr>
<td>19-8-3-gg-1 APPEAL</td>
<td>Appeal of M. Hirschler of GBH International, requesting the NFPA Standards Council overturn the ballot results of the NEC Panel 3 on CAM 70-48 to Accept Public Comment No. 501. See Attachment 19-8-3-gg-1</td>
</tr>
<tr>
<td>19-8-3-gg-1-a</td>
<td>Comment received by R. Jones, CMP 3 Chair, regarding the appeal on CAM 70-48. See Attachment 19-8-3-gg-1-a</td>
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<tr>
<td>19-8-4</td>
<td>Act on the issuance of NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with no amendments and no appeals. See Attachment 19-8-4</td>
</tr>
<tr>
<td>19-8-5</td>
<td>Act on the issuance of NFPA 302, Standard for Fire Protection for Pleasure and Commercial Motor Craft, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with seven amendments and no appeals. See Attachment 19-8-5</td>
</tr>
<tr>
<td>19-8-5-a</td>
<td>CAM 302-1: Accept Public Comment No. 3. CAM 302-1 passed on the floor of the NFPA Technical Meeting. FAILED TC Ballot – 19 voting members/10 agree/7 disagree/1 abstained/1 ballot not returned. See Attachment 19-8-5-a</td>
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<td>19-8-5-a-1</td>
<td>APPEAL</td>
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<tr>
<td>19-8-5-a-1-a</td>
<td>Comment received by John McDevitt, Chair, NFPA 302, regarding the appeal of M. Hirschler on CAM 302-1 on NFPA 302. See Attachment 19-8-5-a-1-a</td>
</tr>
<tr>
<td>19-8-5-b</td>
<td>CAM 302-2: Accept Public Comment No. 4. CAM 302-2 passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> TC Ballot – 19 voting members/10 agree/7 disagree/1 abstained/1 ballot not returned. See Attachment 19-8-5-b</td>
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<tr>
<td>19-8-5-b-1</td>
<td>APPEAL</td>
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<tr>
<td>19-8-5-b-1-a</td>
<td>Comment received by John McDevitt, Chair, NFPA 302, regarding the appeal of M. Hirschler on CAM 302-2 on NFPA 302. See Attachment 19-8-5-a-1-a for comment content.</td>
</tr>
<tr>
<td>19-8-5-c</td>
<td>CAM 302-3: Accept an Identifiable Part of Public Comment No. 5. CAM 302-3 passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> TC Ballot – 19 voting members/10 agree/7 disagree/1 abstained/1 ballot not returned. See Attachment 19-8-5-c</td>
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<td>19-8-5-c-1</td>
<td>APPEAL</td>
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<tr>
<td>19-8-5-c-1-a</td>
<td>Comment received by John McDevitt, Chair, NFPA 302, regarding the appeal of M. Hirschler on CAM 302-3 on NFPA 302. See Attachment 19-8-5-a-1-a for comment content.</td>
</tr>
<tr>
<td>19-8-5-d</td>
<td>CAM 302-4: Accept an Identifiable Part of Public Comment No. 5. CAM 302-4 passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> TC Ballot – 19 voting members/9 agree/7 disagree/2 abstained/1 ballot not returned. See Attachment 19-8-5-d</td>
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<td>19-8-5-d-1</td>
<td>APPEAL</td>
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<tr>
<td>19-8-5-d-1-a</td>
<td>Comment received by John McDevitt, Chair, NFPA 302, regarding the appeal of M. Hirschler on CAM 302-4 on NFPA 302. See Attachment 19-8-5-a-1-a for comment content.</td>
</tr>
<tr>
<td>19-8-5-e</td>
<td>CAM 302-5: Accept Public Comment No. 6. CAM 302-5 passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> TC Ballot – 19 voting members/10 agree/7 disagree/1 abstained/1 ballot not returned. See Attachment 19-8-5-e</td>
</tr>
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<td>19-8-5-e-1</td>
<td>APPEAL</td>
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<tr>
<td>19-8-5-e-1-a</td>
<td>Comment received by John McDevitt, Chair, NFPA 302, regarding the appeal of M. Hirschler on CAM 302-5 on NFPA 302. See Attachment 19-8-5-a-1-a for comment content.</td>
</tr>
<tr>
<td>19-8-5-f</td>
<td>CAM 302-6: Accept an Identifiable Part of Public Comment No. 7. CAM 302-6 passed on the floor of the NFPA Technical Meeting. <strong>PASSED</strong> TC Ballot – 19 voting members/15 agree/2 disagree/1 abstained/1 ballots not returned. See Attachment 19-8-5-f</td>
</tr>
<tr>
<td>19-8-5-g</td>
<td>CAM 302-7: Accept an Identifiable Part of Public Comment No. 7. CAM 302-7 passed on the floor of the NFPA Technical Meeting. <strong>FAILED</strong> TC Ballot – 19 voting members/9 agree/7 disagree/2 abstained/1 ballot not returned. See Attachment 19-8-5-g</td>
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<tr>
<td>19-8-5-g-1</td>
<td>Appeal of M. Hirschler of GBH International, requesting the NFPA Standards Council overturn the ballot results of the Technical Committee on Motor Craft on CAM 302-7 to Accept an Identifiable Part of Public Comment No. 7. See Attachment 19-8-5-a-1 for Content of Appeal.</td>
</tr>
<tr>
<td>19-8-5-g-1-a</td>
<td>Comment received by John McDevitt, Chair, NFPA 302, regarding the appeal of M. Hirschler on CAM 302-7 on NFPA 302. See Attachment 19-8-5-a-1-a for comment content.</td>
</tr>
<tr>
<td>19-8-6</td>
<td>Act on the issuance of NFPA 502, <em>Standard for Road Tunnels, Bridges, and Other Limited Access Highways</em>, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with no amendments and no appeals. See Attachment 19-8-6.</td>
</tr>
<tr>
<td>19-8-7</td>
<td>Act on the issuance of NFPA 654, <em>Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids</em>, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with no amendments and no appeals. See Attachment 19-8-7.</td>
</tr>
<tr>
<td>19-8-9</td>
<td>Act on the issuance of NFPA 855, <em>Standard for the Installation of Stationary Energy Storage Systems</em>, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with one amendment and two appeals.</td>
</tr>
<tr>
<td>19-8-9-a-1</td>
<td>Appeal from J. Houston of Southern Company Services, requesting the NFPA Standards Council overturn the ballot results of the Technical Committee on Energy Storage Systems on CAM 855-1 to Accept Part of Public Comment Nos. 912 and 454. See Attachment 19-8-9-a-1.</td>
</tr>
<tr>
<td>19-8-9-b</td>
<td>Appeal of N. West of Southern Company Services, requesting the NFPA Standards Council overturn the Association Action and Reject an Identifiable Part of Second Revision No. 75 (CAM 855-8). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-9-b.</td>
</tr>
<tr>
<td>19-8-9-c</td>
<td>Appeal of B. Cantor of TPI Engineering, requesting the NFPA Standards Council overturn the Association Action and Reject an Identifiable Part of Second Revision No. 75 (CAM 855-8). This Motion failed on the floor of the NFPA Technical Meeting. See Attachment 19-8-9-c.</td>
</tr>
<tr>
<td>19-8-9-c-1</td>
<td>Comment received by James Biggins, Chair, TC on Energy Storage Systems, regarding appeal on CAM 855-8. See Attachment 19-8-9-c-1.</td>
</tr>
<tr>
<td>19-8-9-c-2</td>
<td>One comment was received on the Appeal of B. Cantor (CAM 855-8)(1 Oppose) See Attachment 19-8-9-c-2.</td>
</tr>
<tr>
<td>19-8-10</td>
<td>Act on the issuance of NFPA 1851, <em>Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting</em>, with an issuance date of August 5, 2019 and an effective date of August 25, 2019, as acted on at the NFPA Technical Meeting, with one amendment and no appeals.</td>
</tr>
<tr>
<td>19-8-10-a</td>
<td>CAM 1851-1: Reject Second Revision No. 37. CAM 1851-1 passed on the floor of the NFPA Technical Meeting. <strong>No Ballot Necessary</strong>. See Attachment 19-8-10-a.</td>
</tr>
</tbody>
</table>
### 19-8-12

**Annual 2019 Revision Cycle Consent Standards** that did not receive NITMAMs, were letter balloted by the Council with an **issuance date of April 28, 2019** and an **effective date of May 18, 2019**:

- NFPA 5, *Compressed Gases and Cryogenic Fluids Code*
- NFPA 405, *Standard for the Recurring Proficiency of Airport Fire Fighters*
- NFPA 412, *Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment*
- NFPA 414, *Standard for Aircraft Rescue and Fire-Fighting Vehicles*
- NFPA 556, *Guide on Methods for Evaluating Fire Hazard to Occupants of Passenger Road Vehicles*
- NFPA 780, *Standard for the Installation of Lightning Protection Systems*
- NFPA 820, *Standard for Fire Protection in Wastewater Treatment and Collection Facilities*
- NFPA 1082, *Standard for Facilities Fire and Life Safety Director Professional Qualifications*
- NFPA 1300, *Standard on Community Risk Assessment and Community Risk Reduction Plan Development (New)*
- NFPA 1452, *Guide for Training Fire Service Personnel to Conduct Community Risk Reduction for Residential Occupancies*
- NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments*
- NFPA 2113, *Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Short-Duration Thermal Exposures from Fire*

**Annual 2019 Revision Cycle Consent Standards**, with **custom** schedules, that did not receive NITMAMs, were letter balloted by the Council with an **issuance date of June 10, 2019** and an **effective date of June 30, 2019**:

- NFPA 2, *Hydrogen Technologies Code*
- NFPA 78, *Guide on Electrical Inspections (New)*
- NFPA 451, *Guide for Community Healthcare Programs*
- NFPA 1078, *Standard for Electrical Inspector Professional Qualifications (New)*
- NFPA 1936, *Standard on Rescue Tools*

### 19-8-13


**19-8-13-a** Text of proposed TIA No. 1423. See Attachment 19-8-13-a

**19-8-13-b** Ballot results of TIA No. 1423. FAILED TC Ballot on both technical merit and emergency nature – 26 voting members/8 agree on technical merit/14 disagree/2 abstained/8 agree on emergency nature/15 disagree/1 abstained/2 ballots not returned. See Attachment 19-8-13-b

**19-8-13-c** One comment was received. (1 Support w/editorial comment). See Attachment 19-8-13-c
<table>
<thead>
<tr>
<th>APPEAL</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-8-14</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Table 14.2.8.2.1 of the 2019 Edition of NFPA 13, <em>Standard for the Installation of Sprinkler Systems</em>, (TIA No. 1416).</td>
</tr>
<tr>
<td>19-8-14-a</td>
<td>Text of proposed TIA No. 1416. See Attachment 19-8-14-a</td>
</tr>
<tr>
<td>19-8-14-b</td>
<td>Ballot results of TIA No. 1416. <strong>PASSED</strong> TC Ballot on both technical merit and emergency nature – 33 voting members/27 agree on technical merit/1 disagree/0 abstained/27 agree on emergency nature/1 disagree/0 abstained/5 ballots not returned. <strong>PASSED</strong> CC Ballot on both correlation and emergency nature – 20 voting members/18 agree on correlation/0 disagree/0 abstained/18 agree on emergency nature/0 disagree/0 abstained/2 ballots not returned. See Attachment 19-8-14-b</td>
</tr>
<tr>
<td>19-8-14-c</td>
<td>No comments were received.</td>
</tr>
<tr>
<td>19-8-15-a</td>
<td>Text of proposed TIA No. 1456. See Attachment 19-8-15-a</td>
</tr>
<tr>
<td>19-8-15-b</td>
<td>Ballot results of TIA No. 1456. <strong>FAILED</strong> TC Ballot on both technical merit and emergency nature – 23 voting members/6 agree on technical merit/12 disagree/0 abstained/6 agree on emergency nature/11 disagree/1 abstained/5 ballots not returned. See Attachment 19-8-15-b</td>
</tr>
<tr>
<td>19-8-15-c</td>
<td>No comments were received.</td>
</tr>
<tr>
<td>19-8-16-a</td>
<td>Text of proposed TIA No. 1424. See Attachment 19-8-16-a</td>
</tr>
<tr>
<td>19-8-16-b</td>
<td>Ballot results of TIA No. 1424. <strong>PASSED</strong> TC Ballot on both technical merit and emergency nature – 33 voting members/23 agree on technical merit/3 disagree/0 abstained/23 agree on emergency nature/3 disagree/0 abstained/7 ballots not returned. See Attachment 19-8-16-b</td>
</tr>
<tr>
<td>19-8-16-c</td>
<td>No comments were received.</td>
</tr>
<tr>
<td>19-8-17</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Article 210.8 and Informational Note No. 3(new) of the 2017 Edition of NFPA 70, <em>National Electrical Code</em>® (TIA No. 1453).</td>
</tr>
<tr>
<td>19-8-17-a</td>
<td>Text of proposed TIA No. 1453. See Attachment 19-8-17-a</td>
</tr>
<tr>
<td>19-8-17-b</td>
<td>Ballot results of TIA No. 1453. <strong>PASSED</strong> Panel Ballot on both technical merit and emergency nature – 14 voting members/12 agree on technical merit/2 disagree/0 abstained/10 agree on emergency nature/4 disagree/0 abstained/0 ballots not returned. <strong>FAILED</strong> CC Ballot, passed Correlation Issue but failed Emergency Nature – 12 voting members/9 agree on correlation/3 disagree/0 abstained/7 agree on emergency nature/5 disagree/0 abstained/0 ballots not returned. See Attachment 19-8-17-b</td>
</tr>
<tr>
<td>19-8-17-c</td>
<td>Four comments were received. (3 Support, 1 Oppose) See Attachment 19-8-17-c</td>
</tr>
<tr>
<td>19-8-18-a</td>
<td>Text of proposed TIA No. 1426. See Attachment 19-8-18-a</td>
</tr>
</tbody>
</table>
| 19-8-18-b | Ballot results of TIA No. 1426. **FAILED** Panel Ballot on both technical merit and emergency nature – 11 voting members/8 agree on technical merit/3 disagree/0 abstained/8 agree on
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Text</th>
</tr>
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<tr>
<td>19-8-18</td>
<td>Three comments was received. (1 Support, 2 Oppose) See Attachment 19-8-18-c</td>
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<tr>
<td>19-8-19</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Article 725.121(C) of the Proposed 2020 Edition of NFPA 70, National Electrical Code® (TIA No. 1438).</td>
<td></td>
</tr>
<tr>
<td>19-8-19-a</td>
<td>Text of proposed TIA No. 1438. See Attachment 19-8-19-a</td>
<td></td>
</tr>
<tr>
<td>19-8-19-b</td>
<td>Ballot results of TIA No. 1438. PASSED Panel Ballot on both technical merit and emergency nature – 17 voting members/14 agree on technical merit/2 disagree/0 abstained/14 agree on emergency nature/2 disagree/0 abstained/1 ballots not returned. PASSED CC Ballot on both correlation and emergency nature –12 voting members/11 agree on correlation/0 disagree/0 abstained/11 agree on emergency nature/0 disagree/0 abstained/1 ballot not returned. See Attachment 19-8-19-b</td>
<td></td>
</tr>
<tr>
<td>19-8-19-c</td>
<td>No comments were received.</td>
<td></td>
</tr>
<tr>
<td>19-8-20</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Article 210.52 (C)(2) of the Proposed 2020 Edition of NFPA 70, National Electrical Code® (TIA No. 1442).</td>
<td></td>
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<tr>
<td>19-8-20-a</td>
<td>Text of proposed TIA No. 1442. See Attachment 19-8-20-a</td>
<td></td>
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<tr>
<td>19-8-20-b</td>
<td>Ballot results of TIA No. 1442. PASSED Panel Ballot on both technical merit and emergency nature – 14 voting members/13 agree on technical merit/1 disagree/0 abstained/13 agree on emergency nature/1 disagree/0 abstained/0 ballots not returned. PASSED CC Ballot on both correlation and emergency nature –12 voting members/11 agree on correlation/0 disagree/0 abstained/11 agree on emergency nature/0 disagree/0 abstained/1 ballot not returned. See Attachment 19-8-20-b</td>
<td></td>
</tr>
<tr>
<td>19-8-20-c</td>
<td>Three comments were received. (1 Support, 3 Oppose) See Attachment 19-8-20-c</td>
<td></td>
</tr>
<tr>
<td>19-8-21</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Article 725.121(C) of the Proposed 2020 Edition of NFPA 70, National Electrical Code® (TIA No. 1444).</td>
<td></td>
</tr>
<tr>
<td>19-8-21-a</td>
<td>Text of proposed TIA No. 1444. See Attachment 19-8-21-a</td>
<td></td>
</tr>
<tr>
<td>19-8-21-b</td>
<td>Ballot results of TIA No. 1444. PASSED Panel Ballot on both technical merit and emergency nature – 17 voting members/12 agree on technical merit/3 disagree/0 abstained/11 agree on emergency nature/3 disagree/1 abstained/2 ballots not returned. FAILED CC Ballot, passed Correlation Issue but failed Emergency Nature –12 voting members/12 agree on correlation/0 disagree/0 abstained/5 agree on emergency nature/7 disagree/0 abstained/0 ballots not returned. See Attachment 19-8-21-b</td>
<td></td>
</tr>
<tr>
<td>19-8-21-c</td>
<td>Two comments were received. (1 Support, 1 Oppose) See Attachment 19-8-21-c</td>
<td></td>
</tr>
<tr>
<td>19-8-21-d</td>
<td>APPEAL Appeal of C. Jones of Cisco Systems, requesting the NFPA Standards Council overturn the Correlating Committee action and issue TIA No. 1444, NFPA 70, National Electrical Code. See Attachment 19-8-21-d</td>
<td></td>
</tr>
<tr>
<td>19-8-21-d-1</td>
<td>Comment received by M. Johnston, NEC Correlating Chair, regarding the appeal of C. Jones on TIA No. 1444 on NFPA 70. See Attachment 19-8-21-d-1</td>
<td></td>
</tr>
<tr>
<td>19-8-21-d-2</td>
<td>Comment received by Robert Jones, Panel 3 Chair, regarding the appeal of C. Jones on TIA No. 1444 on NFPA 70. See Attachment 19-8-21-d-2</td>
<td></td>
</tr>
<tr>
<td>19-8-21-d-3</td>
<td>Two comment received on Appeal. (2 Support) See Attachment 19-8-21-d-3</td>
<td></td>
</tr>
<tr>
<td>19-8-22</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Article 240.67(C) and Informational Note (new) of the Proposed 2020 Edition of NFPA 70, <em>National Electrical Code</em>® (TIA No. 1451).</td>
<td></td>
</tr>
<tr>
<td>19-8-22-a</td>
<td>Text of proposed TIA No. 1451. See Attachment 19-8-22-a</td>
<td></td>
</tr>
<tr>
<td>19-8-22-b</td>
<td>Ballot results of TIA No. 1451. PASSED Panel Ballot on both technical merit and emergency nature – 12 voting members/9 agree on technical merit/0 disagree/1 abstained/9 agree on emergency nature/0 disagree/1 abstained/2 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 12 voting members/11 agree on correlation/0 disagree/0 abstained/11 agree on emergency nature/0 disagree/0 abstained/1 ballots not returned. See Attachment 19-8-22-b</td>
<td></td>
</tr>
<tr>
<td>19-8-22-c</td>
<td>Two comments were received. (2 Oppose) See Attachment 19-8-22-c</td>
<td></td>
</tr>
<tr>
<td>19-8-23</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Article 240.87(C) and Informational Note (new) of the Proposed 2020 Edition of NFPA 70, <em>National Electrical Code</em>® (TIA No. 1452).</td>
<td></td>
</tr>
<tr>
<td>19-8-23-a</td>
<td>Text of proposed TIA No. 1452. See Attachment 19-8-23-a</td>
<td></td>
</tr>
<tr>
<td>19-8-23-b</td>
<td>Ballot results of TIA No. 1452. PASSED Panel Ballot on both technical merit and emergency nature – 12 voting members/9 agree on technical merit/0 disagree/1 abstained/9 agree on emergency nature/0 disagree/1 abstained/2 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 12 voting members/11 agree on correlation/0 disagree/0 abstained/11 agree on emergency nature/0 disagree/0 abstained/1 ballots not returned. See Attachment 19-8-23-b</td>
<td></td>
</tr>
<tr>
<td>19-8-23-c</td>
<td>No comments was received.</td>
<td></td>
</tr>
<tr>
<td>19-8-24-a</td>
<td>Text of proposed TIA No. 1455. See Attachment 19-8-24-a</td>
<td></td>
</tr>
<tr>
<td>19-8-24-b</td>
<td>Ballot results of TIA No. 1455. PASSED Panel Ballot on both technical merit and emergency nature – 14 voting members/13 agree on technical merit/0 disagree/0 abstained/13 agree on emergency nature/0 disagree/0 abstained/1 ballot not returned. PASSED CC Ballot on both correlation and emergency nature – 12 voting members/11 agree on correlation/0 disagree/0 abstained/11 agree on emergency nature/0 disagree/0 abstained/1 ballot not returned. See Attachment 19-8-24-b</td>
<td></td>
</tr>
<tr>
<td>19-8-24-c</td>
<td>One comment was received. (1 Support) See Attachment 19-8-24-c</td>
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</tr>
<tr>
<td>19-8-25</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Article 334.10(2) and (3) of the Proposed 2020 Edition of NFPA 70, <em>National Electrical Code</em>® (TIA No. 1458).</td>
<td></td>
</tr>
<tr>
<td>19-8-25-a</td>
<td>Text of proposed TIA No. 1458. See Attachment 19-8-25-a</td>
<td></td>
</tr>
<tr>
<td>19-8-25-b</td>
<td>Ballot results of TIA No. 1458. FAILED Panel Ballot on both technical merit and emergency nature – 13 voting members/4 agree on technical merit/6 disagree/3 abstained/4 agree on emergency nature/7 disagree/2 abstained/1 ballot not returned. FAILED CC Ballot, passed Correlation Issue but failed Emergency Nature – 12 voting members/10 agree on correlation/2 disagree/0 abstained/3 agree on emergency nature/9 disagree/0 abstained/0 ballots not returned. See Attachment 19-8-25-b</td>
<td></td>
</tr>
<tr>
<td>19-8-25-c</td>
<td>Seven comments were received. (5 Support, 2 Oppose) See Attachment 19-8-25-c</td>
<td></td>
</tr>
<tr>
<td>19-8-26</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to delete Table 430.252 in its entirety of the Proposed 2020 Edition of NFPA 70, <em>National Electrical Code</em>® (TIA No. 1462).</td>
<td></td>
</tr>
<tr>
<td>19-8-26-a</td>
<td>Text of proposed TIA No. 1462. See Attachment 19-8-26-a</td>
<td></td>
</tr>
<tr>
<td>19-8-26-b</td>
<td><strong>Preliminary</strong> Ballot results of TIA No. 1462. <strong>PASSING</strong> Panel Ballot on both technical merit and emergency nature – 15 voting members/14 agree on technical merit/0 disagree/0 abstained/14 agree on emergency nature/0 disagree/0 abstained/1 ballots not returned. <strong>PASSING</strong> CC Ballot on both correlation and emergency nature –12 voting members/12 agree on correlation/0 disagree/0 abstained/0 ballots not returned. See Attachment 19-8-26-b</td>
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<tr>
<td>19-8-26-c</td>
<td>Two comments were received. (2 Support) See Attachment 19-8-26-c</td>
<td></td>
</tr>
<tr>
<td>19-8-27</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Section 8.10.6 of the 2019 Edition of NFPA 86, <em>Standard for Ovens and Furnaces</em> (TIA No. 1439).</td>
<td></td>
</tr>
<tr>
<td>19-8-27-a</td>
<td>Text of proposed TIA No. 1439. See Attachment 19-8-27-a</td>
<td></td>
</tr>
<tr>
<td>19-8-27-b</td>
<td>Ballot results of TIA No. 1439. <strong>FAILED</strong> TC Ballot on both technical merit and emergency nature – 35 voting members/13 agree on technical merit/15 disagree/2 abstained/14 agree on emergency nature/13 disagree/3 abstained/5 ballots not returned. See Attachment 19-8-27-b</td>
<td></td>
</tr>
<tr>
<td>19-8-27-c</td>
<td>Twenty-three comments were received. (24 Support, 1 Oppose) See Attachment 19-8-27-c</td>
<td></td>
</tr>
<tr>
<td>19-8-28</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Section 8.5.1.9(3) of the 2019 Edition of NFPA 86, <em>Standard for Ovens and Furnaces</em> (TIA No. 1440).</td>
<td></td>
</tr>
<tr>
<td>19-8-28-a</td>
<td>Text of proposed TIA No. 1440. See Attachment 19-8-28-a</td>
<td></td>
</tr>
<tr>
<td>19-8-28-b</td>
<td>Ballot results of TIA No. 1440. <strong>PASSED</strong> TC Ballot on both technical merit and emergency nature – 35 voting members/24 agree on technical merit/8 disagree/1 abstained/27 agree on emergency nature/5 disagree/1 abstained/2 ballots not returned. See Attachment 19-8-28-b</td>
<td></td>
</tr>
<tr>
<td>19-8-28-c</td>
<td>Three comments were received. (1 Support, 2 Oppose) See Attachment 19-8-28-c</td>
<td></td>
</tr>
<tr>
<td>19-8-29</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to add new paragraphs 7.2.12.1.1(4) (new) and 7.2.12.2.6(new) to the 2018 and Proposed 2021 Editions of NFPA 101, <em>Life Safety Code</em>® (TIA No. 1405).</td>
<td></td>
</tr>
<tr>
<td>19-8-29-a</td>
<td>Text of proposed TIA No. 1405. See Attachment 19-8-29-a</td>
<td></td>
</tr>
<tr>
<td>19-8-29-b</td>
<td>Ballot results of TIA No. 1405. <strong>FAILED</strong> TC Ballot, passed Technical Merit but failed Emergency Nature – 32 voting members/23 agree on technical merit/5 disagree/1 abstained/20 agree on emergency nature/9 disagree/0 abstained/3 ballots not returned. <strong>FAILED</strong> CC Ballot, passed on Correlation Issue but failed Emergency Nature –12 voting members/9 agree on correlation/2 disagree/0 abstained/5 agree on emergency nature/6 disagree/0 abstained/1 ballots not returned. See Attachment 19-8-29-b</td>
<td></td>
</tr>
<tr>
<td>19-8-29-c</td>
<td>One comment was received. (1 Support) See Attachment 19-8-29-c</td>
<td></td>
</tr>
<tr>
<td>19-8-30</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to add new 15.2.2.2.4(3), revise (4), and renumber subsequent items of the 2018 Edition of NFPA 101, <em>Life Safety Code</em>® (TIA No. 1436).</td>
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<tr>
<td>19-8-30-a</td>
<td>Text of proposed TIA No. 1436. See Attachment 19-8-30-a</td>
<td></td>
</tr>
<tr>
<td>19-8-30-b</td>
<td>Ballot results of TIA No. 1436. <strong>PASSED</strong> TC Ballot on both technical merit and emergency nature – 23 voting members/15 agree on technical merit/4 disagree/0 abstained/15 agree on emergency nature/4 disagree/0 abstained/4 ballots not returned. <strong>PASSED</strong> CC Ballot on both correlation and emergency nature –11 voting members/7 agree on correlation/1 disagree/0 abstained/6 agree on emergency nature/2 disagree/0 abstained/3 ballots not returned. See Attachment 19-8-30-b</td>
<td></td>
</tr>
<tr>
<td>19-8-30-c</td>
<td>Six comments were received. (4 Support, 2 Oppose) See Attachment 19-8-30-c</td>
<td></td>
</tr>
<tr>
<td>19-8-31</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Section 9.6.13.1(2)(d), 9.6.13.2.1(7), 11.3.19.2.1(7), and 11.3.9.2.2.7 of the 2019 Edition of NFPA 1221, <em>Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems</em> (TIA No. 1435).</td>
<td></td>
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<tr>
<td>19-8-31-a</td>
<td>Text of proposed TIA No. 1435. See Attachment 19-8-31-a</td>
<td></td>
</tr>
<tr>
<td>19-8-31-b</td>
<td>Ballot results of TIA No. 1435. FAILED TC Ballot on both technical merit and emergency nature – 27 voting members/4 agree on technical merit/12 disagree/0 abstained/3 agree on emergency nature/13 disagree/0 abstained/11 ballots not returned. See Attachment 19-8-31-b</td>
<td></td>
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<tr>
<td>19-8-31-c</td>
<td>Two comments were received. (2 Support) See Attachment 19-8-31-c</td>
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</tr>
<tr>
<td>19-8-32</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Sections 7.1.1.3, 7.1.3.2.2.1, 7.1.3.5.1, 7.2.2.1, and 7.2.2.5 of the Proposed 2020 Edition of NFPA 1851, <em>Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting</em> (TIA No. 1445).</td>
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<tr>
<td>19-8-32-a</td>
<td>Text of proposed TIA No. 1445. See Attachment 19-8-32-a</td>
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<tr>
<td>19-8-32-b</td>
<td>Ballot results of TIA No. 1445. PASSED TC Ballot on both technical merit and emergency nature – 34 voting members/27 agree on technical merit/0 disagree/0 abstained/27 agree on emergency nature/0 disagree/0 abstained/7 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 29 voting members/21 agree on correlation/0 disagree/0 abstained/21 agree on emergency nature/0 disagree/0 abstained/8 ballots not returned. See Attachment 19-8-32-b</td>
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<tr>
<td>19-8-32-c</td>
<td>No comments were received.</td>
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<tr>
<td>19-8-33</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Sections 11.3.7.3 thru 11.3.7.5 of the Proposed 2020 Edition of NFPA 1851, <em>Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting</em> (TIA No. 1446).</td>
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<td>19-8-33-a</td>
<td>Text of proposed TIA No. 1446. See Attachment 19-8-33-a</td>
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<tr>
<td>19-8-33-b</td>
<td>Ballot results of TIA No. 1446. PASSED TC Ballot on both technical merit and emergency nature – 34 voting members/27 agree on technical merit/0 disagree/0 abstained/27 agree on emergency nature/0 disagree/0 abstained/7 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 29 voting members/21 agree on correlation/0 disagree/0 abstained/21 agree on emergency nature/0 disagree/0 abstained/8 ballots not returned. See Attachment 19-8-33-b</td>
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<tr>
<td>19-8-33-c</td>
<td>No comments were received.</td>
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<tr>
<td>19-8-34</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Annex 12.2.4.3(1) of the Proposed 2020 Edition of NFPA 1851, <em>Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting</em> (TIA No. 1447).</td>
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<tr>
<td>19-8-34-a</td>
<td>Text of proposed TIA No. 1447. See Attachment 19-8-34-a</td>
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<tr>
<td>19-8-34-b</td>
<td>Ballot results of TIA No. 1447. PASSED TC Ballot on both technical merit and emergency nature – 34 voting members/28 agree on technical merit/0 disagree/0 abstained/28 agree on emergency nature/0 disagree/0 abstained/6 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 29 voting members/21 agree on correlation/0 disagree/0 abstained/21 agree on emergency nature/0 disagree/0 abstained/8 ballots not returned. See Attachment 19-8-34-b</td>
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<tr>
<td>19-8-34-c</td>
<td>No comments were received.</td>
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</table>
| 19-8-35 | Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Annex 7.2.2.5 and Annex 9.1.6 of the Proposed 2020 Edition of NFPA 1851, *Standard on Selection, Care,
| 19-8-35 | Text of proposed TIA No. 1448. See Attachment 19-8-35-a  
| 19-8-35-b | Ballot results of TIA No. 1448. PASSED TC Ballot on both technical merit and emergency nature – 34 voting members/28 agree on technical merit/1 disagree/0 abstained/28 agree on emergency nature/1 disagree/0 abstained/5 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 30 voting members/21 agree on correlation/0 disagree/0 abstained/21 agree on emergency nature/0 disagree/0 abstained/9 ballots not returned. See Attachment 19-8-35-b  
| 19-8-35-c | No comments were received.  
| 19-8-36 | Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Table 11.3.9(c), and add new paragraphs 11.3.9.2.1 thru 11.3.9.2.4(new) to the Proposed 2020 Edition of NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting (TIA No. 1449).  
| 19-8-36-a | Text of proposed TIA No. 1449. See Attachment 19-8-36-a  
| 19-8-36-b | Ballot results of TIA No. 1449. PASSED TC Ballot on both technical merit and emergency nature – 34 voting members/27 agree on technical merit/1 disagree/1 abstained/27 agree on emergency nature/0 disagree/0 abstained/7 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 29 voting members/21 agree on correlation/0 disagree/0 abstained/21 agree on emergency nature/0 disagree/0 abstained/8 ballots not returned. See Attachment 19-8-36-b  
| 19-8-36-c | No comments were received.  
| 19-8-37 | Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Various Sections of the Proposed 2020 Edition of NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting (TIA No. 1450).  
| 19-8-37-a | Text of proposed TIA No. 1450. See Attachment 19-8-37-a  
| 19-8-37-b | Ballot results of TIA No. 1450. PASSED TC Ballot on both technical merit and emergency nature – 34 voting members/27 agree on technical merit/1 disagree/1 abstained/27 agree on emergency nature/1 disagree/1 abstained/5 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 30 voting members/21 agree on correlation/0 disagree/0 abstained/21 agree on emergency nature/0 disagree/0 abstained/9 ballots not returned. See Attachment 19-8-37-b  
| 19-8-37-c | No comments were received.  
| 19-8-38 | Act on the issuance of proposed Tentative Interim Amendment (TIA) to revise Table 6.1.14.3(a), 6.1.14.3, Table 6.1.14.3(d)(new), Figure 6.1.14.7(c), 6.1.14.4, 6.1.14.5, and Figure 6.1.14.7(c) of the 2016 Edition of NFPA 1977, Standard on Protective Clothing and Equipment for Wildland Fire Fighting (TIA No. 1422).  
| 19-8-38-a | Text of proposed TIA No. 1422. See Attachment 19-8-38-a  
| 19-8-38-b | Ballot results of TIA No. 1422. FAILED TC Ballot on both technical merit and emergency nature – 22 voting members/12 agree on technical merit/5 disagree/0 abstained/13 agree on emergency nature/4 disagree/0 abstained/5 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 29 voting members/23 agree on correlation/0 disagree/1 abstained/21 agree on emergency nature/3 disagree/0 abstained/5 ballots not returned. See Attachment 19-8-38-b  
| 19-8-38-c | Twelve comments were received. (10 Support, 2 Oppose) See Attachment 19-8-38-c
| Page 17 | 21 | August 5-7, 2019 Standards Council Agenda |

**19-8-38-d**<br>
**APPEAL**<br>

| 19-8-31-d-1 | **Comment received by George Broyles, Chair, NFPA 1977, regarding the appeal of K. Hallam on TIA No. 1422 on NFPA 1977. See Attachment 19-8-38-d-1** |

| 19-8-38-d-2 | **Two comments were received. (1 Support, 1 Oppose)** See Attachment 19-8-38-d-2 |

**19-8-39**<br>
Act on the issuance of proposed Tentative Interim Amendment (TIA) to add new paragraphs 6.6.4.3, 6.6.4.3.1 and 6.6.4.3.2 to the 2019 Edition of NFPA 1981, *Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services* (TIA No. 1420).

| 19-8-39-a | **Text of proposed TIA No. 1420. See Attachment 19-8-39-a** |

| 19-8-39-b | **Ballot results of TIA No. 1420. FAILED TC Ballot on both technical merit and emergency nature – 32 voting members/6 agree on technical merit/19 disagree/4 abstained/7 agree on emergency nature/18 disagree/4 abstained/3 ballots not returned. FAILED CC Ballot on both correlation and emergency nature – 29 voting members/10 agree on correlation/6 disagree/5 abstained/6 agree on emergency nature/11 disagree/4 abstained/8 ballots not returned. See Attachment 19-8-39-b** |

| 19-8-39-c | **Two comments were received. (2 Oppose)** See Attachment 19-8-39-c |

**19-8-40**<br>

| 19-8-40-a | **Text of proposed TIA No. 1428. See Attachment 19-8-40-a** |

| 19-8-40-b | **Ballot results of TIA No. 1428. PASSED TC Ballot on both technical merit and emergency nature – 31 voting members/25 agree on technical merit/0 disagree/0 abstained/22 agree on emergency nature/3 disagree/0 abstained/6 ballots not returned. PASSED CC Ballot on both correlation and emergency nature – 30 voting members/23 agree on correlation/0 disagree/0 abstained/21 agree on emergency nature/2 disagree/0 abstained/7 ballots not returned. See Attachment 19-8-40-b** |

| 19-8-40-c | **No comments were received.** |

**19-8-41**<br>

| 19-8-41-a | **Text of proposed TIA No. 1429. See Attachment 19-8-41-a** |

| 19-8-41-b | **Ballot results of TIA No. 1429. FAILED TC Ballot on both technical merit and emergency nature – 31 voting members/11 agree on technical merit/13 disagree/0 abstained/12 agree on emergency nature/12 disagree/0 abstained/7 ballots not returned. FAILED CC Ballot on both correlation and emergency nature – 30 voting members/9 agree on correlation/13 disagree/0 abstained/6 agree on emergency nature/16 disagree/0 abstained/8 ballots not returned. See Attachment 19-8-41-b** |

| 19-8-41-c | **No comments were received.** |

**19-8-42**<br>
Act on the issuance of proposed Tentative Interim Amendment (TIA) to add new paragraph 7.6.2.8 (renumber subsequent paragraphs), and revise A.7.6.2.9.1 of the 2018 Edition of NFPA 1994, *Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents* (TIA No. 1431).

| 19-8-42-a | **Text of proposed TIA No. 1431. See Attachment 19-8-42-a** |

| 19-8-42-b | **Ballot results of TIA No. 1431. PASSED TC Ballot on both technical merit and emergency nature – 31 voting members/24 agree on technical merit/0 disagree/1 abstained/24 agree on emergency nature/1 disagree/0 abstained/6 ballots not returned. PASSED CC Ballot on both** |
| 19-8-42-c | No comments were received. |
| 19-8-43-a | Text of proposed TIA No. 1432. See Attachment 19-8-43-a |
| 19-8-43-b | Ballot results of TIA No. 1432. FAILED TC Ballot on both technical merit and emergency nature – 31 voting members/11 agree on technical merit/14 disagree/0 abstained/10 agree on emergency nature/14 disagree/0 abstained/6 ballots not returned. FAILED CC Ballot on both correlation and emergency nature –30 voting members/10 agree on correlation/16 disagree/0 abstained/6 agree on emergency nature/20 disagree/1 abstained/5 ballots not returned. See Attachment 19-8-43-b |
| 19-8-43-c | No comments were received. |
| 19-8-44-a | Text of proposed TIA No. 1433. See Attachment 19-8-44-a |
| 19-8-44-b | Ballot results of TIA No. 1433. FAILED TC Ballot on both technical merit and emergency nature – 31 voting members/10 agree on technical merit/14 disagree/0 abstained/10 agree on emergency nature/14 disagree/0 abstained/6 ballots not returned. FAILED CC Ballot on both correlation and emergency nature –30 voting members/9 agree on correlation/16 disagree/0 abstained/6 agree on emergency nature/18 disagree/1 abstained/5 ballots not returned. See Attachment 19-8-44-b |
| 19-8-44-c | No comments were received. |
| 19-8-45 | Act on the issuance of proposed Tentative Interim Amendment (TIA) to add 7.2.1.2.5(new), 7.2.1.2.6(new), 7.3.1.2.3(new), 7.3.1.2.4(new), 7.4.1.2.5(new), 7.4.1.2.6(new), 7.5.1.2.5(new), and 7.5.1.2.6(new) of the 2018 Edition of NFPA 1994, *Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents* (TIA No. 1434). |
| 19-8-45-a | Text of proposed TIA No. 1434. See Attachment 19-8-45-a |
| 19-8-45-b | Ballot results of TIA No. 1434. FAILED TC Ballot on both technical merit and emergency nature –31 voting members/11 agree on technical merit/14 disagree/0 abstained/12 agree on emergency nature/13 disagree/0 abstained/6 ballots not returned. FAILED CC Ballot on both correlation and emergency nature –30 voting members/8 agree on correlation/16 disagree/1 abstained/4 agree on emergency nature/20 disagree/1 abstained/5 ballots not returned. See Attachment 19-8-45-b |
| 19-8-45-c | No comments were received. |
| 19-8-46-a | Text of proposed TIA No. 1457. See Attachment 19-8-46-a |
| 19-8-46-b | Ballot results of TIA No. 1457. FAILED TC Ballot, passed on Technical Merit but failed Emergency Nature – 32 voting members/20 agree on technical merit/5 disagree/1 abstained/17
agree on emergency nature/9 disagree/0 abstained/6 ballots not returned. FAILED CC Ballot, passed Correlation Issue but failed Emergency Nature –16 voting members/9 agree on correlation/3 disagree/0 abstained/4 agree on emergency nature/8 disagree/0 abstained/4 ballots not returned. See Attachment 19-8-46-b

19-8-46-c No comments were received.

19-8-47 Consider the request from NFPA Committees to change revision cycle for the following documents:

<table>
<thead>
<tr>
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<tr>
<td>120</td>
<td>2015 F2019</td>
<td>F2024 to F2022</td>
<td>1X move</td>
<td>5 to 3 year revision cycle</td>
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<td>F2024 to F2022</td>
<td>1X move</td>
<td>5 to 3 year revision cycle</td>
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<td>2017 A2020</td>
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<td>Permanent Move</td>
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<td>2017 A2020</td>
<td>A2024 to A2023</td>
<td>Permanent Move</td>
<td>4 to 3 year revision cycle</td>
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<tr>
<td>499</td>
<td>2017 A2020</td>
<td>A2024 to A2023</td>
<td>Permanent Move</td>
<td>4 to 3 year revision cycle</td>
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<td>557</td>
<td>2020 A2023</td>
<td>A2023 to A2022</td>
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<tr>
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<td>2016 F2020</td>
<td>F2020 to A2021</td>
<td>1X move</td>
<td>5 to 5½ revision cycle</td>
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See Attachment 19-8-47

19-8-48 Response from the Correlating Committee Chair for Dusts regarding the timeline to accomplish the consolidation of the Combustible Dust standards. See Attachment 19-8-48

19-8-49 The Council received a request to develop a document that would identify the minimum job requirements for personnel engaged in specified roles that support fire service organizations, but who are not engaged in traditional firefighting activities. At its December 2018 meeting, Council asked staff to work with interested stakeholders to determine if the development of such standards would be: (1) appropriate for assignment to the Fire Fighter Professional Qualifications Committee; and if so (2) best included within NFPA 1001 or best as a new standard.

At the direction of Council, Staff assembled a Task Group comprised of various members of the Technical Committee on Fire Fighter Professional Qualifications, as well as other interested stakeholders. The Task Group is in favor of assigning this subject to the Fire Fighter Professional Qualifications Committee and noted that the Committee scope would require the Council’s approval to proceed. The Task Group also agreed that the minimum job qualifications for roles that support fire service organizations, but do engage in traditional firefighting activities, should be included within NFPA 1001.

The Standards Council requested input from the Technical Committee as to whether it agrees with the Task Group recommendations. NFPA Staff is now reporting back to the Standards Council with the results of that request.

**Proposed Committee Scope:** This Committee shall have primary responsibility for documents on professional competence qualifications required of the fire fighters and fire service support personnel.

See Attachment 19-8-49

19-8-50 Consider the request of the Technical Committee on Wildland Fire Fighting Protective Clothing and Equipment to enter proposed document NFPA 1877, *Standard on Selection, Care, and Maintenance of Wildland Fire Fighting Protective Clothing and Equipment* into the F2020 revision cycle. This document was returned to the Committee by the Fire and Emergency Services Protective Clothing and Equipment Correlating Committee for further study.
<table>
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<tr>
<th>Agenda Item</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>19-8-51</strong></td>
<td>At the April 2019 Standards Council Meeting the Council reviewed the request of Preet Bassi, Center for Public Safety Excellence, Inc., and Denis Onieal, US Fire Administration, to develop a standard on fire service analysts and information technical specialist professional qualifications. After reviewing all of the material before them, the Council directed that additional applications from individuals across multiple disciplines were still need. The Council directed Staff to report back to the Council with a balanced Committee and a scope for the Committee. At this meeting, a balance roster is being proposed to the Council (see related Agenda Item 19-8-55-b). The following scope is also proposed for the Council’s review. <strong>Proposed Committee Scope:</strong> This Committee shall have primary responsibility for documents on the professional qualifications for personnel who use, manage, review, analyze, support, or evaluate data and related technical systems in public safety agencies. No Attachment</td>
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<td><strong>19-8-52</strong></td>
<td>At the April 2019 Standards Council Meeting, the Council reviewed the request of Ted Williams, American Gas Association, to develop a standard on the location and installation of residential fuel gas detectors. After reviewing all of the material before them, the Council directed that a call for applications from additional individuals was needed. The Council directed Staff to report back to the Council with a balanced technical Committee and a scope for the Committee. At this meeting, a balance roster is being proposed to the Council (see related Agenda Item 19-8-55-c). The following scope is also proposed for the Council’s review. <strong>Proposed Committee Scope:</strong> This Committee shall have primary responsibility for documents on the installation, performance, maintenance, testing, and use of fuel gases warning equipment for the protection of life, property and mission continuity. This Committee shall address the selection, installation, operation, and maintenance of fuel gases warning equipment. No Attachment</td>
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<td><strong>19-8-54</strong></td>
<td>Consider the request of the Emergency Responder &amp; Responder Safety (ERRS) Division to approve the cycle changes for the remainder of the documents that will be changing cycles due to the ERRS consolidation plan. See Attachment 19-8-54</td>
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<tr>
<td>19-8-55-f</td>
<td>Discuss a request to modify the membership policy on members reapplying to the Committee after a change in status. See Attachment 19-8-55-f</td>
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<td>19-8-56</td>
<td>Report of the Policy and Procedures Task Group (D. O’Connor, Chair) See Supplementary Attachment 19-8-56</td>
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<td>19-8-57</td>
<td>Report from the Recording Secretary on the April 2019 Minutes.</td>
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<td>19-8-58</td>
<td>The Council will review the dates and locations of upcoming Council meetings, as follows:</td>
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<td>December 5-6, 2019</td>
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<td>April 1-2, 2020</td>
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<td>August 10-12, 2020 (Revised)</td>
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<td>Quincy, MA</td>
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<td>December 2-3, 2020</td>
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Dear Ms. Bellis:

This letter is intended to constitute an appeal to the NFPA Standards Council with respect to a procedural matter related to the development of the next (2020) edition of the National Electrical Code, NFPA 70. It is my belief that the procedures set forth in the Regulations Governing the Development of NFPA Standards have not been followed with respect to the balloting of the Association action on Motion 70-36 at the Annual Meeting held in San Antonio, Texas on June 20, 2019. Because the likely substantive effect of this appeal will be similar to and supportive of the Standards Council agenda subject 19-8-3-v, it may be considered at that time. For these purposes, this appeal is therefore filed as an “Other Submission Relating to an Appeal” as covered in the Regulations at 1.6.4.

Therefore, pursuant to and in express adherence to the letter of that regulation:

(a) My name is Frederic P. Hartwell, I am representing myself, and my address is that on the letterhead of this correspondence.

(b) The referenced appeal is 19-8-3-v, and the submitter supports the appeal insofar as the outcome of the procedural objections set forth in this filing lead in that direction.

(c) The Certified Amending Motion now before Council was to “Reject an Identifiable Part of Second Correlating Revision 30.” The path to this revision begins with a first revision, in this case FR 8475. This first revision was accepted by CMP 7 on a vote of 13 to 2 (NEMA and IEC being the two negative votes). This revision did five things, as follows:

1) It relocated the existing text regarding the required design features of RV site receptacles out of the first-level subdivision (F) regarding GFCI protection, and moved it to (A) where it better belonged.

2) By expressly including weather resistance (A), it completely removed the waiver of the normally applicable weather resistance requirement, a more robust design going forward.

3) By not including it in the new text of (A), it removed the allowance for 15-ampere rated receptacles, and now allowed only 20-ampere ratings, also a more robust design.

4) It restructured (F) into two second-level subdivisions, the first containing the existing GFCI requirement for 15- and 20-ampere 125-volt receptacles, and

5) In the restructured (F), it created an express waiver from the normally applicable GFCI protection requirement in 210.8(B) for 30-ampere and 50-ampere RV site receptacles.

At the second draft meeting, CMP 7 generated Committee Comment 7659 that restructured (F) into a single paragraph. At this stage there were no substantive changes to the requirements and waivers agreed to at the first draft stage anywhere within 551.71. However, (F) added two informational notes, the first of which effectively explained the waiver in terms of a possible summation of leakage currents that could nuisance trip GFCI protection on the supply side of the RV supply connection. The second note explained that given the typical RV internal distribution...
(the definition of “power supply assembly” in 551.2 expressly refers to a “supply to a distribution panel”) the supply cord constitutes a feeder for NEC purposes. This classification, if confirmed, would also lend credence to the argument that the higher amperage supply receptacle is beyond the reach of branch circuit requirements in Article 210. This comment passed CMP 7 on a vote of 14-1, with only the NEMA representative holding out for GFCI coverage.

The Correlating Committee stepped in at this point and made editorial changes to the single paragraph that now constituted 551.71, primarily aimed at clarifying the application of 90.3 in this instance. The revisions were entirely editorial in nature, and left the new informational notes exactly as CMP 7 had created them. The final result was Second Correlating Revision No. 30. Again, the first three substantive changes in the originating FR relative to receptacle design characteristics remained unchallenged. This is important information relative to where the document ends up if it is returned to previous edition text.

This brings us to the NFPA Annual Meeting, Certified Amending Motion 70-36. This motion was to “Reject an Identifiable Part of Second Correlating Revision 30.” The identifiable parts being rejected were (1) the sentence waiving the mandatory applicability of GFCI protection for receptacles with higher amperage receptacles than 15- or 20-amperes, and (2) the informational note that justified the consideration of an RV supply cord as a feeder. This motion passed on a vote of 274 in favor, and 154 opposed.

The motion offered at the Annual Meeting is covered in the motion table at the end of the Regulations, as Motion 10 in Column 1. This column covers “What are the permitted Amending Motions.” Anyone can make this motion, as established in Column 2. Column 3 establishes that the effect of passage is to reject the identifiable part of a Second Correlating Revision.

Column 4 is the gravamen of this appeal. It covers the following question: “Does the Committee (or Committees) ballot on a successful Amending Motion?” In the case of Motion 10, the answer is “Yes, if there is a related First Revision or a related part of a First Revision. In that case, the committee ballots the related First Revision or related part of the First Revision.” That is clearly the case here, and it turns out that CMP 7 was issued a ballot on the First Revision text. Remember, the last time the panel voted on this text, it passed 13-2.

After being in possession of this ballot for about a week, CMP 7 members were then informed that their ballot was “inaccurate.” This communication was accompanied by a new ballot that offered the opportunity to vote on the result of the Annual Meeting action. If the vote failed, the result would be previous edition text. Because the Annual Meeting result reversed a panel action that had been supported on a 14-1 vote, the result would likely be first revision text. Whether the remainder of 551.71, especially the portions that contradict the previous edition text, remain in effect will require careful attention by Council.

However, the important question is how can NFPA Standards Administration issue a ballot that has no support in the regulations, and in fact directly contradicts the motion table? That is an immutable fact, open and shut. When I questioned this, I received the following answer from the Council Secretary:

“The NFPA standards development process seeks to identify a point of consensus between the Technical Committee, or Code Making Panel, and the Association as embodied by the floor of the Technical Session. What we learned, by the floor vote in San Antonio, is that the Association membership is in partial agreement with the recommended Second Draft text. For this reason, the CMP members received the revised ballot as to whether you agree with the language fa-
vored by the membership at Tech Session. If not, then by operation of the process, the recommendation to Standards Council is that the text is returned to previous edition text, which would be the last point where the committee and participants agree.”

There is absolutely no support for that position in the regulations. Nowhere. What we learned from the floor vote was that the Association members didn’t like the second draft result here, and nothing else. The regulations actually make sense as written. If you want to object to an action during the comment stage, and find the first draft workable, make Motion #10. The panel then gets to decide if the first draft language is still worthwhile, and by two-thirds vote can make it so. If you want to reverse the panel direction during the entire cycle, make Motion #12; the result will be, if passed, previous edition text, and in the process any related portions of First Revisions and First Correlating Revisions” [emphasis supplied] are set aside as well. In this case, the word “related” could have been used to allow the first three elements of the First Revision to stand as being unrelated to the Correlating Committee action, additionally solving that problem. Given the tenor of the debate, one could speculate that such a motion would have passed. However, Motion 12 was not made.

The likely effect of this unseemly Standards Administration intervention is to create a more positive economic environment for the manufacturers of GFCI circuit breakers, there being no other method of providing the required protection for the larger circuits. This thirty year member of the NEC Committee, and now Committee Service Award recipient, for over thirty five years has steadfastly defended NFPA against countless scurrilous attacks in the field about how the NEC is all about benefiting manufacturers. The Council has seen firsthand repeated instances of my diligent efforts to work within the rules, defend NFPA, and protect the integrity of the document. This appeal, at its heart, is an attempt to protect this work.

We must never forget that the NEC is not a mandatory document. It depends on local adoptions, and ultimately those depend on its credibility. A document that is produced without transparency is a document that will be discredited. The production of the subsequent CMP 7 ballot perfectly embodies the opposite of transparency. A faceless bureaucracy changes a ballot squarely authorized under written procedures, one likely to produce result A, and shifts to another ballot with no observable support in the regulations, one likely to produce result B. This is unacceptable.

(d) The Standards Council has enjoyed, in my mind, an exemplary history of making tough decisions that protect the integrity of their documents. The decision in the 2002 NEC cycle to remove the three-story NM cable limitation in the teeth of unified opposition from the electrical industry at all stages of the process (rejected at every stage, proposal, comment, and annual meeting) is a case in point. No one on this planet defended the Council more robustly than I did, often confronting significant peer disapproval. I continue to view that Council action with such regard that I retain my supportive analysis in even current editions of my books. My argument then and now is that the Council saved the electrical industry from itself. In no small way, I am now asking the Council to save NFPA from itself. Honor the integrity of the regulations by counting the FR 8475 text, the text the panel was clearly in the process of endorsing, as valid for the 2020 edition. The panel chair reports that at the conclusion of a conference call at the time, 12 CMP 7 members (far more than two thirds) were in favor of such a position.

Very truly yours,

[Signature]

Page | 3

Licensed in Massachusetts as a Master Electrician #A12019
Subject: Appeal to NFPA Standards Council re CAM 70-36, NFPA 70

From: Keith Lofland [mailto:klofland@iaei.org]
Sent: Wednesday, July 17, 2019 8:50 PM
To: Maynard, Mary <mmaynard@NFPA.org>
Subject: RE: Appeal to NFPA Standards Council re CAM 70-36, NFPA 70

Consider this my response as Chair of CMP-7 on the letter of appeal from Frederic Hartwell on CAM 70-36. I support Mr. Hartwell’s efforts to return NEC 551.71(F) to Second Correlating Revision 30.

One of the interesting facts here is the fact that Mr. Hartwell spotted the waiver from the NFPA regulations surrounding CAM 70-36 completely on his own. No one on CMP-7 (including myself) had any contact with Mr. Hartwell until he contact me as I was copied on an e-mail between Mr. Hartwell and NFPA on 07/14/19.

From the floor of the NFPA Technical Session in San Antonio, I began to question why we (CMP-7) were not given the opportunity to vote on First Draft language after CAM 70-36 passed the floor vote in San Antonio. That was the last point on the NFPA process where CMP-7 had reached consensus (13-2). This whole process got worst from there. What is in question here is not GFCI protection for this or that, what is in question here is the NFPA Code consensus process. Were the NFPA regulations followed to the letter here? The integrity of the entire NFPA 70 document rides on your answer to that question.

Regards,
L. Keith Lofland
Chair NEC CMP-7
Maynard, Mary

Subject: FW: THIS IS AN APPEAL FOR PROCESSING FW: Appeal to Motion 70-36 NFPA Standards

From: Az Arvc [mailto:arizonaarvc@aol.com]
Sent: Wednesday, July 17, 2019 7:59 PM
To: Bellis, Dawn <DBellis@nfpa.org>
Subject: Appeal to Motion 70-36 NFPA Standards

Ms. Dawn Michele Bellis
NFPA Standards Council Secretary
1 Batterymarch Park
Quincy, MA 02169-7471
July 17, 2019

Dear Ms. Bellis:

This letter is intended to constitute an appeal to the NFPA Standards Council with respect to a procedural matter related to the development of the next (2020) edition of the National Electrical Code, NFPA 70. It is my belief that the procedures set forth in the Regulations Governing the Development of NFPA Standards have not been followed with respect to the balloting of the Association action on Motion 70-36 at the Annual Meeting held in San Antonio, Texas on June 20, 2019. Because the likely substantive effect of this appeal will be similar to and supportive of the Standards Council agenda subject 19-8-3-v, it may be considered at that time. For these purposes, this appeal is therefore filed as an “Other Submission Relating to an Appeal” as covered in the Regulations at 1.6.4.

Please appeal the action on Motion 70-36.

Jo Anne & Harvey Mickelson, owners
J&H RV Park
7901 N. US Highway 89
Flagstaff, AZ 86004
928-526-1829
Request for Appeal

Submitter:
David Liu, American Honda Motor Co., Inc. (on behalf of 23 Automotive Manufacturers, the Automotive Alliance, Global Automakers, and SAE International.)
1001 G Street, NW Suite 950
Washington, DC 20001
Phone: 202-661-4408
Email: David_liu@ahm.honda.com

Date: July 10, 2019

To:
NFPA Standards Council

Related Actions:
2019 Technical Session Certified Amending Motions (CAM) 70-3, 70-37, and 70-40

Relief Requested:
- CAM 70-3: Accept an identifiable part of Public Comment 1482 and eliminate Section 625.60 AC Receptacle Outlets Used for EVPE
- CAM 70-37: Reject Second Revision No. 7783, including any related portions of First Revision No. 8597, deleting the definition of Electric Vehicle Power Export Equipment (EVPE) in Section 625.2.
- CAM 70-40: Accept an identifiable part of Public Comment No. 1480 thereby deleting the reference to the definition of Electric Vehicle Power Export Equipment (EVPE).

Hearing Request:
Based on the reasons set forth below, a hearing is requested at the Standards Council Meeting, August 5-7, 2019.

Justification:
1. Adequate technical debate was not afforded to the subject matter. Further, technical arguments presented at the NFPA Technical Session were not fully considered.
2. Due in part to time-constraints and the format of the NFPA Technical Session, the general voting membership was not able to adequately consider and evaluate conflicts between the NEC code and existing regulations of the National Highway Traffic Safety Administration (NHTSA). In addition, the general voting constituency lacks familiarity with NHTSA regulations and therefore was unable to render an informed decision on the preemption of the proposed NEC 2020 revisions by federal law.
3. Since the NFPA Technical Session, the Alliance of Automobile Manufacturers submitted a request to NHTSA for a letter of interpretation regarding NHTSA’s federal preemptive authority over motor vehicle safety and the conflicts presented by the NEC 2020 proposed revisions. If NHTSA’s response were available prior to the Technical Session, the voting outcome would likely...
have been different. Upon receiving NHTSA’s letter of interpretation, we intend to supplement our response to this appeal.

4. Approval of the standards, specifically the proposed Sections 625.2 and 625.60 of Article 625, run contrary to the Regulations Governing the Development of NFPA Standards, Section 4.1, because the proposed NEC revisions are unsubstantiated. This is due in large part to the fact that the NEC proposals have not adhered to the scientific process. The NEC proposals are neither objective, practicable, nor necessary for safety. The NEC proposals do not contain substantive technical requirements, including but not limited to the proposal requiring that the covered equipment be listed, nor is there sufficient data to support the proposals pertaining to Sections 625.2 and 625.60. Additionally, no basis has been established to show that the proposed requirements improve safety, if at all. Therefore, we request that the Standards Council consider our technical arguments and the implications of the proposed NFPA-70 language.

Basis of Motions 70-3, 70-37, 70-40:

The petitioners urge NFPA to reconsider the proposals defined in Section 625.60 and in the definition of EVPE (collectively, the “NEC Proposals”). In essence, these sections effectively propose to regulate on-board equipment, including on-board AC receptacles, that provide power to external loads using the vehicle as the source of supply. However, these requirements do not appropriately contemplate that, depending upon the type of EVPE/receptacles and types of off-board loads, usage conditions can vary significantly. As a result, the petitioners urge the NFPA to reconsider the above sections for the following reasons:

1. The NEC Proposals Do Not Improve Safety in Automotive Applications
2. The NEC Proposals Do Not Appropriately Address Various Usage Conditions and Receptacles
3. The NEC Proposals Directly Conflict With Existing Motor Vehicle Safety Oversight
4. The NEC Proposals Are Not Consistent With Other NEC Sections

The petitioners fully agree with the committee’s suggestions that “NFPA and SAE create a joint working group to address this issue.” As the committee has rightfully identified, the “suitable and safe interaction” between the vehicle and premises wiring and equipment is an issue that has yet to be addressed. Since we are also not aware of any demonstrated immediate safety need for the NEC Proposals, we have time to thoroughly vet and appropriately address these interactions. Instead of prematurely publishing requirements that are likely to cause confusion, as well as legal and practical challenges, we urge the NFPA to delete Section 625.60 and the definition of EVPE from the current NEC Proposals until the issues are resolved through a joint working group between NFPA and SAE. The three years between now and the next iteration of the NEC provides sufficient time to undertake this activity and get it right from the outset. Additional detail is provided in the subsequent sections.

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1 The NEC is considered to have the force and effect of regulation as these codes are broadly adopted by states and municipalities. The review process by which these entities revise the statute or administrative rule to adopt the latest NEC edition varies significantly, if such a review process exists at all. In other words, some jurisdictions have laws that automatically codify the most current NEC, which will include the 2020 version adopted by NFPA.
1. The NEC Proposals Do Not Improve Safety in Automotive Applications

The NEC’s primary purpose is to set electrical safety standards for residential, commercial, and industrial premises. One of the primary methods that proposed Section 625.60 ostensibly seeks to improve electrical safety is through subsection (D):

\[(D) \text{ GFCI Protection for Personnel}\]
\nGround-fault circuit-interrupter protection for personnel shall be provided for all receptacles. The ground-fault circuit-interrupter indication and reset shall be installed in a readily accessible location.

This language does not appropriately consider the characteristics inherent in residential, commercial, and industrial premises as compared to automotive electrical architecture. Unlike residential, commercial, and industrial premises, a “ground” does not exist in automotive applications and it is therefore not appropriate to apply ground fault logic to 120V AC outlets on a vehicle. GFCI equipment, designed primarily for premises wiring, may not even trip. We agree with the comments provided in the August 30, 2018 letter jointly written by the Alliance, Global Automakers, and SAE International to the NFPA:

- The isolation resistance [in the SAE J1766 document] should provide 2.0 mA or less of fault current...Article 100 of the 2017 version of NFPA-70 states that Class-A GFCI shall not trip when the fault current is less than 4.0 mA, which is not harmonized with SAE J1766.
- The requirement for the integration of a GFCI in each receptacle is not the most efficient solution for the automotive application, since the desired function can be achieved through integration/centralization without having a GFCI integral to each receptacle. Such a requirement would only increase complexity and potentially decrease reliability when other more effective approaches are possible through centralization of such functions with no compromise to safety.

2. The NEC Proposals Do Not Appropriately Address Various Usage Conditions and Receptacles

PC 1482 additionally highlights the overarching issue that Section 625.60 lacks clarity on the types of usage conditions and receptacles it is intended to address. Multiple categories of AC receptacles may exist and, depending upon this, the usage conditions can vary significantly. Such types of AC receptacles, and their related issues are described as follows:

- Regarding AC reverse power flow from an EV charging receptacle (namely an SAE J1772 receptacle or equivalent) through an EVSE wired to the premises, the EVSE shall be listed in accordance with Section 625.5, and the EVSE shall be equipped with overcurrent protection and a ground-fault detection method. However, the on-board charging receptacle does not have to have overcurrent protection or a ground-fault circuit interrupter.
- Regarding AC reverse power flow from an EV charging receptacle (namely an SAE J1772 receptacle or equivalent) for powering an individual stand-alone device, such a stand-alone device is not electrically grounded, and the on-board wires conductively connected to the AC receptacle are electrically insulated. Hence, even when a ground fault occurs, a current...
return path that might cause electrocution would not be formed. Therefore, a ground-fault circuit interrupter is not needed.

The phrase “AC receptacles intended to allow for connection of off-board utilization equipment” is ambiguous as to whether this includes NEMA 5-15R AC outlets in the cabin. AC outlets in the cabin are intended for on-board use, and not for devices off-board. However, some AHJ might consider on-board receptacles can be used for off-board equipment, which can cause confusion if this ambiguity remains unresolved. In addition, and similar to the bullet point 2 above, utilization equipment in the cabin is not electrically grounded, and the on-board wires conductively connected to the AC receptacle are electrically insulated. Hence, even when a ground fault occurs, a current return path that might cause electrocution would not be formed. Therefore, a ground-fault circuit interrupter is not necessary.

On-board overcurrent protection in automotive applications exists in various forms. For instance, overcurrent protection of multiple automotive circuits can be accomplished with a centralized system. In this case, employing a fuse that is integral to the power export system would add significant component complexity with no safety benefit. In the case of circuits employing an on-board inverter, the inverter is also designed to suppress its output current before overcurrent is achieved.

PC 1475 also highlights that the definition of EVPE is too broad and is referred to only in the definition of EVSE and in Sections 625.48 and 625.60. As proposed, the definition of EVPE is as follows:

**625.2 Definitions**

*Electric Vehicle Power Export Equipment (EVPE).*

The equipment, including the outlet on the vehicle, that is used to provide electrical power at voltages greater than or equal to 30 Vac or 60 Vdc to loads external to the vehicle, using the vehicle as the source of supply.

This definition can be interpreted to include, but is not necessarily limited to, the following equipment:

- Inverter regardless of off-board or on-board
- EVSE that works for reverse power flow from a vehicle
- AC outlet regardless of off-board or on-board
- EV charging receptacle when used as an outlet, regardless of AC or DC
- Wires and cables for the devices above.

In summary, Section 625.60 and the definition of EVPE do not properly recognize the various forms of such equipment and their respectively unique safety requirements. These unreasonable requirements for on-board equipment would add unwarranted complexity and fail to realize any safety benefit.

**3. The NEC Proposals Directly Conflict With Existing Motor Vehicle Safety Oversight**

In the broadest sense, Section 625.60 and the definition of EVPE present a very significant conflict with the federal preemptive authority of the National Highway Traffic Safety Administration (NHTSA). Since the passage of the National Traffic and Motor Vehicle Safety Act of 1966, NHTSA has been granted the
authority to set and administer safety standards for motor vehicles. This authority has been codified into 49 U.S. Code Chapter 301 and establishes that motor vehicle manufacturers must self-certify compliance with all applicable safety standards.²

Federal Motor Vehicle Safety Standard (FMVSS) No. 305, for “Electric-powered vehicles: Electrolyte spillage and electrical shock protection,” was first established on September 27th, 2000 and established initial requirements for electrolyte spillage, battery retention, and electrical isolation. Over the course of its existence, FMVSS No. 305 has been amended multiple times and was most recently amended on September 27th, 2017. As a result of NHTSA’s significant efforts, FMVSS No. 305 has been updated to reflect modern vehicle electrification technologies, harmonize with globally adopted electrical safety requirements, and broaden the coverage to include both post-crash performance and everyday normal vehicle operation.

In a July 29th, 2011 Notice of Proposed Rulemaking (NPRM) to amend FMVSS No. 305, NHTSA stated that they are “not aware of any cases of injuries/fatalities from shock in non-electrically powered vehicles with other high voltage components.”³ AC Receptacles have been employed in non-electrically powered vehicles and are functionally identical to those employed in electrically powered vehicles. We agree with NHTSA’s statement that a safety need does not exist to regulate this equipment. A September 27th, 2017 NPRM further stated that “NHTSA may consider the need for and feasibility of requirements for off-board electric vehicle equipment in the future.”⁴ We also agree that there is not a demonstrated safety need for NHTSA to regulate off-board equipment but certainly acknowledge that NHTSA may do so if the need arises and such regulation would be within its sole and exclusive authority. The FMVSS No. 305 rulemaking record demonstrates that, where an electrical safety need exists, NHTSA is responsible for setting standards for on-board equipment and potentially also for off-board equipment.

Furthermore, NHTSA’s regulatory oversight goes beyond the mere existence of FMVSS:

NHTSA has broad enforcement authority under existing statutes and regulations to address existing and emerging automotive technologies. With regard to NHTSA’s enforcement authority over motor vehicles and equipment, it applies “notwithstanding the presence or absence of an FMVSS for any particular type of advanced technology.” NHTSA has the authority to “respond to a safety problem posed by new technologies in the same manner it has responded to safety problems posed by more established automotive technology and equipment.” This includes the Agency determining the existence of a defect that poses an unreasonable risk to motor vehicle safety and ordering the manufacturer to conduct a recall.⁵

In conclusion, the proposed Section 625.60 and definition of EVPE present multiple and significant conflicts with and infringes upon NHTSA’s existing regulatory oversight for motor vehicle electrical safety equipment. Should electrical safety concerns arise, NHTSA possesses a broad set of regulatory

² See https://www.govinfo.gov/content/pkg/USCODE-2010-title49/pdf/USCODE-2010-title49-subtitleVI-partA-chap301.pdf
tools to address such issues, including rulemaking and enforcement authority. If the NEC proposed language that “all equipment covered by the scope of this article shall be listed” applies to on-board equipment, a direct conflict would exist between the third party listing and motor vehicle self-certification process. This presents a significant obstacle for vehicle manufacturers to fulfill their duty to address market or recall actions in a timely manner.

4. The NEC Proposals Are Not Consistent with Other NEC Sections

Within Article 625, it is unclear whether the AC receptacles or outlets are within the scope of requirements. Section 625.60 and 625.2 both clearly specify requirements for AC Receptacles outlets installed in electric vehicles:

625.60 AC Receptacle Outlets Used for EVPE.

AC receptacles installed in electric vehicles and intended to allow for connection of offboard utilization equipment shall comply with 625.60(A) through (D).

625.2 Definitions

Electric Vehicle Power Export Equipment (EVPE).

The equipment, including the outlet on the vehicle, that is used to provide electrical power at voltages greater than or equal to 30 Vac or 60 Vdc to loads external to the vehicle, using the vehicle as the source of supply.

However, outside of those two sections, the scope of the requirements becomes increasingly ambiguous. For example, Section 625.1 suggests that the electric vehicle (interpreted to include on-board equipment) is not within scope:

625.1 Scope

This article covers the electrical conductors and equipment connecting an electric vehicle to premises wiring for the purposes of charging, power export, or bidirectional current flow.

Furthermore, Section 90.2 more broadly describes the scope of the entire NEC as only covering the “installations” used to export power from vehicles. It also expressly states that “automotive vehicles other than mobile homes and recreational vehicles” are not within the scope of Article 625:

Section 90.2(A) Covered, (6)

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

Section 90.2, (B) Not Covered, (1)

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

For the above reasons, Honda urged that the definition of EVPE be eliminated in PC 1475. In the committee’s response to PC 1475, the committee recognizes “concerns” with the scope yet asserts that
the NEC has authority over such “interfaces.” While an attempt is made to clarify the scope, it still remains unclear what might be covered under the definition of “interfaces.” Overall, despite the revisions made in the recent Second Draft, the same concerns continue to exist not only within Section 625.60 but in multiple other NEC sections.

Recommendation

Given the above considerations, the petitioners firmly believe that the NEC Proposals to add Section 625.60 and the definition of EVPE are premature. We agree with the Committee response to PC 1482 where the CMP-12 acknowledges that NFPA and SAE should create a joint working group to address the issues of suitable and safe interaction with premises wiring and equipment. Unfortunately, in the absence of such prerequisite action, the NEC Proposals will not create any substantial safety improvements, will not appropriately address automotive usage conditions and equipment, and will create a significant conflict with NHTSA’s existing safety oversight.

We strongly urge the NFPA to reconsider the significant impacts of this premature NEC proposed revision. These issues must be addressed before establishing problematic standards. We recommend that Section 625.60, the definition of EVPE, and other sentences referencing the term EVPE be deleted from the 2020 NEC Second Draft revision until appropriate and harmonized standards can be developed through joint SAE and NFPA working group activity.
wish to vote in support of the motion, and recommend
the text on Screen One, touch 'Yes'. If you wish to
vote against the motion, and recommend the text on
Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 32 in favor of the motion;
372 against the motion. The motion has failed.

Now let's proceed with the discussion on
Certified Amending Motion 70-37. Microphone - runner.
Microphone - I was just waiting to see where you
stopped - four.

SCOTT SCHMIDT: Thank you, Sir.

JAMES GOLINVEAUX: No worries. Catch your
breath.

SCOTT SCHMIDT: I'm Scott Schmidt with the
Alliance of Automobile Manufacturing, speaking for
Nancy Stone, 23 OEMs, their trade associations, and
SAE. I make the Motion to Reject SR No. 7783,
Including Part of FR No. 8597.

JAMES GOLINVEAUX: Thank you. There is a
motion on the floor to Reject Second Revision No.
7783, Including Any Related Portions of First Revision
No. 8597. Is there a second?

UNIDENTIFIED SPEAKER: Second.
JAMES GOLINVEAUX: Before we begin discussion on this motion, I wanted to point out that there are—some of the text on the Second Revision 7783, was not included in the Agenda. The text which appears on the screens behind me reflects the additional text. Please proceed with the motion.

SCOTT SCHMIDT: Yes. Scott Schmidt with the Auto Alliance. I support the motion.

The proposed definition of EVP seeks to regulate on board equipment that provide power to external loads using the vehicle as a source of supply. These requirements do not appropriately contemplate that automotive electrical architecture significantly differs from other installations.

The definition of EVP conflicts with existing safety oversight, namely federal preemptive authority and the National Highway Traffic Safety Administrations.

As indicated before, we have been in discussions with the agency and are very interested in examining where these conflicts would cause them to consider preemption.

NHTSA has continuously evolved FMVSS 305 to address safety needs as they emerged. Therefore, NHTSA's enforcement authority replies regardless of
the presence of even an FMVSS. And as was said, if
there should be an issue in the field, NHTSA has the
authority to force the manufacturer to recall and
remedy its products.

There's use - various usage conditions and
receptacles are not appropriately addressed, either.
The proposed definition of EVPE lacks clarity on the
significantly wide variety uses and equipment it may
be intended to address. The proposed definition is
also overly broad, and may be interpreted to include
the inverter, regardless of on board or off board; the
EVSC that works for reversed power from the vehicle;
AC outlets regardless of on board or off board; EV
charging receptacles when used as an outlet, again,
regardless of AC or DC; wires or cables for the
devices above.

There is also inconsistency with the other NEC
sections. Section 625.60 and 625.2 both clearly
specify requirements for on board outlets installed in
electric vehicles. However, 625.1 and 90.2 can be
interpreted otherwise.

The Code-Making Committee attempted to address
these inconsistencies, but with the definition, such
interfaces remains unclear.

In summary, the petitioners of this motion
f firmly believe that the proposal to add the definition of EVPE would create a significant conflict with the (unintelligible) authority, will not address automotive usage conditions, and is not consistent with the scope of other NEC sections. The proposal will not provide any safety benefit, and we strongly urge the NFPA to remove the definition of EVPE from the 2020 NEC Second Draft Revisions. Thank you.

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position, please.

MICHAEL JOHNSTON: Thank you, Mr. Chair. There were no correlation issues or conflicts identified by the NEC Correlating Committee. However, I would like to defer the technical response to the Chair of Code Panel 12, Scott Cline, and I believe he's at microphone two, please.

SCOTT CLINE: I am Scott Cline, representing NECA. I am Chair of NEC Code-Making Panel 12, which is responsible for Article 625, and I speak against this motion.

You have again just heard my opinion about the necessity of having rules in the NEC to cover hazards arising from the decision of vehicle manufacturers to provide electrical power supply having nothing to do with transportation. I still insist that the
electricity provided does not know where it comes from, nor does it care what it goes through. It can be an, an adult or a child's body; it will still be a killer.

Neither the National Electric Code Article 90 scope, nor the scope of Article 625 is a one time declaration of coverage which may never be changed. When available technology comes into being which presents these hazards, then we have the responsibility to consider them, and make rules where required.

The vehicle manufacturers are sometimes choosing to offer these options, turning the vehicle into a non-transportation power supply system. When they do this, they need to accept NEC standards, which will integrate systems safely with loads that can be connected to the vehicle now by simply plugging in a cord, having nothing to do, necessarily, with bidirectional vehicle charging equipment.

The Panel voting on Second Revision 7783 was 17 to 1. Please continue to provide protection to the public, and vote no on this motion.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name, affiliation, and whether you are speaking in
support, or against the motion. Microphone number four, please.

SCOTT SCHMIDT: Yes. This I Scott Schmidt, the Alliance, just providing some supplemental. I would like to make note that we have examined, and talked to NHTSA. There is absolutely no injuries that have been documented due to these outlets. For - and in addition, these outlets are not new. They've been on the market for quite a while, as part of ICE, internal combustion engine vehicle.

So the safety record of the industry is sterling. We have no issues that need to be resolved immediately.

Now, because of that, when we went to the Panel, we were saying, 'Okay. You have this issue. Let's work on maybe a joint SAE/NFPA work group that can find a way of putting some standard language together that is compatible with how our systems are designed, especially when they are designed to provide fault tolerance to FMVSS 305, and therefore, will not conflict.'

So the whole idea of this was to say, 'We don't have a safety problem that needs to be handled in this code cycle. But we're not going to ignore it. We are going to find a way of making something that gives you
the safety assurance you want, and be flexible for
industry.' And that's what we want, and that's what
we've been trying to do. Unfortunately, that did not
move forward, but I would like to see that happen.
And if this does carry, we will still be willing to
work on such a joint issue.

JAMES GOLINVEAUX: Thank you. Microphone two,
please.

KEN BOYCE: Thank you, Mr. Chair. Ken Boyce,
UL LLC, and the Chairman of Co-Panel 1, speaking in
opposition to the motion.

You already heard me speak earlier, relative to
70-1, on, on - Panel 1's views on this, as it pertains
to the scope in Article 90.

I just wanted a few new comments. People have
heard the term NHTSA, and I just want to make sure
everyone understands. NHTSA is an acronym for the
National Highway Traffic Safety Administration. And
they say that they're responsible for keeping people
safe on America's roadways - a very important role.
But they also go on to say their mission is to save
lives, prevent injuries, and reduce economic costs due
to road traffic crashes, through education, research,
safety, safety standards, and enforcement activity.
So that's a very different purview than what we're
talking about here.

As Chairman Cline has pointed out in his comments about CMP 12's view, of the nature of this mode of operation of an electrical source, and the NEC's clear purview over it, that we've already established, that means we need requirements in the NEC. Code Panel 12 has given us those requirements through diligent deliberation.

I ask that you oppose this motion, and support electrical safety.

JAMES GOLINVEAUX: Thank you. Microphone five.

JIM TARCHINSKI: Good evening. Jim Tarchinski, representing SAE International, speaking for the motion on the table. I would like to talk about two of the previous comments that were made.

First, Mr. Cline mentioned safety. NHTSA - the National Highway Traffic Safety Administration - uses a method of protection called isolation resistance. And the goal of that method is to make certain touching high voltage, there are no hazards. But it's different than the method in the NEC. And therefore, the two are not compatible, and that's why it's very important what was mentioned about the need for NFPA and SAE International to work together.

The second comment was made relative to
National Highway Traffic Safety Administration only covering vehicles when they're on the roadways. That's not quite correct. NHTSA has stated that they are responsible for vehicle safety in normal usage conditions; and for an electric vehicle, that would include charging. So NHTSA has vehicles' coverage stationary, as well as in motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone three.

JOEL GORGON (phonetic): Mr. Chairman, I'm Joel Gorgon with Cisco Systems, and I am speaking against the motion. I'm a CMP 12 principal member. I do not speak for CMP 12. Scott Cline has already done that.

I'd like to make a couple clarifications on what we've been talking about here. Specifically, if I look at the scope defined in 625.1, and I quote, 'It covers the electrical conductors and equipment connecting an electric vehicle to premise wiring.'

Now, I understand that a car is supposed to be on the road. But when it's not on the road, and it's pulled in the garage, and it's plugged into the garage and it's charging, or delivering power into the home, it now has, since it's delivering power into the home or residence, it is now specifically powering that, and has become part of the home power source system.
Further, with electric outlets that are inside the vehicle, if I choose to clean my car while it's in the garage, I can take my wet/dry shop vac and plug it into said electrical outlet.

Now, there has to be some type of protection, because now the car is no longer on the road. I'm not driving 90 miles an hour down the road - I like to drive fast, by the way - so I'm no longer driving that. I'm actually parked in the garage, driving the home.

This is, this is part of the National Electrical Code. This text needs to be here. And again, I speak against this motion, and I urge you all to vote against this.

JAMES GOLINVEAUX: Thank you very much.

Microphone one.

EDDY GEDRIE: Me again, Eddy Gedrie, speaking for myself. Call the question.

JAMES GOLINVEAUX: There's a motion on the floor to call the question. I notice there are a number of people remaining at the microphones waiting to speak, but we'll proceed with the motion on call the question. Do we have a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. In
order to vote on this motion, please scroll down to
the bottom of the tablet to vote. If you wish to vote
in support of the motion, touch 'Yes'. If you wish to
vote against the motion, touch 'No'. Please record
your vote.

Five seconds, the voting will be closed.

The voting is closed.
The results are: 355 in favor of calling the
questions; 11 against calling the question. So the
vote is in favor of calling the question.

This will move us to the - restate the motion.
The motion on the floor is to Reject the Second
Revision 7783, Including Any Related Portions of the
First Revision No. 8597. To vote, touch the 'vote'
button. If you wish to vote in support of the motion,
and recommend the text on Screen One, touch 'Yes'. If
you wish to vote against the motion, and recommend the
text on Screen Two, touch 'No'. Please record your
vote.

The voting will close in five seconds.
The voting is closed.
The results are: 15 in favor of the motion;
and 382 against the motion. The motion has failed.
Now let's proceed with the discussion on
Certified Amending Motion 70-38. Microphone four,
Request for Appeal

Submitter:
D. Douglas Burkett, Ford Motor Company (on behalf of 23 Automotive Manufacturers, the Automotive Alliance, Global Automakers, and SAE International.)
21500 Oakwood Boulevard
Dearborn, MI, 48124-4091
Phone: 313-805-5558
Email: dburket2@ford.com

Date: July 1, 2019

To:
NFPA Standards Council

Related Actions:
2019 Technical Session CAM 70.38

Relief Requested:
Section 625.5 Listed Statement change to:
“All electric vehicle power transfer system equipment external to the vehicle shall be listed.”

Hearing Request:
Based on the below outlined reasoning’s, a hearing is requested at the Standard Council Meeting, August 5-7, 2019.

Justification:
1. Adequate technical debate was not afforded to the subject matter. Further, technical arguments presented at the NFPA Technical Session were not fully considered.
2. Partly because of the time-constraints and format of the Expo meeting, the general voting membership was not able to adequately evaluate conflicts between the NEC code and that of existing regulations of the National Highway Traffic Safety Administration (NHTSA). The general voting constituency lacks familiarity with NHTSA regulations and automotive self-certification status with the Federal Government.
3. Since the time of the NFPA Technical Session, NHTSA has been working on an interpretation request related to this matter at the request of the Automotive Alliance. If NHTSA’s response had been available at the Technical Session, it would have likely changed the voting results. The Alliance would like to present all available information on this process at the NFPA Standards Council Meeting.

Basis of Motion:
The Public Comment 1590 has not been adequately considered for the ambiguity that this change brings to the Code. In an attempt to clarify, the Code has instead caused confusion, as evidenced by the comments submitted by the various members of respective Code Making Panels.

It is our position that the requirement for listing of any on-vehicle components is improperly directed. The requirement for listing any potential vehicle item creates at least six significant, unresolved issues, which are detailed below.

1. Current automotive industry requirements for on-vehicle components are written to accommodate the needs and specifications necessary to satisfy those required in an all-inclusive automotive environment. Similar components currently in use in premise wiring applications do not have to perform to the extreme temperature and vibration profiles that are required for an automotive component. Current off-the-shelf premise wiring type of components could not conform to these more stringent specifications. This new listing requirement would require duplicative testing and costs for tests already validated by the industry.

2. The Nationally Recognized Testing Laboratory (NRTL) listing process is not consistent with The National Highway Traffic Safety Administration (NHTSA) self-certification per The National Traffic and Motor Vehicle Safety Act of 1966 (Public Law #89-563). Through self-certification, the industry is able to efficiently ensure that stringent safety engineering standards are maintained. Self-certification is a desirable, more nimble approach to specialized applications and requirements.

3. Listing of on-vehicle components is not pragmatic due to the complexities of testing components to the full extent of the requirements outside of an actual vehicle. Duplication on the bench or in a lab of all necessary inputs to properly exercise and test the component could pose significant challenges while providing little or no additional benefit.

4. A listing requirement could delay service part availability in a vehicle recall. NHTSA has legal requirements governing reporting, customer notification, and remedying vehicles in the field. Logistical considerations related to the processes involved in obtaining component certification, such as on-site inspection of overseas manufacturing facilities, could significantly increase the timing of service part availability. Thus, the completion of safety recall repairs could be delayed.

5. States typically adopt the Code as a legislative action. Individual state adoption of different versions of the Code could raise issues of unique state-by-state requirements for motor vehicles. This would result in requiring different vehicles for different states and hamper correction of any in-field vehicle issues. In addition, the ability for states to enforce on-vehicle Code requirements in individual vehicles will be a complex, almost impossible task.

6. Finally, assuming that listed components were required on vehicles, there could be a safety hazard for Authority Having Jurisdiction (AHJ) inspectors performing on-site inspections depending on the location of such components. The inspector could lack the training and necessary procedures to
properly disassemble and re-assemble parts of the automobile to verify compliance. At minimum, the scope and complexity of the work performed by the AHJ is likely to increase.

It also must be highlighted that, as written, the Second Draft version of 625.5 gives a blanket-listing requirement for equipment that might be added to this article of the Code in the future. Therefore, the items discussed above should also be evaluated in terms of the negative impact they might impart on the development of future technology in this area. To avoid these pitfalls, now and in the future, this NITMAM recommends the removal of all listing requirements for on-vehicle components.

**Recommendation:**

It is appreciated that the NFPA’s goal is to proactively update the Code with well-defined and consistent standards. However, any on-vehicle requirements should be consistent with existing roles within industry standards development by having separate infrastructure requirements, addressed by NFPA requirements, and on-vehicle requirements, addressed through SAE International standards. SAE standards are the recognized source for automobile standards and are often referenced/adopted by NHTSA in federal regulations and standards such as FMVSS 305.

Therefore, it is strongly requested that all requirements for listing of in-vehicle components be removed from the National Electrical Code, including the proposed section 625.5 and 625.60(A).
625.5 Listed.
All electric vehicle power transfer system equipment external to the vehicle shall be listed.

Statement of Problem and Substantiation for Public Comment

Per the scope of both NFPA-70 and Article 625, this document can only cover requirements for off-vehicle equipment.

Related Item
• FR-8399

Submitter Information Verification

Submitter Full Name: James Tarchinski
Organization: General Motors Company
Affiliation: SAE International
Street Address:
City:
State:
Zip:
Submittal Date: Wed Aug 29 12:35:21 EDT 2018
Committee: NEC-P12

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-7792-NFPA 70-2018
Statement: The panel clarifies that all equipment within the the scope of this article is required to be listed.

Copyright Assignment

I, James Tarchinski, hereby irrevocably grant and assign to the National Fire Protection Association (NFPA) all and full rights in copyright in this Public Comment (including both the Proposed Change and the Statement of Problem and Substantiation). I understand and intend that I acquire no rights, including rights as a joint author, in any publication of the NFPA in which this Public Comment in this or another similar or derivative form is used. I hereby warrant that I am the author of this Public Comment and that I have full power and authority to enter into this copyright assignment.

By checking this box I affirm that I am James Tarchinski, and I agree to be legally bound by the above Copyright Assignment and the terms and conditions contained therein. I understand and intend that, by checking this box, I am creating an electronic signature that will, upon my submission of this form, have the same legal force and effect as a handwritten signature.

https://submittals.nfpa.org/TerraViewWeb/FormLaunch?id=/TerraView/Content/70-2017....  7/10/2019
order to vote on this motion, please scroll down to 
the bottom of the tablet to vote. If you wish to vote 
in support of the motion, touch 'Yes'. If you wish to 
vote against the motion, touch 'No'. Please record 
your vote.

Five seconds, the voting will be closed.

The voting is closed.

The results are: 355 in favor of calling the 
questions; 11 against calling the question. So the 
vote is in favor of calling the question.

This will move us to the - restate the motion.

The motion on the floor is to Reject the Second 
Revision 7783, Including Any Related Portions of the 
First Revision No. 8597. To vote, touch the 'vote' 
button. If you wish to vote in support of the motion, 
and recommend the text on Screen One, touch 'Yes'. If 
you wish to vote against the motion, and recommend the 
text on Screen Two, touch 'No'. Please record your 
vote.

The voting will close in five seconds.

The voting is closed.

The results are: 15 in favor of the motion; 
and 382 against the motion. The motion has failed.

Now let's proceed with the discussion on 
Certified Amending Motion 70-38. Microphone four,
DOUG BURKETT: Hello. My name is Doug Burkett, Ford Motor Company, and I'm here today representing 23 OEM companies, as well as the organizations of Alliance of Automobile Manufacturers, Global Automakers, and SAE International.

We request that the NFPA Accept Public Comment 1590, and only require the listing of any equipment external --

JAMES GOLINVEAUX: Sir, Sir --

DOUG BURKETT: -- to the vehicle.

JAMES GOLINVEAUX: Let's, let's, let's stop on -- you've requested the Motion to Accept Public Comment No. 1590. Correct?

DOUG BURKETT: Yes.

JAMES GOLINVEAUX: So there's a motion on the floor to Accept Public Comment No. 1590. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: Did I get that second? All right. Got a second. We do have a second. Please proceed with the discussion on the motion.

DOUG BURKETT: Thank you. Again, my name is Doug Burkett with Ford Motor Company, and I'm speaking for the motion.
The Public Comment 1590 has not been adequately considered. The current changes to the code creates ambiguity. An attempt to clarify the code has instead caused additional confusion.

It's our position that the requirement for listing of any on vehicle components is improperly directed. The requirement for listing any on vehicle components creates at least six significant, unresolved issues.

One, current automotive industry requirements for on vehicle components have more stringent specifications than similar current, off the shelf, premises wiring type of components. Two, the NRTL listing process is not consistent with NHTSA's legally established self-certification process. Three, listing of on vehicle components it not pragmatic, due to the complexities of fully testing component requirements outside of an actual vehicle. Four, a listing requirement will delay service part availability. Five, states typically adopt a code as a legislative action. Individual state adoption of different versions could raise issues of unique state by state requirements for motor vehicles. Six, assuming that listed components were required on vehicles, there could be potential safety hazard for
AHJ inspectors performing on site inspections.

   It must also be highlighted that as written, the Second Draft version of 625.5 gives a blanket listing requirement for any equipment that might be added to this article of the code in the future. Therefore, the items discussed above should also be evaluated in terms of the negative impact they might impart on the development of future technology in this area.

   It's appreciated that NFPA's goal is to proactively update the code with well defined and consistent standards. However, an on vehicle requirement should be consistent with existing roles within industry standard developments. There should be separate infrastructure requirements addressed by NFPA, and on vehicle requirements addressed through SAE International. SAE standards are a recognized source for automobile standards, and are often referenced, adopted by NHTSA in federal regulations such as FMVSS 305. Thank you.

   JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to state the Panel's position, please.

   MICHAEL JOHNSTON: Thank you, Mr. Chair. I'd like to defer to the Chair of Code Panel 12, Scott Cline, for a technical response.
SCOTT CLINE: I am Scott Cline, representing NECA. I am the Chair of NECA Code-Making Panel 12, which is responsible for Article 625. I speak against this motion.

Again, we hear from the vehicle manufacturing industry that they should be able to offer options which turn the vehicle into a non-transportation power supply system, without conforming to NEC standards. Despite hearing that the time spent by the Panel is irrelevant, it actually proves the well-considered actions which the Panel has taken.

I will again insist that the protections which the Code-Making Panel was very careful to require, do not impede the safe use of vehicles for transportation; do not impede the safe use of vehicles for providing power to a dwelling; do not impede the safe use of vehicles for stationary use as a power generator. Providing this option is exactly that. It's an option not relevant to transportation.

We only insist that it be done safely, to the same standards as elsewhere in the NEC. Please vote no on this motion.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name, affiliation, and whether you are speaking in
support, or against the motion. Microphone five, please.

JIM TARCHINSKI: Good evening. Again, my name's Jim Tarchinski, representing SAE International, speaking for the motion at hand.

As Mr. Burkett already mentioned, the listing process would be very difficult to set up and operate. Let me explain why, though.

Automobiles use a distributed computing system, where the software to drive a particular component generally does not reside in that component. It could reside across the vehicle. This would make it different - this would make it difficult to set up a particular device in a listing lab.

Also, the listing requirements do not cover the automotive environment, including crash worthiness requirements. As Doug mentioned, the AHJ would have no way to enforce this requirement. They cannot safely disassemble a vehicle in the field to make certain it complies with the NEC code.

And as previously mentioned, the National Highway Traffic Safety Administration has this area covered. They have regulations on the book. NHTSA obviously has not seen any safety issues in this field, or they would have started an investigation,
started regulations.

For these reasons, I strongly recommend a vote in favor of these motions - or this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone one, please.

EDDIE GEDRY: Eddie Gedry, representing myself. Call the question.

JAMES GOLINVEAUX: There's a motion from the floor to call the question. I notice there are a number of people remaining at the microphones waiting to speak, but I will proceed with the vote on the call of the question. Do we have a second?

UNIDENTIFIED SPEAKERS: Second.

JAMES GOLINVEAUX: We do have a second. And in order to vote on the motion, please scroll down to the bottom of the tablet to vote. If you wish to vote in support of the motion, touch 'Yes'. If you wish to vote against the motion, touch 'No'. Please record your vote.

The voting will end in five seconds.

The voting is closed.

The results are: 356 in favor of calling the question; 14 against calling the question. Therefore, the motion is passed to call the question.
I'll move to the main motion. Before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 1590. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

Voting will close in five seconds.

The voting is closed.

The results are: 30 in favor of the motion; and 346 against the motion. The motion has failed.

Now let's proceed with the discussion on Certified Amending Motion 70-39. Microphone four?

No. Okay. I'm not seeing the maker of the motion at a microphone. Last call for 70-39. Seeing that the maker of the motion, nor an identified designated representative has approached the - to make the motion, 70-39, in accordance with the NFPA Convention Rules, Section 2.7, the motion may not be considered by the assembly, and is removed from the Agenda. We will now move on to the next motion included in the Agenda.

Now let's proceed with the discussion on Certified Amending Motion 70-40. Microphone four,
Request for Appeal

Submitter:
David Liu, American Honda Motor Co., Inc. (on behalf of 23 Automotive Manufacturers, the Automotive Alliance, Global Automakers, and SAE International.)
1001 G Street, NW Suite 950
Washington, DC 20001
Phone: 202-661-4408
Email: David_liu@ahm.honda.com

Date: July 10, 2019

To:
NFPA Standards Council

Related Actions:
2019 Technical Session Certified Amending Motions (CAM) 70-3, 70-37, and 70-40

Relief Requested:
- CAM 70-3: Accept an identifiable part of Public Comment 1482 and eliminate Section 625.60 AC Receptacle Outlets Used for EVPE
- CAM 70-37: Reject Second Revision No. 7783, including any related portions of First Revision No. 8597, deleting the definition of Electric Vehicle Power Export Equipment (EVPE) in Section 625.2.
- CAM 70-40: Accept an identifiable part of Public Comment No. 1480 thereby deleting the reference to the definition of Electric Vehicle Power Export Equipment (EVPE).

Hearing Request:
Based on the reasons set forth below, a hearing is requested at the Standards Council Meeting, August 5-7, 2019.

Justification:
1. Adequate technical debate was not afforded to the subject matter. Further, technical arguments presented at the NFPA Technical Session were not fully considered.
2. Due in part to time-constraints and the format of the NFPA Technical Session, the general voting membership was not able to adequately consider and evaluate conflicts between the NEC code and existing regulations of the National Highway Traffic Safety Administration (NHTSA). In addition, the general voting constituency lacks familiarity with NHTSA regulations and therefore was unable to render an informed decision on the preemption of the proposed NEC 2020 revisions by federal law.
3. Since the NFPA Technical Session, the Alliance of Automobile Manufacturers submitted a request to NHTSA for a letter of interpretation regarding NHTSA’s federal preemptive authority over motor vehicle safety and the conflicts presented by the NEC 2020 proposed revisions. If NHTSA’s response were available prior to the Technical Session, the voting outcome would likely
have been different. Upon receiving NHTSA’s letter of interpretation, we intend to supplement our response to this appeal.

4. Approval of the standards, specifically the proposed Sections 625.2 and 625.60 of Article 625, run contrary to the Regulations Governing the Development of NFPA Standards, Section 4.1, because the proposed NEC revisions are unsubstantiated. This is due in large part to the fact that the NEC proposals have not adhered to the scientific process. The NEC proposals are neither objective, practicable, nor necessary for safety. The NEC proposals do not contain substantive technical requirements, including but not limited to the proposal requiring that the covered equipment be listed, nor is there sufficient data to support the proposals pertaining to Sections 625.2 and 625.60. Additionally, no basis has been established to show that the proposed requirements improve safety, if at all. Therefore, we request that the Standards Council consider our technical arguments and the implications of the proposed NFPA-70 language.

Basis of Motions 70-3, 70-37, 70-40:

The petitioners urge NFPA to reconsider the proposals defined in Section 625.60 and in the definition of EVPE (collectively, the “NEC Proposals”). In essence, these sections effectively propose to regulate on-board equipment, including on-board AC receptacles, that provide power to external loads using the vehicle as the source of supply. However, these requirements do not appropriately contemplate that, depending upon the type of EVPE/receptacles and types of off-board loads, usage conditions can vary significantly. As a result, the petitioners urge the NFPA to reconsider the above sections for the following reasons:

1. The NEC Proposals Do Not Improve Safety in Automotive Applications
2. The NEC Proposals Do Not Appropriately Address Various Usage Conditions and Receptacles
3. The NEC Proposals Directly Conflict With Existing Motor Vehicle Safety Oversight
4. The NEC Proposals Are Not Consistent With Other NEC Sections

The petitioners fully agree with the committee’s suggestions that “NFPA and SAE create a joint working group to address this issue.” As the committee has rightfully identified, the “suitable and safe interaction” between the vehicle and premises wiring and equipment is an issue that has yet to be addressed. Since we are also not aware of any demonstrated immediate safety need for the NEC Proposals, we have time to thoroughly vet and appropriately address these interactions. Instead of prematurely publishing requirements that are likely to cause confusion, as well as legal and practical challenges, we urge the NFPA to delete Section 625.60 and the definition of EVPE from the current NEC Proposals until the issues are resolved through a joint working group between NFPA and SAE. The three years between now and the next iteration of the NEC provides sufficient time to undertake this activity and get it right from the outset. Additional detail is provided in the subsequent sections.

1 The NEC is considered to have the force and effect of regulation as these codes are broadly adopted by states and municipalities. The review process by which these entities revise the statute or administrative rule to adopt the latest NEC edition varies significantly, if such a review process exists at all. In other words, some jurisdictions have laws that automatically codify the most current NEC, which will include the 2020 version adopted by NFPA.
1. The NEC Proposals Do Not Improve Safety in Automotive Applications

The NEC’s primary purpose is to set electrical safety standards for residential, commercial, and industrial premises. One of the primary methods that proposed Section 625.60 ostensibly seeks to improve electrical safety is through subsection (D):

(D) GFCI Protection for Personnel

Ground-fault circuit-interrupter protection for personnel shall be provided for all receptacles. The ground-fault circuit-interrupter indication and reset shall be installed in a readily accessible location.

This language does not appropriately consider the characteristics inherent in residential, commercial, and industrial premises as compared to automotive electrical architecture. Unlike residential, commercial, and industrial premises, a “ground” does not exist in automotive applications and it is therefore not appropriate to apply ground fault logic to 120V AC outlets on a vehicle. GFCI equipment, designed primarily for premises wiring, may not even trip. We agree with the comments provided in the August 30, 2018 letter jointly written by the Alliance, Global Automakers, and SAE International to the NFPA:

- The isolation resistance [in the SAE J1766 document] should provide 2.0 mA or less of fault current...Article 100 of the 2017 version of NFPA-70 states that Class-A GFCI shall not trip when the fault current is less than 4.0 mA, which is not harmonized with SAE J1766.
- The requirement for the integration of a GFCI in each receptacle is not the most efficient solution for the automotive application, since the desired function can be achieved through integration/centralization without having a GFCI integral to each receptacle. Such a requirement would only increase complexity and potentially decrease reliability when other more effective approaches are possible through centralization of such functions with no compromise to safety.

2. The NEC Proposals Do Not Appropriately Address Various Usage Conditions and Receptacles

PC 1482 additionally highlights the overarching issue that Section 625.60 lacks clarity on the types of usage conditions and receptacles it is intended to address. Multiple categories of AC receptacles may exist and, depending upon this, the usage conditions can vary significantly. Such types of AC receptacles, and their related issues are described as follows:

- Regarding AC reverse power flow from an EV charging receptacle (namely an SAE J1772 receptacle or equivalent) through an EVSE wired to the premises, the EVSE shall be listed in accordance with Section 625.5, and the EVSE shall be equipped with overcurrent protection and a ground-fault detection method. However, the on-board charging receptacle does not have to have overcurrent protection or a ground-fault circuit interrupter.
- Regarding AC reverse power flow from an EV charging receptacle (namely an SAE J1772 receptacle or equivalent) for powering an individual stand-alone device, such a stand-alone device is not electrically grounded, and the on-board wires conductively connected to the AC receptacle are electrically insulated. Hence, even when a ground fault occurs, a current
return path that might cause electrocution would not be formed. Therefore, a ground-fault circuit interrupter is not needed.

- The phrase “AC receptacles intended to allow for connection of off-board utilization equipment” is ambiguous as to whether this includes NEMA 5-15R AC outlets in the cabin. AC outlets in the cabin are intended for on-board use, and not for devices off-board. However, some AHJ might consider on-board receptacles can be used for off-board equipment, which can cause confusion if this ambiguity remains unresolved. In addition, and similar to the bullet point 2 above, utilization equipment in the cabin is not electrically grounded, and the on-board wires conductively connected to the AC receptacle are electrically insulated. Hence, even when a ground fault occurs, a current return path that might cause electrocution would not be formed. Therefore, a ground-fault circuit interrupter is not necessary.

On-board overcurrent protection in automotive applications exists in various forms. For instance, overcurrent protection of multiple automotive circuits can be accomplished with a centralized system. In this case, employing a fuse that is integral to the power export system would add significant component complexity with no safety benefit. In the case of circuits employing an on-board inverter, the inverter is also designed to suppress its output current before overcurrent is achieved.

PC 1475 also highlights that the definition of EVPE is too broad and is referred to only in the definition of EVSE and in Sections 625.48 and 625.60. As proposed, the definition of EVPE is as follows:

625.2 Definitions

Electric Vehicle Power Export Equipment (EVPE).

The equipment, including the outlet on the vehicle, that is used to provide electrical power at voltages greater than or equal to 30 Vac or 60 Vdc to loads external to the vehicle, using the vehicle as the source of supply.

This definition can be interpreted to include, but is not necessarily limited to, the following equipment:

- Inverter regardless of off-board or on-board
- EVSE that works for reverse power flow from a vehicle
- AC outlet regardless of off-board or on-board
- EV charging receptacle when used as an outlet, regardless of AC or DC
- Wires and cables for the devices above.

In summary, Section 625.60 and the definition of EVPE do not properly recognize the various forms of such equipment and their respectively unique safety requirements. These unreasonable requirements for on-board equipment would add unwarranted complexity and fail to realize any safety benefit.

3. The NEC Proposals Directly Conflict With Existing Motor Vehicle Safety Oversight

In the broadest sense, Section 625.60 and the definition of EVPE present a very significant conflict with the federal preemptive authority of the National Highway Traffic Safety Administration (NHTSA). Since the passage of the National Traffic and Motor Vehicle Safety Act of 1966, NHTSA has been granted the
authority to set and administer safety standards for motor vehicles. This authority has been codified into 49 U.S. Code Chapter 301 and establishes that motor vehicle manufacturers must self-certify compliance with all applicable safety standards.²

Federal Motor Vehicle Safety Standard (FMVSS) No. 305, for “Electric-powered vehicles: Electrolyte spillage and electrical shock protection,” was first established on September 27th, 2000 and established initial requirements for electrolyte spillage, battery retention, and electrical isolation. Over the course of its existence, FMVSS No. 305 has been amended multiple times and was most recently amended on September 27th, 2017. As a result of NHTSA’s significant efforts, FMVSS No. 305 has been updated to reflect modern vehicle electrification technologies, harmonize with globally adopted electrical safety requirements, and broaden the coverage to include both post-crash performance and everyday normal vehicle operation.

In a July 29th, 2011 Notice of Proposed Rulemaking (NPRM) to amend FMVSS No. 305, NHTSA stated that they are “not aware of any cases of injuries/fatalities from shock in non-electrically powered vehicles with other high voltage components.”³ AC Receptacles have been employed in non-electrically powered vehicles and are functionally identical to those employed in electrically powered vehicles. We agree with NHTSA’s statement that a safety need does not exist to regulate this equipment. A September 27th, 2017 NPRM further stated that “NHTSA may consider the need for and feasibility of requirements for off-board electric vehicle equipment in the future.”⁴ We also agree that there is not a demonstrated safety need for NHTSA to regulate off-board equipment but certainly acknowledge that NHTSA may do so if the need arises and such regulation would be within its sole and exclusive authority. The FMVSS No. 305 rulemaking record demonstrates that, where an electrical safety need exists, NHTSA is responsible for setting standards for on-board equipment and potentially also for off-board equipment.

Furthermore, NHTSA’s regulatory oversight goes beyond the mere existence of FMVSS:

*NHTSA has broad enforcement authority under existing statutes and regulations to address existing and emerging automotive technologies. With regard to NHTSA’s enforcement authority over motor vehicles and equipment, it applies “notwithstanding the presence or absence of an FMVSS for any particular type of advanced technology.” NHTSA has the authority to “respond to a safety problem posed by new technologies in the same manner it has responded to safety problems posed by more established automotive technology and equipment.” This includes the Agency determining the existence of a defect that poses an unreasonable risk to motor vehicle safety and ordering the manufacturer to conduct a recall.*⁵

In conclusion, the proposed Section 625.60 and definition of EVPE present multiple and significant conflicts with and infringes upon NHTSA’s existing regulatory oversight for motor vehicle electrical safety equipment. Should electrical safety concerns arise, NHTSA possesses a broad set of regulatory

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² See https://www.govinfo.gov/content/pkg/USCODE-2010-title49/pdf/USCODE-2010-title49-subtitleVI-partA-chap301.pdf
tools to address such issues, including rulemaking and enforcement authority. If the NEC proposed language that “all equipment covered by the scope of this article shall be listed” applies to on-board equipment, a direct conflict would exist between the third party listing and motor vehicle self-certification process. This presents a significant obstacle for vehicle manufacturers to fulfill their duty to address market or recall actions in a timely manner.

4. The NEC Proposals Are Not Consistent with Other NEC Sections

Within Article 625, it is unclear whether the AC receptacles or outlets are within the scope of requirements. Section 625.60 and 625.2 both clearly specify requirements for AC Receptacles outlets installed in electric vehicles:

625.60 AC Receptacle Outlets Used for EVPE.
AC receptacles installed in electric vehicles and intended to allow for connection of offboard utilization equipment shall comply with 625.60(A) through (D).

625.2 Definitions
Electric Vehicle Power Export Equipment (EVPE).
The equipment, including the outlet on the vehicle, that is used to provide electrical power at voltages greater than or equal to 30 Vac or 60 Vdc to loads external to the vehicle, using the vehicle as the source of supply.

However, outside of those two sections, the scope of the requirements becomes increasingly ambiguous. For example, Section 625.1 suggests that the electric vehicle (interpreted to include on-board equipment) is not within scope:

625.1 Scope
This article covers the electrical conductors and equipment connecting an electric vehicle to premises wiring for the purposes of charging, power export, or bidirectional current flow.

Furthermore, Section 90.2 more broadly describes the scope of the entire NEC as only covering the “installations” used to export power from vehicles. It also expressly states that “automotive vehicles other than mobile homes and recreational vehicles” are not within the scope of Article 625:

Section 90.2(A) Covered, (6)
Installations used to export electric power from vehicles to premises wiring or for bidirectional current flow.

Section 90.2, (B) Not Covered, (1)
Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles

For the above reasons, Honda urged that the definition of EVPE be eliminated in PC 1475. In the committee’s response to PC 1475, the committee recognizes “concerns” with the scope yet asserts that
the NEC has authority over such “interfaces.” While an attempt is made to clarify the scope, it still remains unclear what might be covered under the definition of “interfaces.” Overall, despite the revisions made in the recent Second Draft, the same concerns continue to exist not only within Section 625.60 but in multiple other NEC sections.

**Recommendation**

Given the above considerations, the petitioners firmly believe that the NEC Proposals to add Section 625.60 and the definition of EVPE are premature. We agree with the Committee response to PC 1482 where the CMP-12 acknowledges that NFPA and SAE should create a joint working group to address the issues of suitable and safe interaction with premises wiring and equipment. Unfortunately, in the absence of such prerequisite action, the NEC Proposals will not create any substantial safety improvements, will not appropriately address automotive usage conditions and equipment, and will create a significant conflict with NHTSA’s existing safety oversight.

We strongly urge the NFPA to reconsider the significant impacts of this premature NEC proposed revision. These issues must be addressed before establishing problematic standards. We recommend that Section 625.60, the definition of EVPE, and other sentences referencing the term EVPE be deleted from the 2020 NEC Second Draft revision until appropriate and harmonized standards can be developed through joint SAE and NFPA working group activity.
I'll move to the main motion. Before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 1590. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

Voting will close in five seconds.

The voting is closed.

The results are: 30 in favor of the motion; and 346 against the motion. The motion has failed.

Now let's proceed with the discussion on Certified Amending Motion 70-39. Microphone four? No. Okay. I'm not seeing the maker of the motion at a microphone. Last call for 70-39. Seeing that the maker of the motion, nor an identified designated representative has approached the - to make the motion, 70-39, in accordance with the NFPA Convention Rules, Section 2.7, the motion may not be considered by the assembly, and is removed from the Agenda. We will now move on to the next motion included in the Agenda.

Now let's proceed with the discussion on Certified Amending Motion 70-40. Microphone four,
please.

SCOTT SCHMIDT: Yes. This is Scott Schmidt with the Alliance of Automobile Manufacturers. I'd like to move to withdraw this motion.

UNIDENTIFIED SPEAKER: Yay.

(applause)

JAMES GOLINVEAUX: The Motion 70-40 appeared on the Agenda. However, the authorized maker of the motion has notified NFPA that he is no - no - no longer wishes to pursue this motion. Therefore, in accordance with the NFPA Rules, Convention Rules at Section 2.7, the motion may not be considered by the assembly, and is removed from the agenda. We will now move to the next motion.

As we discussed earlier, we have reordered the next motion so that it will be discussed in paragraph section order. The discussion on Motion 70-3 will be heard next.

SCOTT SCHMIDT: Thank you. This is Scott Schmidt of the Alliance of Automobile Manufacturers.

JAMES GOLINVEAUX: Let - let me, let me --

SCOTT SCHMIDT: I'm sorry.

JAMES GOLINVEAUX: Just give me one - now let's proceed with the discussion on Certified Amending Motion 70-3. Microphone four, please.
The voting will close in five seconds.
The voting is closed.
The results of the vote are: 24 in favor of the motion; 355 against the motion. The motion has failed.

Let's now proceed with the discussion on Certified Amending Motion 70-41. Microphone four.

HOWARD HERNDON: Howard Herndon with PEARL; Motion 70-41 to Reject Second Revision 7522.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject Second Revision No. 7522. Is there a second?

UNIDENTIFIED SPEAKERS: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

HOWARD HERNDON: Real quick on this. There's two issues. One is, we feel that this is new material because this has not been covered with any review. And fire pump controllers are made up of many different components. They could include circuit breakers, contactors, relays, starters - all types of components within those systems. And we feel that not permitting them can be - to be reconditioned could actually do undue hardship in existing facilities.

JAMES GOLINVEAUX: Thank you. Mr. Johnston,
would you like to offer the Panel's position?

MICHAEL JOHNSTON: Thank you, Mr. Chair. As a reminder, one of the responsibilities of the Correlating Committee is to call balls and strikes when it comes to judgment on new material. The NEC Correlating Committee reviewed the complete record of both public input and comments to ensure there was no new material being introduced. The Correlating Committee concluded that no new material was related to the definition of reconditioned, and the rules related to it. There were no apparent conflicts, or correlation issues identified by the Correlating Committee, and I'd like to defer to the Chair of Code Panel 13, Linda Little, and I think she's at microphone three, please.

LINDA LITTLE: Thank you. My name is Linda Little. I'm Chairman of Code Panel 13, and I represent the IBEW. I stand in opposition to the motion on the floor, and I support the Panel action. Multiple manufacturers are represented on Code Panel 13, and all sides of the issue had an opportunity to speak. I encourage this body to oppose the motion on the floor. Thank you.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your
name and affiliation, and whether you are speaking in
support, or against the motion. I'll go to microphone
two.

JOHN KOVACHIC: Thank you, Mr. Chairman. I'm
John Kovachic, UL LLC, and I'm speaking on behalf of
UL, against the motion. I'm also a member of the NFPA
20 Committee on Stationary Fire Pumps. I'm not
speaking on behalf of the Committee, but as a 30 year
member of the Committee, I'd like to address primarily
fire pump controllers. But transfer switches can be
provided as a combination unit with a fire pump
controller, so they factor into my comments, as well.

Fire pump controllers are life safety
equipment, and no doubt about it. Just ask any member
of the 20 Committee, or other committees associated
with fire protection and fire suppression. A fire
pump controller controls a motor, which is a prime
mover for a pump that delivers water into a sprinkler
system in the event of a fire. Besides controlling
the motor, the fire pump controller performs other
function. It is monitoring the pressure in that
sprinkler system, which is the parameter that
determines whether a pump needs to start to deliver
water - for example, when a sprinkler opens. The
controller is also monitoring conductors going out to
remote start stations - looking at those conductors to make sure that they're continuous. If there's any breakage or any disconnection, they're required then to send a signal back to the controller, which then starts the pump. So it's definitely life safety equipment.

And reconditioning a fire pump controller would be tantamount to playing with the lives of people in a building that are depending on fire suppression equipment to protect them.

Ladies and gentlemen of this body, I urge you to vote against this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone three, please.

MIKE STONE: Mike Stone, representing NEMA. NEMA opposes this Motion to Reject Second Revision 7522 related to the reconditioning of fire pump controllers and transfer switches. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone two, please.

BARRY RODGERS: I am Barry Rodgers. I represent Schneider Electric. We are against this motion. We support the action taken by the Code Panel to include this language.

Safety is the major reason to adopt this
change. My concern - my safety concern includes safety of workers, as well as safety of occupants and facilities. I urge you to vote against this motion.

JAMES GOLINVEAUX: Thank you. Microphone two, please.

THOMAS DOMITROVICH: Thank you. My name is Thomas Domitrovich, with Eaton. Transfer switch and fire pump controllers - both of those components are very technically complicated devices. As a manufacturer of both of those devices, I do not support the CAM that's on the, on the motion. I'm speaking in opposition.

JAMES GOLINVEAUX: Yes.

THOMAS DOMITROVICH: Yes.

JAMES GOLINVEAUX: Thank you.

THOMAS DOMITROVICH: Sorry about that. Speaking in opposition. These - this equipment is very technical, and it should not be reconditioned in the field, nor any time after installation or manufacture. It is a life saving equipment, and very important that it functions correctly. Please vote against this motion on the floor. Thank you.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-41 to Reject Second Revision No. 7522? Just waiting to see if they're
going to a microphone. No? Okay. Mr. Johnston, any final comment?

MICHAEL JOHNSTON: I have nothing further, Mr. Chair. Thank you.

JAMES GOLINVEAUX: All right. Before we vote, let me restate the motion. The motion on the floor is to reject Second Revision 7522. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 11 in favor of the motion; 391 against the motion. The motion has failed.

Now let's proceed to the discussion on Certified Amending Motion 70-42. Microphone four.

HOWARD HERNDON: Howard Herndon with PEARL. Reject - Motion 70-42 to Reject the Second Revision 7584.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject Second Revision No. 7584. Is there a second?

UNIDENTIFIED SPEAKER: Second.
going to a microphone. No? Okay. Mr. Johnston, any final comment?

MICHAEL JOHNSTON: I have nothing further, Mr. Chair. Thank you.

JAMES GOLINVEAUX: All right. Before we vote, let me restate the motion. The motion on the floor is to reject Second Revision 7522. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 11 in favor of the motion; 391 against the motion. The motion has failed.

Now let's proceed to the discussion on Certified Amending Motion 70-42. Microphone four.

HOWARD HERNDON: Howard Herndon with PEARL. Reject - Motion 70-42 to Reject the Second Revision 7584.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject Second Revision No. 7584. Is there a second?

UNIDENTIFIED SPEAKER: Second.
JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

HOWARD HERNDON: We feel this is the same case as the previous discussion – that it is in fact, new material, and that in fact, they are made of many different components, which many of these components can be reconditioned to assemble a complete automatic transfer switch. And in fact, I've done it myself.

UNIDENTIFIED SPEAKER: (unintelligible).

JAMES GOLINVEAUX: Not going to say it.

UNIDENTIFIED SPEAKER: (unintelligible)

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position?

MICHAEL JOHNSTON: Thank you, Mr. Chair. The NEC Correlating Committee reviewed the complete record of both public input and comments to ensure that there was no new material being introduced. The conclusion was that there were – was no new material introduced related to the definition of recondition, and the rules related to it. There are no apparent conflicts or correlation issues related to this CAM. I would like to defer of Code-Making Panel 13, Linda Little, at microphone three for some technical comments.

LINDA LITTLE: Thank you. My name is Linda Little. I'm Chairman of Code Panel 13. I represent
IBEW. I stand in opposition to the motion on the floor, in support of Panel action.

Multiple manufacturers are represented on Code Panel 13, including transfer switch manufacturers. And all of them had the opportunity to present their sides of this issue. I encourage this body to oppose the motion on the floor. Thank you.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name, affiliation, and whether you're speaking in support, or against the motion. Microphone two, please.

JIM DOLLARD: Thank you, Mr. Chairman. My name is Jim Dollard, representing the International Brotherhood of Electrical Workers. I rise in opposition to the motion on the floor.

We have heard all the arguments. This - there is no new material. These are transfer switches for emergency systems. We're going to get to do this again in 701, 702, and 708. I urge that this body, very quickly, oppose the motion on the floor. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone three, please.

THOMAS DOMITROVICH: My name is Thomas
Domitrovich with Eaton. We are a manufacturer - Eaton is a manufacturer of automatic transfer switches, and we do not support the reconditioning of this equipment. It is life safety. This is Article 700. We do not support, and we would hope that others in this room will continue to not support the reconditioning of this equipment. I speak in opposition to this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone two.

BARRY RODGERS: I am Barry Rodgers. I represent Schneider Electric. We are against this motion. We support the action take by the Code Panel to include this language.

Safety is the major reason to adopt these changes. My safety concern includes the safety of workers, as well as safety of occupants and facilities. I urge you to vote against this motion.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-42 to reject Second Revision 7584? Mr. Johnston, do you have any final comments?

MICHAEL JOHNSTON: Nothing further, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is
to Reject Second Revision 7584. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The vote will close in five seconds.

The voting is closed.

The results are: 16 in favor of the motion; 388 against the motion. The motion has failed.

Now let's proceed with the discussion on Certified Amending Motion 70-43. Microphone four, please.

HOWARD HERNDON: Again, this is Howard Herndon, representing PEARL, and we would have the same argument, that this is a new material, number one.

JAMES GOLINVEAUX: Excuse me.

HOWARD HERNDON: Number two --

JAMES GOLINVEAUX: You need to make the motion.

HOWARD HERNDON: Oh, I'm sorry. Rejecting - Motion 70.43, Rejecting Second Revision 7586.

JAMES GOLINVEAUX: Thank you. There is a motion on the floor to Reject Second Revision No. 7586. Is there a second?

UNIDENTIFIED SPEAKER: Second.
to Reject Second Revision 7584. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The vote will close in five seconds.

The voting is closed.

The results are: 16 in favor of the motion; 388 against the motion. The motion has failed.

Now let's proceed with the discussion on Certified Amending Motion 70-43. Microphone four, please.

HOWARD HERNDON: Again, this is Howard Herndon, representing PEARL, and we would have the same argument, that this is a new material, number one.

JAMES GOLINVEAUX: Excuse me.

HOWARD HERNDON: Number two --

JAMES GOLINVEAUX: You need to make the motion.

HOWARD HERNDON: Oh, I'm sorry. Rejecting - Motion 70.43, Rejecting Second Revision 7586.

JAMES GOLINVEAUX: Thank you. There is a motion on the floor to Reject Second Revision No. 7586. Is there a second?

UNIDENTIFIED SPEAKER: Second.
JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

HOWARD HERNDON: Our discussion would go to the same line that it's gone with the other issues. On transfer switches, we feel that these can be reconditioned, and this is new material to this section.

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position?

MICHAEL JOHNSTON: Thank you, Mr. Chair. The Correlating Committee reviewed the complete record of both public input and comments to ensure there was no new material being introduced. The conclusion was that no new material was being introduced related to the definition of reconditioned, or any of the rules related to it, including the new rules. There are no apparent conflicts or correlation issues, and I'd like to defer to the Chair of Code Panel 13, Linda Little, for a technical response, at microphone three.

LINDA LITTLE: Thank you. My name is Linda Little. I'm the Chairman of Panel 13, and I represent the IBEW. I stand in opposition to the motion. All sides of this issue had an opportunity to speak at the Panel meetings. I encourage you to reject this motion. Thank you.
JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name and affiliation, and whether you're speaking in support, or against the motion. Microphone three, please.

THOMAS DOMITROVICH: Thank you. My name is Thomas Domitrovich, with Eaton. I speak in opposition to the motion on the floor.

This is not new material. We've heard this over and over again. I agree with that. And I agree with the, the actions of the Panel. We should continue to support the Panel. Please vote in - against this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone two.

BARRY RODGERS: I am Barry Rodgers. I represent Schneider Electric. We're against this motion. We support the action taken by the Code Panel to, to include this language. Safety is the major reason to adopt these changes. I urge you to vote against this motion.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-43 to Reject Second Revision No. 7586? Mr. Johnston, any final comments?

MICHAEL JOHNSTON: Nothing further, Mr. Chair.

JAMES GOLINVEAUX: Thank you.
MICHAEL JOHNSTON: Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Reject Second Revision No. 7586. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 10 in favor of the motion; 400 against the motion. The motion has failed.

Now let's proceed to the discussion on Certified Amending Motion 70-44. Microphone four, please.

HOWARD HERNDON: Howard - Howard Herndon, representing PEARL. Motion 70-44 to Reject an Identifiable Part of Second Revision 7588.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject an Identifiable Part of Second Revision No. 7588. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.
MICHAEL JOHNSTON: Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Reject Second Revision No. 7586. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'.

Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 10 in favor of the motion; 400 against the motion. The motion has failed.

Now let's proceed to the discussion on Certified Amending Motion 70-44. Microphone four, please.

HOWARD HERNDON: Howard - Howard Herndon, representing PEARL. Motion 70-44 to Reject an Identifiable Part of Second Revision 7588.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject an Identifiable Part of Second Revision No. 7588. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.
HOWARD HERNDON: Article 702.5 - transfer switches can be found in many, many different pieces of equipment, including UPSes and, and in separate components, being both breaker based, and contactor based. We feel like that this article paints it with a very broad brush, and is new material.

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position.

MICHAEL JOHNSTON: Thank you, Mr. Chair. Since the new material issue was brought again, I'll reemphasize that the NEC Correlating Committee, fulfilling its responsibilities, did review the complete record of both public input and comments to ensure that no new material was being introduced. Conclusion was that no new material related to the definition of recondition, and the rules that relate to it, were introduced into the process. There are no apparent conflicts or correlation issues. And I'd like to defer to the Chair of Code Panel 13, Linda Little, at microphone three, please.

LINDA LITTLE: Thank you. My name is Linda Little. I'm the Chairman, Code Panel 13. I represent the IBEW, and I speak in opposition to this motion. All the Panel members had ample time to discuss this issue. Many manufacturers are represented on our
Panel. I encourage you to vote against the motion on the floor. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone two.

JOHN MCKENZIE: Thank you, Mr. Chairman. John McKenzie. I represent Schneider Electric. We support the actions of the Code-Making Panel, and oppose this motion.

I don't wish to subject the Membership to a complete restatement of our argument against Motion 70-30, but the premise is the same.

I will, however, restate that engaging in reconditioning without knowledge of the methods and procedures used by the manufacturer can result in an unsafe product; or the attempt to recondition a product that cannot and should not be reconditioned. We urge the Membership to oppose this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone three, please.

THOMAS DOMITROVICH: Thomas Domitrovich with Eaton, speaking in opposition to the motion on the floor. Eaton is a manufacturer of transfer switches. These are safety related devices. I agree with my colleague from Schneider that explained these - that modifying this equipment can be dangerous, and result
in tragedy. So please, continue to not support this motion. Thank you.

JAMES GOLINVEAUX: All right. Thank you. Is there any further discussion on Motion 70-44 to Reject an Identifiable Part of Second Revision No. 7588? Mr. Johnston, any final comment?

MICHAEL JOHNSTON: Nothing further, Mr. Chair.

JAMES GOLINVEAUX: Thank you.

MICHAEL JOHNSTON: Thank you.

JAMES GOLINVEAUX: Before we vote, let me restate the motion. The motion on the floor is to Reject an Identifiable Part of Second Revision No. 7588. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 30 in favor of the motion; 380 against the motion. The motion has failed.

Now let's proceed to the discussion on Certified Amending Motion 70-45. Microphone four, please.

TIM CROUSHORE: Yes. My name is Tim Croushore.
MEMORANDUM

(AMENDMENT)

TO: Code-Making Panel 4 and NEC® Correlating Committee

FROM: Sarah Caldwell, Technical Committee Administrator

DATE: June 26, 2019

SUBJECT: Proposed 2020 Edition of the National Electrical Code®

At the NFPA Technical Meeting (Tech Session) held June 20, 2019, the NEC® was recommended for issuance with the following:

Amendment 70-45: Reject Second Revision No. 8159 and any Related Portions of First Revision No. 8608

Pursuant to Section 4.6 and Table 1 of the Regulations Governing the Development of NFPA Standards (Regs), the following are not subject to committee ballot:

- An Amendment to Reject a Second Revision and related portions of a First Revision.
  OR
- An Amendment to Reject a Second revision where no First Revision or related part of a First Revision exists.

The transcripts from the Annual 2019 Tech Session will be available with two weeks at www.nfpa.org/techsession.

NOTE:

In accordance with 1.6.2(a) of the Regs, anyone who is dissatisfied with the results of the floor motion from the June 2019 NFPA Technical Meeting may appeal the results. Appeals shall be filed no later than twenty days after the NFPA Technical Meeting at which Association action on the issuance of the Standard was recommended. The final date to file any such appeal is July 10, 2019.
in tragedy. So please, continue to not support this motion. Thank you.

JAMES GOLINVEAUX: All right. Thank you. Is there any further discussion on Motion 70-44 to Reject an Identifiable Part of Second Revision No. 7588? Mr. Johnston, any final comment?

MICHAEL JOHNSTON: Nothing further, Mr. Chair.

JAMES GOLINVEAUX: Thank you.

MICHAEL JOHNSTON: Thank you.

JAMES GOLINVEAUX: Before we vote, let me restate the motion. The motion on the floor is to Reject an Identifiable Part of Second Revision No. 7588. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 30 in favor of the motion; 380 against the motion. The motion has failed.

Now let's proceed to the discussion on Certified Amending Motion 70-45. Microphone four, please.

TIM CROUSHORE: Yes. My name is Tim Croushore.
I represent the electric utility industry as a consultant for the Edison Electric Institute. And I move to Reject Second Revision No. 8159, Including Any Related Portions of First Revision No. 8608.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject Second Revision No. 8159, Including Any Related Portions of the First Revision No. 8608. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

TIM CROUSHORE: Thank you. My name is Timothy Croushore. I represent the electric utility industry as a consultant for the Edison Electric Institute. I stand for the motion.

What this deals with, in Article 705 is interconnected electric power production sources that are interconnected with the electric utilities. These sources are solar, energy storage, fuel cells, wind, and as we've heard, vehicles.

The three options to interconnect premises wiring systems - and I'll really emphasis premises wiring, because we really need to look at this is the - what's covered by the NEC is premises wiring.

There are three options to interconnect
premises wiring - with generation, premises wiring
generation to the utility. One would be after the
service disconnecting means. Two would be a separate
service, permitted - already permitted by 230.2(A)(5),
or 230.40. Or option number three, and this is what
this is about - is ahead of the disconnecting means,
is already permitted in 230.82, specifically Item No.
6.

Now, since this CAM deals with option number
three, ahead of the service disconnecting means, there
was a lot of moving parts during both the First
Revision, and Second Revision process on the 2020 code
making process. This involved three different panels
- Code-Making Panel 4, in which I'm a principal
member; Code-Making Panel 5; and Code-Making Panel 10.
Okay. Now, this deals with how to ground and bond
these connections.

Now, during the same time, Code-Making Panel 5
already has worked on these requirements to bond this
in Article - bond and ground this in Article 250.
They are covered in new Section 250.25 for system
grounding, and our traditional Section 250.92 for the
bonding of services.

Basically, the requirements in 705-11(D) are
not required. Furthermore, this is a safety issue,
with - when you have a grounded service. The
conductor is not bonded through the main bonding
jumper, through the enclosure of the disconnecting
means, as required by 250-24(C), and also by 250-28.

My CAM eliminates this complete section in its
entirety, and the requirements of Article 250 can
apply safely. The issue was thoroughly discussed at
length in the Electrical Section meeting, and the
members voted to support this CAM. I request the
Membership of the Association to vote in favor of this
Certified Amending Motion. Thank you.

JAMES GOLINVEAUX: Thank you. Mr. Johnston,
would you like to offer the Panel's position?

MICHAEL JOHNSTON: Thank you, Mr. Chair. There
were no apparent correlating issues, or conflicts
identified by the NEC Correlating Committee. And I'd
like to defer to the Chair of Code-Making Panel 4, Jim
Rogers. And Jim is at microphone two.

JIM ROGERS: Good evening - oh, good morning,
pretty soon.

(laughter)

JIM ROGERS: My name's Jim Rogers. I represent
IAEI as the Chair on Code-Making Panel 4. I speak
against the motion.

Code-Making Panel 4 deals with alternative
energy sources, and their interconnection with the utility companies in 705. We had multiple public inputs, and public comments on this issue. And we soon discovered that there was rampant confusion all across the country on how this could be done safely and uniformly. And we had, like I say, multiple public inputs and comments on that.

The Panel spent several hours - multiply - this was probably the most heavily discussed item in both the First Revision and the Second Revision process. As a result, we - the Panel constructed language totally in the First Revision, that was totally rewritten in the Second Revision, to simplify and clarify the portions of Article 250 that should be utilized when making the connection to one of these disconnects that's required ahead - when you make a connection ahead of the service main.

The Panel never wanted to circumvent the requirements of, of Article 250, but simply clarify them. And, and that was the language that they put in place to do that. Sorry, I'm a little tired. I'm getting - I'm losing my train of thought here a little bit.

So the, the - it was an overwhelming majority. 17 to 1 was the Panel vote to accept this language.
And the one dissenting vote was the EEI vote. And part of the rationale for that dissenting vote was 250.92 not being complied with. But the language does reference 250.92. And I respectfully request, because of that clarity and uniformity in application of these rules, I respectfully request that you support the Panel on this, and reject this motion.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name and affiliation, and whether you are speaking in support, or against the motion. Microphone three, please.

JASON FISHER: Hello. I am Jason Fisher. I am representing the Solar Energy Industries Association here, and I'm speaking against this motion. I was one of the voting members of the Code-Making Panel Four, and I'm a licensed electrician who has applied the code to my daily work for over 25 years. I'm not speaking on behalf of the Technical Committee, though.

The first thing I'd note about this motion is that the report of the motion's Committee that's currently posted on NFPA 70 Next Edition web page as of today, shows different language than that is what's up on the screen. According to that report, it states that - that is stated as the final report on the
Certified Amended Motion, that this motion, based on NITMAM Log 108 was a motion to reject a Second Revision. What I see here, though, is completely different, since now this motion seems to want to strike the entire section, including the First Revision language.

This concerns me a bit, since I don't really understand how a motion can keep changing up to the last minute, but - and personally, I am not clear that this motion's in order. But since it's up there, I'll go ahead and address it, with my apologies to the members in the room for the time it takes me, but I must go on the record to oppose this.

It's not true I do not agree that there is a safety concern with this language. I agree with our Chair that this language, which the Committee worked very hard to create with lots of debate, adds a lot of clarity – that's important. It was significantly debated, with dozens of task group meetings, and many hours spent on it, and it was based on multiple inputs and comments.

To delete this section would, in fact, remove requirements for these installations, which are becoming increasingly common every year. The removal of a set of requirements that were written to ensure
safety, does not improve safety. By removing this section, electricians like myself, and enforcers of the code would be left without clear requirements, and thus would have to go back to hunting for, and debating over what the code actually requires for these installations. I didn't hear that there were any real conflicts. There was a suggestion that this was just duplicative. I don't think it's going to be the only language in the code that helps aid the users of the code to follow requirements correctly, and that's why it's important to remain. I urge the membership to reject this motion, and to support the Committee.

JAMES GOLINVEAUX: Thank you. Microphone four, please.

JOHN KOVACHIC: Thank you, Mr. Chairman. John Kovachic, UL LLC, speaking on behalf of the Electrical Section of the National Fire Protection Association, and speaking for the motion.

The Electrical Section had its business meeting on Tuesday of this week, and the Section voted to support the motion on the floor. Ladies and gentlemen of this body, I ask for your support in voting for this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone four,
TIM CROUSHORE: Thank you very much. Timothy Croushore. I represent the electric utility industry as a consultant through the Edison Electric Institute. I stand for the motion.

A couple different things. Jim Rogers, excellent Panel Chairman. As you know, it's Panel Chairman's responsibility to stand up and support the Panel Chair, and every good panel chairman does that. The issue here is not necessarily supporting the panel; the issue here is one of safety. If you notice, the, the disconnecting means that we've been talking about, and we'll be covering that on the next Certified Amending Motion, should be a service disconnecting means. And as you know, every inspector knows on the service disconnecting means, it's not the supply side bonding jumper; it's the main bonding jumper. And if you look at about the middle of the paragraph, it's incorrect.

What we're concerned with is confusion between the requirements of Panel 5, and these requirements in the field. We respectfully request that all of these be removed, and new Section 250.25, which for a grounded service, talk about 250.24, and that is about a page and a half. You cannot cover all the
requirements of 250.24 in just one few - in just a few sentences.

So therefore, I recommend to the, the Association that we support this Certified Amending Motion, and leave the grounding to the grounding experts in Article 250. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone four.

LEO ZIEMAN (phonetic): Thank you. My name is Leo Zieman. I am with Florida Power and Light, and also with the Edison Electric Institute, and am voting alternate for Panel No. 4. And I speak in favor of this motion, for the exact same reasons that they have been stating all along - and that is that the language in their proposed revision, which is shown up there in red, would constitute a problem with the availability of fault return back to the source to the utility. And that is really what's at crux here.

I also believe that, along with my colleague, that when we're talking about grounding and bonding, it does belong with Code-Making Panel 5. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone four.

CHARLES MELLOW: Charles Mellow, with CDC Mellows Consulting, respect - representing myself here. The statement here that this (unintelligible)
against the motion?

CHARLES MELLOW: I'm speaking for the motion. Thank you. There are some technical errors, actually, in this. I am a long time member of Code Panel 5, just recently off of that. But the use of the term supply side (unintelligible) is actually technically incorrect. What is actually needed in this location is bringing the grounded circuit conductor from the utility to this disconnect. That is a fault return path.

This is about taking care of ground fault current, wherever it happens in the system, and it needs to be treated essentially just like a service. Whether you call it a service or not doesn't matter, but from a fault current standpoint, it needs to be treated, and grounded, and bonded exactly like a service disconnect would be. Please vote for this motion.

JAMES GOLINVEAUX: Thank you. Microphone four.

FRED HARTWELL: Thank you, Mr. Chairman. Fred Hartwell - faintly in favor of the motion.

At the Electrical Section, I voted against this. I've now reconsidered that position. But I do have a problem with describing this as a service. To my way of thinking, a service supplies load. These do
not supply load.

However, the reason that I have changed my position is that the existing text that is presented in 705.11(D) can frequently undersize the conductor that will accomplish the fault current return. I use that kind of tortured construction to avoid the question of whether it is a supply side bonding jumper, or the main bonding jumper. In order to get there, you have to settle the question, is it a service, or not.

So I have a suggestion. I believe that this motion is going to pass. And I suggest to Code Panel 4 that the way to get around this is to immediately come back with a Tentative Interim Amendment that restores 705.11(D), essentially the way it - they wrote it, except at the end of the second sentence, where it relates to the size of this fault return conductor - maybe it's a main bonding jumper, and maybe it's a supply side bonding jumper - we could have a very interesting discussion about that. But the point is, and the safety is - to make darned sure that it is the right size. And whether you think it's a service or not, we can establish if, if the Panel comes back with a TIA, they can change this, the, the back end of that sentence, and instead of relating the
size, basing the size on the size of the 705.11(B) conductors, just simply say that it is to be sized on — in reference to the size of the service conductors to which the 705.11(B) conductors are connected.

And in that way, you sidestep the entire semantic issue of whether it's a service or not, and you accomplish the required safety by making sure that that conductor is properly sized.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-45 to Reject Second Revision No. 81-59, Including Any Related Portions of First Revision 8608? Mr. Johnston, do you have any final comment?

MICHAEL JOHNSTON: I have no additional comments, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Reject Second Revision 8159, Including Any Related Portions of the First Revision 8608. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.
The voting is closed.

The results of the vote are: 285 in favor of the motion; 96 against the motion. The motion has passed.

Now let's proceed with the discussion on Certified Amending Motion 70-46. Microphone four, please.

TIM CROUSHORE: My name is Tim Croushore. I represent the electric utility industry as a consultant through the Edison Electric Institute. I move to Accept an Identifiable Part of Public Comment No. 315.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Accept an Identifiable Part of Public Comment No. 315. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

TIM CROUSHORE: My name is Tim Croushore. I represent the electric utility industry as a consultant through the Edison Electric Institute.

This issue is relatively the same issue that we talked about of Option 3 of 705.11. As Chairman Rogers had said, there was confusion in this industry, and we're trying to basically clarify this.
July 8, 2019

Dawn Michele Bellis, Director and NFPA Standards Council Secretary
National Fire Protection Association
1 Batterymarch Park
Quincy, Massachusetts
USA 02169-7471

Subject: Appeal related to the NFPA 70® National Electrical Code 2020 revision process

Dear Ms. Bellis,

The Solar Energy Industries Association (SEIA®) is the national driving force behind solar energy. We are building a strong solar industry to power America through advocacy and education. As the national trade association in the U.S., we represent all organizations that promote, manufacture, install and support the development of solar energy. SEIA works with its 1000-member companies to champion the use of clean, affordable solar in America by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy.

On behalf of SEIA, we respectfully submit this appeal to the Standards Council related to the current (2019) revision of NFPA 70®. This appeal seeks to identify how the inclusion of two amending motions (Seq # 70-45 and 70-46) in the Agenda of the NFPA Technical Session meeting held on June 20th, 2019, herein referred to as the “Meeting”, and their presentation to NFPA membership at that Meeting, was not in compliance with NFPA’s published rules and regulations governing the development of NFPA standards.

It is our position that these two motions should not have been presented at the Meeting for a membership vote. This appeal, which builds on SEIA’s letter to Mark Earley, Michael Johnston, and Jim Rogers, dated June 18th, 2019, as well as Mr. Fisher’s testimony at the Meeting on these motions, requests that the Standards Council act to reverse the Second Draft language modification recommendations resulting from the actions taken by the membership at the Meeting, as well as any resulting actions of Code Making Panel 4 through their balloting on Amendment 70-46. We further request that for the reasons outlined in this document the Standards Council act to adopt the language as published in the Second Draft Report dated April 3rd, 2019 as it relates to Sections 705.11(D) and 705.11(F).
Please see the attached pages for further details regarding this appeal.

**Jason Fisher**  
Vice Chair, SEIA Codes and Standards Working Group  
Founder, Solar Technical Consulting LLC  
jason@solartechconsulting.com

**Justin Baca**  
Vice President, Markets and Research  
Solar Energy Industries Association  
jbaca@seia.org  
Phone: 1-202-556-2889

cc: Evelyn Butler, Sr. Director, Codes & Standards, Solar Energy Industries Association  
John Smirnow, General Counsel, Solar Energy Industries Association
Details supporting this appeal:

In keeping with NFPA's Regulations as outlined in section 1.6.3 of the Regulations Governing the Development of NFPA Standards, SEIA submits the following details to support our appeal.

(1) Name, affiliation, and address of the appellant:
   This appeal is being submitted by the following person: Jason Fisher, Vice Chair, SEIA Codes and Standards Working Group, Solar Energy Industries Association, 1425 K Street, N.W., Suite 1000, Washington, D.C. 20005, Phone: 1-202-556-2889

(2) Statement identifying the particular action to which the appeal relates:
   This appeal relates to actions taken at the June 20th, 2019 Meeting on the following two NITMAMs identified in the Report of the Motions Committee on Certified Amending Motions (filename NITMAM_MC_Report_Part2_A2019.pdf), posted May 17th, 2019 on www.NFPA.org:
   - NITMAM Log #108, addressing Section 705.11(D), identified as Motion Seq #70-43 on page 77 of the document
   - NITMAM Log #109, addressing Section 705.11(F), identified as Motion Seq #70-5NC on page 126 of the document
   Note that these two items were presented at the Meeting as Motion Seq # 70-45 and 70-46 respectively.

(3) Argument setting forth the grounds for the appeal:
   Shortly before the June 20th Meeting, SEIA became aware that a proposed motion included on the Meeting agenda, dated June 13th, 2019, and distributed to Committee members on Saturday June 15th, 2019, had not been previously certified in the NFPA Motions Committee Report, herein referred to as the “Report”. This item, identified as NITMAM log #109, addressing section 705.11(F), noted as Motion Seq #70-5NC on page 126 of the Report, was not listed as a Certified Amending Motion (CAM) in the Report.

   At the time that we became aware of this discrepancy we expressed our concern in a letter to NFPA staff and specific NFPA-70 committee chairs (copy attached in Appendix B) that this change had not been properly communicated to the public in a timely fashion such that our members would not have been made aware of all the items that would be discussed at the meeting. In that letter we requested that NFPA remove this item from the agenda. Within this letter we provided our justifications for this request based on our detailed review of applicable NFPA regulations documents. We did not receive a response from NFPA to that letter.
On June 20th, 2019 Mr. Fisher attended the Meeting to represent SEIA. It was at the Meeting that Mr. Fisher identified that there were additional discrepancies with not only the NITMAM log #109 item that we had questioned in our June 19th letter, but also with the NITMAM log #108 item. Since the record is very important to establish the grounds of this appeal, but that record is rather complex, we have assembled the following table so that we can more easily refer to the two items in question within this appeal document.

**TABLE of Document and Motion Records**

<table>
<thead>
<tr>
<th>Item ID</th>
<th>Document Title/Filename</th>
<th>Doc Date</th>
<th>NITMAM Log#</th>
<th>Motion Seq#</th>
<th>Section</th>
<th>Doc Page</th>
<th>Motion</th>
<th>Text Change from Previous?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Report of the Motions Committee on Certified Amending Motions / NITMAM_MC_Report_Part2_A2019.pdf</td>
<td>May 17, 2019 (posted date)</td>
<td>108</td>
<td>70-43</td>
<td>705.11</td>
<td>77</td>
<td>“Reject Second Revision No. 8159” (Certified)</td>
<td>n/a</td>
</tr>
<tr>
<td>B</td>
<td>2019 Tech Session Agenda / 2019_TECH_SESSION_AGENDA_June 5 FINAL.pdf</td>
<td>May 23, 2019 (doc posted date)</td>
<td>109</td>
<td>70 - 5NC</td>
<td>705.11</td>
<td>126</td>
<td>“Reject an Identifiable Part of Second Revision No. 8178” (NOT Certified)</td>
<td>n/a</td>
</tr>
<tr>
<td>C</td>
<td>2019 Tech Session Agenda / 2019_TECH_SESSION_AGENDA_June 5 FINAL.pdf</td>
<td>June 5, 2019 (reposted date with “Editorial Changes and Renumbering”)</td>
<td>108</td>
<td>70-45</td>
<td>705.11</td>
<td>137</td>
<td>“Reject Second Revision No. 8159 and any related portions of First Revision No. 8608”</td>
<td>YES</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td>109</td>
<td>70-46</td>
<td>705.11</td>
<td>138</td>
<td>“Accept an Identifiable Part of Public Comment No. 315”</td>
<td>n/a</td>
</tr>
<tr>
<td>E</td>
<td>2019 Tech Session Agenda / A2019_Agenda_Tech_Session.pdf</td>
<td>June 13, 2019 (reposted date with “Editorial Changes”)</td>
<td>108</td>
<td>70-45</td>
<td>705.11</td>
<td>137</td>
<td>“Reject Second Revision No. 8159 and any related portions of First Revision No. 8608”</td>
<td>NO</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td>109</td>
<td>70-46</td>
<td>705.11</td>
<td>138</td>
<td>“Accept an Identifiable Part of Public Comment No. 315”</td>
<td>YES</td>
</tr>
</tbody>
</table>

Based on our review of NFPA communications and published documents, there appears to be three versions of the Meeting agenda that were posted prior to the June 20th, 2019 Technical Meeting, dated May 23rd, June 5th, and June 13th, each
distributed after the revision date. While there does not appear to be any differences in the two items in question between the May 23rd and June 5th versions, there was a significant difference made to the proposed amending motion text revisions between the June 5th and the June 13th Agenda versions. The specific changes to the proposed amending motion text revisions can be found using the documents and page references given in the Table above related to Item ID “D” to “F”.

The change to the proposed amending language impacting section 705.11(F) was substantive and significant, not editorial in nature. In the June 5th version of the agenda the submitter sought to strikeout an entire sentence. In the June 13th version the proposed revised text changed to only strikeout a single word. SEIA contests that the difference between these two is very significant, not “editorial”, as the changes are noted in this Agenda revision.

Furthermore, there were changes made in both the proposed amending motion text revisions, as well as the specific motion requested between all of the agenda versions and the Report of the Motions Committee on Certified Amending Motions.

The changes to the motions can be viewed in the second to last column of the above table comparing Item ID “A” to “C” as well as Item ID “B” to “D”. These changes to the original motions as made by the submitter as shown in the Report were very significant since these changes resulted in a membership recommendation that Section 705.11(D) be removed in its entirety without a Committee ballot nor any opportunity to return to the First Revision language. This is the direct result of the motion on NITMAM Log#108 being changed between the Report and the Agenda since the original motion that was certified in the Report aligned with item #5 in Table 1 of the NFPA Technical Meeting – Amending Motions Ballot Table as published in the Regulations Governing the Development of NFPA Standards, whereas the changed motion that showed up in the Agenda aligned with Table item #7.

The changes to the proposed amending motion text revisions can be reviewed using the document and page references given in the Table above related to Item IDs “A” to “C” and “B” to “F”. All of these changes were major and substantive, not editorial, since significantly different portions of the Second Draft language were modified between the CAM Report and the Agenda. This is in addition to the fact that a motion that was previously marked as not certified in the Report (NITMAM ID# 109), was nevertheless included in the Agenda and shown as a CAM, when in fact it was not a Certified Amending Motion according to NFPA’s published Report.
SEIA believes that all of the changes made to these motions that we have documented here – including the action to add the motion on NITMAM Log#109 to the Agenda, to change the type of motion made for both NITMAM Log#108 and #109, and to change the proposed text revisions in both NITMAM Log#108 and #109 – were not performed in accordance with NFPA’s published rules and regulations.

It is therefore our position that these two motions impacting sections 705.11(D) and 705.11(F) should never have been presented to the NFPA membership in the form that they were presented for a membership vote. To support this claim we have included our review of the NFPA regulations and policies documents that we have conducted to come to this conclusion and attach it in Appendix A.

In Mr. Fisher’s testimony at the Technical Session he raised SEIA’s concerns that these motions did not appear to have followed the NFPA documented rules and regulations governing the proper Certification of a motion, nor the presentation of these motions to NFPA membership. Since these questions from SEIA were not addressed prior to the Meeting, or after Mr. Fisher’s testimony, SEIA has chosen to pursue our right to this appeal and make the following request for relief from the Standards Council.

(4) Statement of the precise relief requested:

SEIA requests that the Standards Council act to reverse the Second Revision and First Revision language modification recommendations on Sections 705.11(D) and 705.11(F), resulting from the actions taken by the membership at the June 20th, 2019 Technical Session meeting on Motions 70-45 and 70-46, as well as any resulting actions of Code Making Panel 4 through their balloting on Amendment 70-46.

SEIA requests that the Standards Council act to adopt the language as published in the Second Draft Report dated April 3rd, 2019 as it relates to Sections 705.11(D) and 705.11(F).

(5) Whether a hearing on the appeal is being requested:

SEIA respectfully requests a hearing in front of the Standards Council to address this appeal.
APPENDIX A: Review of NFPA documentation

"Report of the Motions Committee on Certified Amending Motions" – The “Report"

This document³, posted May 17, 2019 on NFPA’s website, does not contain a Certified Amended Motion (CAM) addressing NEC section 705.11(F). This document only lists one CAM for Article 705 - Motion Seq #70-43 pertaining to NITMAM Log #108 for 705.11(D).

Note that the Report is the only document shown under the "Motions Committee Report (NITMAM)" section of the NFPA webpage on the Next Edition¹. This section notifies the public of NITMAMs that have been accepted as certified motions and will be debated and voted on at the meeting.

Within a separate document, found further down on this webpage under “NFPA Technical Meeting”, titled "NFPA Technical Meeting (Tech Session)"⁴, there is a motion impacting Article 705. It is only in that document³, released to the public after the Report³, that an additional Motion on Article 705 section 705.11(F), addressing NITMAM Log #109, is identified as potentially addressable at the meeting.

Since the proposed motion on 705.11(F) does not appear in the Report document³, we contend that it was not appropriate for this motion to be brought to the floor at the Technical Meeting since the 705.11(F) addition to the Agenda was not made in keeping with the "NFPA Rules and Regulations Governing the Development of NFPA Standards"⁵ in particular, sections 4.5.2.1, 4.5.2.4, 4.5.2.6, and 4.5.3.2(d).

We note that the Report document³ on NFPA’s webpage¹ states that "This is the third and final segment of the Motions Committee Report listing Certified Amending Motions that may be presented at the 2019 NFPA Technical Meeting in San Antonio, TX on June 20, 2019."

The Report further states that “The only Amending Motions allowed at an NFPA Technical Meeting are Certified Amending Motions set forth in a report of the Motions Committee and any Follow-Up Motions (e.g. motions that may become necessary as a result of a previous successful Amending Motion).” This statement, from the only document provided under the "Motions Committee Report (NITMAM)" section of the NFPA webpage¹, indicate that motions not presented in the Report but appearing subsequently in the Agenda, are not to be considered CAMs.

It is stated on page 2 that "Table A summarizes the Motions on NFPA 25, NFPA 70, NFPA 855 and NFPA 1851 that have been reviewed by the Motions Committee and certified as Certified Amending Motions. These motions can be presented for consideration at the 2019 NFPA Technical Meeting in San Antonio, TX on June 20, 2019."
On the same page it states that "Of the ninety-one NITMAMs received on NFPA 2, NFPA 25, NFPA 70, NFPA 855 and NFPA 1851, eleven were not certified by the Motions Committee.

Additionally, the Motions Committee approved the withdrawal of 13 NITMAMs. Table B itemizes the motions that were not certified." The proposed motion on 705.11(F), NITMAM log#109, that SEIA is questioning, is not included in Table A as a CAM in this document. In this Table, **the proposed motion in question is marked as rejected in Table B on page 126.**

The document says that "[t]he only Amending Motions allowed at an NFPA Technical Meeting are Certified Amending Motions set forth in the comprehensive report of the Motions Committee and any Follow-Up Motions". Note that according to the Convention Rules, a follow-up motion "is a motion that becomes necessary as a result of a previous successful amending motion." The 705.11(F) item is not a follow-up motion. Based on input from our membership, and our review of this document on NFPA's website, we contend that a member of the public would therefore justifiably believe that only certified motions noted in the Report document could be brought to the floor of the Technical Session meeting.

"NFPA Rules and Regulations Governing the Development of NFPA Standards"

This document states in section 4.5, in particular subsections 4.5.2.1 titled "Filing of Notice", and section 4.5.2.4, that only accepted NITMAMs (not rejected ones) should be considered as CAMs in the notice and at the meeting. In fact, subsection 4.5.3.2(d) makes this very clear in its statement that "Amendments other than those permitted by these regulations shall not be permitted for NFPA membership consideration."

While in section 4.5.2.1 it states, "unless the motions committee determines, in its discretion, that it can reasonably consider and act on the notice in advance of the timely publication of the final motions committee report and updated NFPA technical meeting agenda", this allowance for some adjustments to motions is provided within the "Filing of Notice" section of the document, which addresses a period of time that comes before the Motions Committee Report is published. The publicized "final" Motions Committee Report does not include the proposed motion in question as a CAM. While section 4.5.2.6 of the Rules and Regulations does provide an allowance to address possible differences between the final motions committee report and the agenda, is says that "the agenda of the NFPA technical meeting shall be updated to remove any technical committee reports". Nowhere in the document is it mentioned that new motions, not included in the final motions committee report, may be added to the Agenda.
"2019 Tech Session Agenda" (each of the three dated revision includes this same text)

On page 2 of this document, the main paragraph states that:

“This Report contains Certified Amending Motions (CAMs) ... that will be considered at the June, 2019 NFPA Technical Meeting (Tech Session). These motions have been certified and determined as proper by the Motions Committee in accordance with the Regulations Governing the Development of NFPA Standards (Regs) and the NFPA Technical Meeting Convention Rules (Convention Rules). Although the motions as certified will not change, the manner in which they are presented, their layout, and the accompanying supportive material may be modified (solely for presentation), removed or added to.”

Note that the proposed revisions to the Second and First Draft text was changed in both of the motions in questions, between the Report, and between different versions of the Agenda as it was revised.

References:

4. https://www.nfpa.org/assets/files/AboutTheCodes/70/A2019_Agenda_Tech_Session.PDF
1. **APPENDIX B: Copy of Letter sent on June 18, 2019**

June 18, 2019

Michael Johnston, NFPA-70 Correlating Committee Chair, NECA
Mark Earley, NFPA-70 Correlating Committee Secretary, NFPA
Jim Rogers, NFPA-70 Code Making Panel 4 Chair, IAEI

National Fire Protection Association
1 Batterymarch Park
Quincy, Massachusetts
USA 02169-7471

Subject: Code Making Panel 4, National Electrical Code
NFPA Technical Meeting on June 20, 2019

Dear Mr. Johnston, Mr. Earley and Mr. Rogers,

On behalf of the Solar Energy Industries Association (SEIA®), we submit the following for your consideration.

SEIA has recently been made aware that a proposed motion included on the agenda for the June 20, 2019 NFPA Technical Meeting has not been previously certified in the NFPA Motions Committee Report. We have concerns that this change has not been properly communicated to the public such that our members would have been made aware of all the items that may be discussed at the meeting in a timely fashion.

The proposed motion is related to clause 705.11(F). Based on a detailed review of the documents available on NFPA’s NFPA-70 “Next Edition” webpage¹, and documents available on NFPA’s "Regulations and policies" webpage², SEIA contends that this item on the agenda is not in accordance with NFPA’s Rules and Regulations governing the motions process which includes notifying the public.

Since the proposed motion could have a major impact on our industry members, we would like to initiate a formal inquiry and we respectfully request that NFPA remove the item from the upcoming Technical Meeting agenda.

¹ NFPA’s NFPA-70 “Next Edition” webpage
² NFPA’s "Regulations and policies" webpage
We have included a review of the documentation we have conducted to come to this conclusion and attach it as an appendix. Please do reach out to us if you have any questions regarding our review and this request.

Sincerely,

Jason Fisher  
SEIA's Representative to NFPA 70, Code Making Panel 4  
jason@solarrentalconsulting.com

Evelyn M. Butler  
Sr. Director, Codes & Standards  
Solar Energy Industries Association  
ebutler@seia.org  
Phone: 1-202-681-4156

Justin Baca  
Vice President, Markets and Research  
Solar Energy Industries Association  
jbaca@seia.org  
Phone: 1-202-556-2889
in tragedy. So please, continue to not support this motion. Thank you.

JAMES GOLINVEAUX: All right. Thank you. Is there any further discussion on Motion 70-44 to Reject an Identifiable Part of Second Revision No. 7588? Mr. Johnston, any final comment?

MICHAEL JOHNSTON: Nothing further, Mr. Chair.

JAMES GOLINVEAUX: Thank you.

MICHAEL JOHNSTON: Thank you.

JAMES GOLINVEAUX: Before we vote, let me restate the motion. The motion on the floor is to Reject an Identifiable Part of Second Revision No. 7588. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 30 in favor of the motion; 380 against the motion. The motion has failed.

Now let's proceed to the discussion on Certified Amending Motion 70-45. Microphone four, please.

TIM CROUSHORE: Yes. My name is Tim Croushore.
I represent the electric utility industry as a consultant for the Edison Electric Institute. And I move to Reject Second Revision No. 8159, Including Any Related Portions of First Revision No. 8608.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject Second Revision No. 8159, Including Any Related Portions of the First Revision No. 8608. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

TIM CROUSHORE: Thank you. My name is Timothy Croushore. I represent the electric utility industry as a consultant for the Edison Electric Institute. I stand for the motion.

What this deals with, in Article 705 is interconnected electric power production sources that are interconnected with the electric utilities. These sources are solar, energy storage, fuel cells, wind, and as we've heard, vehicles.

The three options to interconnect premises wiring systems - and I'll really emphasis premises wiring, because we really need to look at this is the - what's covered by the NEC is premises wiring.

There are three options to interconnect
premises wiring - with generation, premises wiring
generation to the utility. One would be after the
service disconnecting means. Two would be a separate
service, permitted - already permitted by 230.2(A)(5),
or 230.40. Or option number three, and this is what
this is about - is ahead of the disconnecting means,
is already permitted in 230.82, specifically Item No.
6.

Now, since this CAM deals with option number
three, ahead of the service disconnecting means, there
was a lot of moving parts during both the First
Revision, and Second Revision process on the 2020 code
making process. This involved three different panels
- Code-Making Panel 4, in which I'm a principal
member; Code-Making Panel 5; and Code-Making Panel 10.
Okay. Now, this deals with how to ground and bond
these connections.

Now, during the same time, Code-Making Panel 5
already has worked on these requirements to bond this
in Article - bond and ground this in Article 250.
They are covered in new Section 250.25 for system
grounding, and our traditional Section 250.92 for the
bonding of services.

Basically, the requirements in 705-11(D) are
not required. Furthermore, this is a safety issue,
with - when you have a grounded service. The conductor is not bonded through the main bonding jumper, through the enclosure of the disconnecting means, as required by 250-24(C), and also by 250-28.

My CAM eliminates this complete section in its entirety, and the requirements of Article 250 can apply safely. The issue was thoroughly discussed at length in the Electrical Section meeting, and the members voted to support this CAM. I request the Membership of the Association to vote in favor of this Certified Amending Motion. Thank you.

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position?

MICHAEL JOHNSTON: Thank you, Mr. Chair. There were no apparent correlating issues, or conflicts identified by the NEC Correlating Committee. And I'd like to defer to the Chair of Code-Making Panel 4, Jim Rogers. And Jim is at microphone two.

JIM ROGERS: Good evening - oh, good morning, pretty soon.

(laughter)

JIM ROGERS: My name's Jim Rogers. I represent IAEI as the Chair on Code-Making Panel 4. I speak against the motion.

Code-Making Panel 4 deals with alternative
energy sources, and their interconnection with the utility companies in 705. We had multiple public inputs, and public comments on this issue. And we soon discovered that there was rampant confusion all across the country on how this could be done safely and uniformly. And we had, like I say, multiple public inputs and comments on that.

The Panel spent several hours - multiply - this was probably the most heavily discussed item in both the First Revision and the Second Revision process. As a result, we - the Panel constructed language totally in the First Revision, that was totally rewritten in the Second Revision, to simplify and clarify the portions of Article 250 that should be utilized when making the connection to one of these disconnects that's required ahead - when you make a connection ahead of the service main.

The Panel never wanted to circumvent the requirements of, of Article 250, but simply clarify them. And, and that was the language that they put in place to do that. Sorry, I'm a little tired. I'm getting - I'm losing my train of thought here a little bit.

So the, the - it was an overwhelming majority. 17 to 1 was the Panel vote to accept this language.
And the one dissenting vote was the EEI vote. And part of the rationale for that dissenting vote was 250.92 not being complied with. But the language does reference 250.92. And I respectfully request, because of that clarity and uniformity in application of these rules, I respectfully request that you support the Panel on this, and reject this motion.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name and affiliation, and whether you are speaking in support, or against the motion. Microphone three, please.

JASON FISHER: Hello. I am Jason Fisher. I am representing the Solar Energy Industries Association here, and I'm speaking against this motion. I was one of the voting members of the Code-Making Panel Four, and I'm a licensed electrician who has applied the code to my daily work for over 25 years. I'm not speaking on behalf of the Technical Committee, though.

The first thing I'd note about this motion is that the report of the motion's Committee that's currently posted on NFPA 70 Next Edition web page as of today, shows different language than that is what's up on the screen. According to that report, it states that - that is stated as the final report on the
Certified Amended Motion, that this motion, based on NITMAM Log 108 was a motion to reject a Second Revision. What I see here, though, is completely different, since now this motion seems to want to strike the entire section, including the First Revision language.

This concerns me a bit, since I don't really understand how a motion can keep changing up to the last minute, but — and personally, I am not clear that this motion's in order. But since it's up there, I'll go ahead and address it, with my apologies to the members in the room for the time it takes me, but I must go on the record to oppose this.

It, it's not true I do not agree that there is a safety concern with this language. I agree with our Chair that this language, which the Committee worked very hard to create with lots of debate, adds a lot of clarity — that's important. It was significantly debated, with dozens of task group meetings, and many hours spent on it, and it was based on multiple inputs and comments.

To delete this section would, in fact, remove requirements for these installations, which are becoming increasingly common every year. The removal of a set of requirements that were written to ensure
safety, does not improve safety. By removing this
section, electricians like myself, and enforcers of
the code would be left without clear requirements, and
thus would have to go back to hunting for, and
debating over what the code actually requires for
these installations. I didn't hear that there were
any real conflicts. There was a suggestion that this
was just duplicative. I don't think it's going to be
the only language in the code that helps aid the users
of the code to follow requirements correctly, and
that's why it's important to remain. I urge the
membership to reject this motion, and to support the
Committee.

JAMES GOLINVEAUX: Thank you. Microphone four,
please.

JOHN KOVACHIC: Thank you, Mr. Chairman. John
Kovachic, UL LLC, speaking on behalf of the Electrical
Section of the National Fire Protection Association,
and speaking for the motion.

The Electrical Section had its business meeting
on Tuesday of this week, and the Section voted to
support the motion on the floor. Ladies and gentlemen
of this body, I ask for your support in voting for
this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone four,
TIM CROUSHORE: Thank you very much. Timothy Croushore. I represent the electric utility industry as a consultant through the Edison Electric Institute. I stand for the motion.

A couple different things. Jim Rogers, excellent Panel Chairman. As you know, it's Panel Chairman's responsibility to stand up and support the Panel Chair, and every good panel chairman does that. The issue here is not necessarily supporting the panel; the issue here is one of safety. If you notice, the, the disconnecting means that we've been talking about, and we'll be covering that on the next Certified Amending Motion, should be a service disconnecting means. And as you know, every inspector knows on the service disconnecting means, it's not the supply side bonding jumper; it's the main bonding jumper. And if you look at about the middle of the paragraph, it's incorrect.

What we're concerned with is confusion between the requirements of Panel 5, and these requirements in the field. We respectfully request that all of these be removed, and new Section 250.25, which for a grounded service, talk about 250.24, and that is about a page and a half. You cannot cover all the
requirements of 250.24 in just one few - in just a few sentences.

So therefore, I recommend to the, the Association that we support this Certified Amending Motion, and leave the grounding to the grounding experts in Article 250. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone four.

LEO ZIEMAN (phonetic): Thank you. My name is Leo Zieman. I am with Florida Power and Light, and also with the Edison Electric Institute, and am voting alternate for Panel No. 4. And I speak in favor of this motion, for the exact same reasons that they have been stating all along - and that is that the language in their proposed revision, which is shown up there in red, would constitute a problem with the availability of fault return back to the source to the utility.

And that is really what's at crux here.

I also believe that, along with my colleague, that when we're talking about grounding and bonding, it does belong with Code-Making Panel 5. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone four.

CHARLES MELLOW: Charles Mellow, with CDC Mellows Consulting, respect - representing myself here. The statement here that this (unintelligible)

JAMES GOLINVEAUX: Are you speaking for, or
CHARLES MELLOW: I'm speaking for the motion. Thank you. There are some technical errors, actually, in this. I am a long time member of Code Panel 5, just recently off of that. But the use of the term supply side (unintelligible) is actually technically incorrect. What is actually needed in this location is bringing the grounded circuit conductor from the utility to this disconnect. That is a fault return path.

This is about taking care of ground fault current, wherever it happens in the system, and it needs to be treated essentially just like a service. Whether you call it a service or not doesn't matter, but from a fault current standpoint, it needs to be treated, and grounded, and bonded exactly like a service disconnect would be. Please vote for this motion.

JAMES GOLINVEAUX: Thank you. Microphone four.

FRED HARTWELL: Thank you, Mr. Chairman. Fred Hartwell - faintly in favor of the motion.

At the Electrical Section, I voted against this. I've now reconsidered that position. But I do have a problem with describing this as a service. To my way of thinking, a service supplies load. These do
not supply load.

However, the reason that I have changed my position is that the existing text that is presented in 705.11(D) can frequently undersize the conductor that will accomplish the fault current return. I use that kind of tortured construction to avoid the question of whether it is a supply side bonding jumper, or the main bonding jumper. In order to get there, you have to settle the question, is it a service, or not.

So I have a suggestion. I believe that this motion is going to pass. And I suggest to Code Panel 4 that the way to get around this is to immediately come back with a Tentative Interim Amendment that restores 705.11(D), essentially the way it - they wrote it, except at the end of the second sentence, where it relates to the size of this fault return conductor - maybe it's a main bonding jumper, and maybe it's a supply side bonding jumper - we could have a very interesting discussion about that. But the point is, and the safety is - to make darned sure that it is the right size. And whether you think it's a service or not, we can establish if, if the Panel comes back with a TIA, they can change this, the, the back end of that sentence, and instead of relating the...
size, basing the size on the size of the 705.11(B) conductors, just simply say that it is to be sized on - in reference to the size of the service conductors to which the 705.11(B) conductors are connected. And in that way, you sidestep the entire semantic issue of whether it's a service or not, and you accomplish the required safety by making sure that that conductor is properly sized.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-45 to Reject Second Revision No. 81-59, Including Any Related Portions of First Revision 8608? Mr. Johnston, do you have any final comment?

MICHAEL JOHNSTON: I have no additional comments, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Reject Second Revision 8159, Including Any Related Portions of the First Revision 8608. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.
The voting is closed.
The results of the vote are: 285 in favor of the motion; 96 against the motion. The motion has passed.

Now let's proceed with the discussion on Certified Amending Motion 70-46. Microphone four, please.

TIM CROUSHORE: My name is Tim Croushore. I represent the electric utility industry as a consultant through the Edison Electric Institute. I move to Accept an Identifiable Part of Public Comment No. 315.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Accept an Identifiable Part of Public Comment No. 315. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

TIM CROUSHORE: My name is Tim Croushore. I represent the electric utility industry as a consultant through the Edison Electric Institute.

This issue is relatively the same issue that we talked about of Option 3 of 705.11. As Chairman Rogers had said, there was confusion in this industry, and we're trying to basically clarify this.
Maynard, Mary

Subject: Appeals to NFPA Standards Council re CAMs 70-45 and 70-46

From: TIM M CROUSHORE [mailto:tcroush@comcast.net]
Sent: Thursday, July 11, 2019 7:21 AM
To: Maynard, Mary <mmaynard@NFPA.org>; Fuller, Linda <lfuller@NFPA.org>; Bellis, Dawn <DBellis@nfpa.org>
Cc: Menges, Mike <mMenges@eei.org>; Buckley, Michael <mbuckley@eei.org>; Pfister, Bill <BPfister@eei.org>; roland.deike@centerpointenergy.com; rodmcdan@southernco.com; christopher.vance@nationalgrid.com

Subject: Re: Appeals to NFPA Standards Council re CAMs 70-45 and 70-46

Dear Ms. Bellis, and Ms Fuller;

The purpose of this e-mail is to address the two appeals in front of the NFPA Standards Council from Mr. Jason Fisher and Mr. Justin Baca representing the Solar Energy Industries Association (SEIA).

I respectfully request the Standards Council deny both appeals as the NFPA process was properly followed.

I am the submitter of both Certified Amending Motions #70-45 and #70-46. These motions were properly moved on the floor of the Technical Session and after deliberations, both were voted and passed successfully by a wide margin. The vote count on 70-45 was 285 For The Amendment and 96 Against the amendment. The vote count on 70-46 was 246 For The Amendment and 132 Against the amendment.

During the process to certify both amending motions, I worked directly with Linda Fuller, Senior Member, Standards Operations in Code and Standards Administration to create these motions based on my submitted NITMAMs by the proper due date. Ms. Fuller and I communicated several times by e-mail, telephone and face-to-face ahead of the Technical Session to make sure these CAMs were proper according to the Regulations Governing the Development of NFPA Standards (Regulations). It is my understanding from Ms. Fuller, that the Motions Committee did review these CAMs thoroughly to assure their compliance with the Regulations. Both CAMs were properly placed on the Technical Session agenda that was followed by the Chair of the session. Both CAMs were properly presented by the Chair, were properly displayed on the screens, and had opportunity for discussion before the votes. I had the opportunity to properly address the motions as did other NFPA members have the opportunity to debate the motions.
As noted in my discussion of the floor of the Technical Session, both of these CAMs were discussed at length at the Electrical Section Meeting and both were supported after technical discussions from the Electrical Section members.

Mr. Michael Johnson and Mr. Mark Early presided over the Electrical Section Meeting.

CAM 70-45 - At the Electrical Section Meeting, members of Code Making Panel 5 (CMP-5) the technical committee on Article 250 covering the issue of grounding and bonding, spoke on CAM 70-45. Several CMP-5 members talked about the technical problems presented in proposed section 705.11 (D) related to grounding and bonding. In addition, CMP-5 had created a new Section 250.25 which would properly address the grounding and bonding issue attempting to be address by the language proposed by CMP-4 in 705.11 (D). It was urged to support the CAM 70-45 and it was voted at the Electrical Section to support this CAM.

CAM 70-46 - At the Electrical Section Meeting, members of Code Making Panel 10 (CMP-10) the technical committee on Article 230 dealing with the issue of services and the service disconnecting means spoke on CAM 70-46. Mr. James Dollard spoke about the change in the definition of "service" in the NEC that CMP-10 revised this cycle and that the disconnect identified in 705.11 (F) would be indeed be a service disconnecting means. He also discussed that there were several attempts to increase the maximum number of disconnects in Section 230.71 beyond the long standing number of 6. Each of these were rejected by CMP-10. It was urged to support the CAM 70-46 and it was voted at the Electrical Section to support this CAM.

There is no previous text in the 2017 NEC for either section 705.11 (D) or 705.11 (F). Those particular two revisions would have created conflicting language in the NEC and would have relaxed requirements that would decrease safety in these installations.

Therefore, I respectfully request that the NFPA Standards Council deny both of these appeals.

Thank you.

Timothy M. Croushore, P.E.
July 15, 2019
Dawn Michelle Bellis, Director and NFPA Standards Council Secretary
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169

Subject: Support for Appeal from Jason Fisher, Solar Energy Industries Association

(a) Name, affiliation, and address of the submitters:
Name: Rebekah Hren
Affiliation: Principal on CMP-4 representing Solar Energy International
Address: 1698 Grove St. San Francisco, CA 94117
Name: Brian Mehalic
Affiliation: Alternate on CMP-4 representing Solar Energy International
Address: 1698 Grove St. San Francisco, CA 94117

Solar Energy International (SEI) is a renewable energy education nonprofit with over 60,000 alumni, founded in 1991, whose mission is to provide industry-leading technical training and expertise in renewable energy to empower people, communities, and businesses worldwide.

(b) Statement identifying the appeal to which the submission relates and stating whether the submitters support or oppose the appeal:
We are writing to support the appeal from Jason Fisher, Solar Energy Industries Association dated July 8, 2019 (related to two separate CAMs), requesting the NFPA Standards Council overturn the Association Action on both CAMs:

- CAM 70-45 (previously identified as Motion Sequence 70-43 in the May 17, 2019 Motions Committee Report); and
- CAM 70-46 (previously identified as Motion Sequence 70-5NC, in the May 17, 2019 Motions Committee Report).

(c) Argument setting forth the grounds for opposing or supporting the appeal
As the representatives on CMP-4 for Solar Energy International, we understand and support the mission of the NFPA “to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically based consensus codes and standards, research, training, and education.” As CMP-4 members, we recognize our responsibility is to understand and be aware of public comments, proposals, or motions that occur during the NFPA 70 revision cycle process that could particularly impact the safety of the solar industry, and to give guidance to, as well as receive it from, the organization we represent.

However, we believe a process failure has occurred which did not allow us to completely fulfill our obligations, and that is why we are writing in support of the above referenced appeal and requesting the NFPA Standards Council overturn the Association Action on 70-45 and 70-46.

The motions Seq # 70-45 and 70-46 presented at the Technical Session did not match the Motions Committee Report. In addition, substantive and technically significant changes were made several times to these motions between the Report and the Technical Session as the motions continued to change in actual content, as presented in several different Technical Meeting Agendas, until the weekend before the meeting. These changes were not in any way purely editorial and are documented in detail in SEIA’s appeal.

This process failure meant that we could neither be fully prepared for the technical meeting, nor brief our organization, as we were not sure of the technical content or which motions were to be presented. In addition, as the language of these two motions changed in each of three subsequent Technical Session agendas, the changes tended in the direction of causing more confusion among Code-users and enforcement officials.

CMP-4 has been working diligently in coordination with many submitted public comments to reduce confusion specifically around supply side connected power sources, as clear Code requirements around these connections have not existed in previous NFPA 70® editions. For over a decade this has been a major source of installation and inspection confusion – the type of confusion that can and does significantly lower installation safety. The addition of Section 705.11(A)-(G), while perhaps not perfect, provides the installation industry and the enforcement community a common ground of reference, with clear and vetted requirements on the installation of supply side power source disconnects and equipment.

The 2 motions as passed on the floor of the NFPA Technical Session increase confusion and potentially lower safety, contrary to the mission of the NFPA. A majority of CMP-4 disagreed with the Amendment 70-46, but we were not able to ballot on 70-45.

(d) Statement of recommended Standards Council action
We agree with the actions and remediation suggested in SEIA’s appeal and request they be undertaken:

- Reverse the Second Draft language modification recommendations resulting from the actions taken by the membership at the Technical Session, as well as any resulting actions of Code Making Panel 4 through their balloting on Amendment 70-46
- Adopt the language as published in the Second Draft Report dated April 3rd, 2019 as it relates to Sections 705.11(D) and 705.11(F)

We would like to take a moment to state our full support of the mission of the NFPA and our appreciation for the dedication and hard-work of the Standards Council, CMP-4 Technical Committee Members, and our Chair, James Rogers.

Rebekah Hren

Brian Mehalic

Cc: Kathy Swartz, Executive Director, Solar Energy International
MEMORANDUM

(AMENDMENT)

TO: Code-Making Panel 4

FROM: Sarah Caldwell, Technical Committee Administrator

DATE: July 10, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Code-Making Panel. As a result, since there is no previous edition text, the recommendation to the Standards Council is to delete the recommended text.

18 Members Eligible to Vote
3 Ballots Not Returned (Buchal, Pruitt, Toomer)

The number of votes needed to recommend approval of the Association Action is 10.

(18 eligible to vote - 3 not returned - 0 abstentions = 15 × 0.66 = 9.9)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2019 NFPA Tech Session are now available at: www.nfpa.org/techsession.
AMENDMENT BALLOT TEXT

Code Making Panel 4
NFPA 70®, National Electrical Code®
Amendment No. 70-46: Accept an Identifiable Part of
Public Comment No. 315
June 2019

IF YOU AGREE TO SUPPORT AMENDMENT 70-46 as recommended by the membership by vote at Tech Session, the recommended text reads as follows:

705.11(F) Disconnecting Means.
The power source disconnecting means shall meet the requirements of 705.20. The power source disconnecting means shall not be considered as one of the service disconnecting means as required by 230.70. The requirements of 230.71 and 230.72 shall apply to the power source disconnecting means that are installed in accordance with 230.2(A)(5) or 230.40, Exception No. 5. The conductors connected to the service conductors shall be terminated on the line side of the disconnect. Equipment containing a power source disconnecting means rated 1000 volts or less shall be listed as suitable for use as service equipment.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-46 by the membership by vote at Tech Session, the recommended text would revert to the previous edition text. Since no previous edition text exists, the text is simply deleted.
Amendment No. 70-46: Accept an identifiable Part of Public Comment No. 315 Note: A DISAGREE vote would recommend previous edition text.
Where no previous edition text exists the text is simply deleted.

Eligible to Vote: 18
Not Returned : 3
Ronald J. Toomer, Thomas E. Buchal, Irozenell Pruitt

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<tr>
<th>Vote Selection</th>
<th>Votes</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Agree</td>
<td>4</td>
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<tr>
<td>Wendell R. Whistler</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Timothy M. Croushore</td>
<td></td>
<td>I agree that the second sentence of the text should be revised and the &quot;not&quot; removed for the 2020 NEC. This action is the identifiable part of public comment No 315. Should this amended ballot not pass in CMP-4. The second sentence should be removed as it does not appear in the 2017 NEC.</td>
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<td>Duke W. Schamel</td>
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<td>Agree</td>
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<tr>
<td>Bill Brown</td>
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<td>Agree</td>
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<tr>
<td>Disagree</td>
<td>11</td>
<td>This change will create confusion for both installers and enforcers and there is no good reason to change the language that was supported by the Panel during the code revision process</td>
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SEIA is voting negative since this amendment would structurally change the work that the Committee did this cycle to address multiple public inputs and comments that sought clarity with regards to how onsite power sources are interconnected to service equipment, including service entrance conductors. Though the results of adding this amended language to the Code are unpredictable, it is the opinion of SEIA that it would increase confusion within users of the Code, rather than decreasing confusion (which was the intent of the original First and Second Revision language), since it would conflict with the manner in which the previous Code has been most commonly interpreted (in articles, training, etc.). This issue was discussed at length during the first and second revision meetings and the record shows that the Committee did not agree that the sentence should be worded as this amendment seeks to change it. While we are aware that voting down this amendment will result in the removal of this new section 705.11(F) from the 2020 revision, the loss of this language, while not ideal, will not result in a lack of requirements for these installations since the requirements are contained elsewhere in Articles 705 and Articles 230.

This change would add confusion and ambiguity to the code. Even though it will cause the reversal to the 2017 language, that would be better than adding confusion to users of the Code.

CMP4 carefully wrote new language for this section in response to public comments. The proposed change is inconsistent with present interpretation of the Code. Deleting this section is the most expedient solution as other parts of 705 address these issues adequately. I therefore choose to vote to disagree.

The change (removing the word ‘not’) fundamentally changes the meaning of the entire paragraph and creates ambiguity on this issue that CMP 4 was trying to avoid.

Removing the word "not" doesn't fix the root issue addressed in 705.11(F)and reverting back to 2107 language will create less confusion to users of the code.
William F. Brooks

The CAM 70-46 passed by the membership completely changes the meaning of this paragraph and makes it very confusing. It would be better to eliminate the paragraph then to propagate confusing language to the users and enforcers of this Code.

Rebekah Wharton Hren

An incredible amount of time and effort went into drafting the language in 705.11(F), and an overwhelming super-majority of CMP-4 voted for the language presented and accepted in the first draft. The precise language that is being proposed as amended here was voted on and overwhelmingly accepted in the 2nd draft by CMP-4. This amendment would 180° reverse the meaning of the second sentence as voted on by CMP4. Passing this motion would devalue the public input and comment process, and devalue the work of the CMP. The amendment as presented would create a huge amount of confusion in the enforcement and installation industry in regards to how PV and other DG power source and service entrance disconnects should be grouped, labeled, and counted. The proposed amendment would in no way increase electrical safety of installations. The proposed amended language instead creates a minefield of confusion that will lead to directly conflicting Code requirements and enforcement for power source disconnects in terms of location, labeling, and installation requirements.

Todd Fries

This seemingly small change fundamentally changes the meaning of the whole paragraph and creates ambiguity on this issue that we, as a panel, are trying to avoid. I believe that removing this paragraph is preferable to having this confusing language in the Code.

Timothy P. Zgonena

This revision is in direct opposition to the CMP4 action that had near unanimous agreement. This new proposed revision could create conflicts and confusion with other code sections.

Mark D. Gibbs

Removing "not" would add confusion for the installation and enforcement of this section. The intent of the panel was to remove ambiguity from this section.

Abstain

0
July 8, 2019

Dawn Michele Bellis, Director and NFPA Standards Council Secretary
National Fire Protection Association
1 Batterymarch Park
Quincy, Massachusetts
USA 02169-7471

Subject: Appeal related to the NFPA 70® National Electrical Code 2020 revision process

Dear Ms. Bellis,

The Solar Energy Industries Association (SEIA®) is the national driving force behind solar energy. We are building a strong solar industry to power America through advocacy and education. As the national trade association in the U.S., we represent all organizations that promote, manufacture, install and support the development of solar energy. SEIA works with its 1000-member companies to champion the use of clean, affordable solar in America by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy.

On behalf of SEIA, we respectfully submit this appeal to the Standards Council related to the current (2019) revision of NFPA 70®. This appeal seeks to identify how the inclusion of two amending motions (Seq # 70-45 and 70-46) in the Agenda of the NFPA Technical Session meeting held on June 20th, 2019, herein referred to as the “Meeting”, and their presentation to NFPA membership at that Meeting, was not in compliance with NFPA’s published rules and regulations governing the development of NFPA standards.

It is our position that these two motions should not have been presented at the Meeting for a membership vote. This appeal, which builds on SEIA’s letter to Mark Earley, Michael Johnston, and Jim Rogers, dated June 18th, 2019, as well as Mr. Fisher’s testimony at the Meeting on these motions, requests that the Standards Council act to reverse the Second Draft language modification recommendations resulting from the actions taken by the membership at the Meeting, as well as any resulting actions of Code Making Panel 4 through their balloting on Amendment 70-46. We further request that for the reasons outlined in this document the Standards Council act to adopt the language as published in the Second Draft Report dated April 3rd, 2019 as it relates to Sections 705.11(D) and 705.11(F).
Please see the attached pages for further details regarding this appeal.

**Jason Fisher**  
Vice Chair, SEIA Codes and Standards Working Group  
Founder, Solar Technical Consulting LLC  
jason@solartechconsulting.com

**Justin Baca**  
Vice President, Markets and Research  
Solar Energy Industries Association  
jbaca@seia.org  
Phone: 1-202-556-2889

**cc:** Evelyn Butler, Sr. Director, Codes & Standards, Solar Energy Industries Association  
John Smirnow, General Counsel, Solar Energy Industries Association
Details supporting this appeal:

In keeping with NFPA's Regulations as outlined in section 1.6.3 of the Regulations Governing the Development of NFPA Standards, SEIA submits the following details to support our appeal.

(1) Name, affiliation, and address of the appellant:
This appeal is being submitted by the following person: Jason Fisher, Vice Chair, SEIA Codes and Standards Working Group, Solar Energy Industries Association, 1425 K Street, N.W., Suite 1000, Washington, D.C. 20005, Phone: 1-202-556-2889

(2) Statement identifying the particular action to which the appeal relates:
This appeal relates to actions taken at the June 20th, 2019 Meeting on the following two NITMAMs identified in the Report of the Motions Committee on Certified Amending Motions (filename NITMAM_MC_Report_Part2_A2019.pdf), posted May 17th, 2019 on www.NFPA.org:

NITMAM Log #108, addressing Section 705.11(D), identified as Motion Seq #70-43 on page 77 of the document
NITMAM Log #109, addressing Section 705.11(F), identified as Motion Seq #70-5NC on page 126 of the document

Note that these two items were presented at the Meeting as Motion Seq #70-45 and 70-46 respectively.

(3) Argument setting forth the grounds for the appeal:
Shortly before the June 20th Meeting, SEIA became aware that a proposed motion included on the Meeting agenda, dated June 13th, 2019, and distributed to Committee members on Saturday June 15th, 2019, had not been previously certified in the NFPA Motions Committee Report, herein referred to as the “Report”. This item, identified as NITMAM log#109, addressing section 705.11(F), noted as Motion Seq #70-5NC on page 126 of the Report, was not listed as a Certified Amending Motion (CAM) in the Report.

At the time that we became aware of this discrepancy we expressed our concern in a letter to NFPA staff and specific NFPA-70 committee chairs (copy attached in Appendix B) that this change had not been properly communicated to the public in a timely fashion such that our members would not have been made aware of all the items that would be discussed at the meeting. In that letter we requested that NFPA remove this item from the agenda. Within this letter we provided our justifications for this request based on our detailed review of applicable NFPA regulations documents. We did not receive a response from NFPA to that letter.
On June 20th, 2019 Mr. Fisher attended the Meeting to represent SEIA. It was at the Meeting that Mr. Fisher identified that there were additional discrepancies with not only the NITMAM log #109 item that we had questioned in our June 19th letter, but also with the NITMAM log #108 item. Since the record is very important to establish the grounds of this appeal, but that record is rather complex, we have assembled the following table so that we can more easily refer to the two items in question within this appeal document.

**TABLE of Document and Motion Records**

<table>
<thead>
<tr>
<th>Item ID</th>
<th>Document Title/Filename</th>
<th>Doc Date</th>
<th>NITMAM Log#</th>
<th>Motion Seq#</th>
<th>Section</th>
<th>Doc Page</th>
<th>Motion Text</th>
<th>Change from Previous?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Report of the Motions Committee on Certified Amending Motions / NITMAM_MC_Report_Part2_A2019.pdf</td>
<td>May 17, 2019 (posted date)</td>
<td>108</td>
<td>70-43</td>
<td>705.11 (D)</td>
<td>77</td>
<td>&quot;Reject Second Revision No. 8159&quot; (Certified)</td>
<td>n/a</td>
</tr>
<tr>
<td>B</td>
<td>2019 Tech Session Agenda / 2019_TECH_SESSION_AGENDA_June 5_FINAL.pdf</td>
<td>May 23, 2019 (doc posted date) June 5, 2019 (reposted date with &quot;Editorial Changes and Renumbering&quot;)</td>
<td>108</td>
<td>70-45</td>
<td>705.11 (D)</td>
<td>137</td>
<td>&quot;Reject Second Revision No. 8159 and any related portions of First Revision No. 8608&quot;</td>
<td>YES</td>
</tr>
<tr>
<td>D</td>
<td>2019 Tech Session Agenda / A2019_Agenda_Tech_Session.pdf</td>
<td>June 13, 2019 (reposted date with &quot;Editorial Changes&quot;)</td>
<td>108</td>
<td>70-45</td>
<td>705.11 (D)</td>
<td>137</td>
<td>&quot;Reject Second Revision No. 8159 and any related portions of First Revision No. 8608&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>E</td>
<td>2019 Tech Session Agenda / A2019_Agenda_Tech_Session.pdf</td>
<td>June 13, 2019 (reposted date with &quot;Editorial Changes&quot;)</td>
<td>108</td>
<td>70-45</td>
<td>705.11 (D)</td>
<td>137</td>
<td>&quot;Accept an Identifiable Part of Public Comment No. 315&quot;</td>
<td>n/a</td>
</tr>
<tr>
<td>F</td>
<td>2019 Tech Session Agenda / A2019_Agenda_Tech_Session.pdf</td>
<td>June 13, 2019 (reposted date with &quot;Editorial Changes&quot;)</td>
<td>108</td>
<td>70-46</td>
<td>705.11 (F)</td>
<td>138</td>
<td>&quot;Accept an Identifiable Part of Public Comment No. 315&quot;</td>
<td>YES</td>
</tr>
</tbody>
</table>

Based on our review of NFPA communications and published documents, there appears to be three versions of the Meeting agenda that were posted prior to the June 20th, 2019 Technical Meeting, dated May 23rd, June 5th, and June 13th, each
distributed after the revision date. While there does not appear to be any differences in the two items in question between the May 23rd and June 5th versions, there was a significant difference made to the proposed amending motion text revisions between the June 5th and the June 13th Agenda versions. The specific changes to the proposed amending motion text revisions can be found using the documents and page references given in the Table above related to Item ID “D” to “F”.

The change to the proposed amending language impacting section 705.11(F) was substantive and significant, not editorial in nature. In the June 5th version of the agenda the submitter sought to strikeout an entire sentence. In the June 13th version the proposed revised text changed to only strikeout a single word. SEIA contests that the difference between these two is very significant, not “editorial”, as the changes are noted in this Agenda revision.

Furthermore, there were changes made in both the proposed amending motion text revisions, as well as the specific motion requested between all of the agenda versions and the Report of the Motions Committee on Certified Amending Motions.

The changes to the motions can be viewed in the second to last column of the above table comparing Item ID “A” to “C” as well as Item ID “B” to “D”. These changes to the original motions as made by the submitter as shown in the Report were very significant since these changes resulted in a membership recommendation that Section 705.11(D) be removed in its entirety without a Committee ballot nor any opportunity to return to the First Revision language. This is the direct result of the motion on NITMAM Log#108 being changed between the Report and the Agenda since the original motion that was certified in the Report aligned with item #5 in Table 1 of the NFPA Technical Meeting – Amending Motions Ballot Table as published in the Regulations Governing the Development of NFPA Standards, whereas the changed motion that showed up in the Agenda aligned with Table item #7.

The changes to the proposed amending motion text revisions can be reviewed using the document and page references given in the Table above related to Item IDs “A” to “C” and “B” to “F”. All of these changes were major and substantive, not editorial, since significantly different portions of the Second Draft language were modified between the CAM Report and the Agenda. This is in addition to the fact that a motion that was previously marked as not certified in the Report (NITMAM ID# 109), was nevertheless included in the Agenda and shown as a CAM, when in fact it was not a Certified Amending Motion according to NFPA’s published Report.
SEIA believes that all of the changes made to these motions that we have documented here – including the action to add the motion on NITMAM Log#109 to the Agenda, to change the type of motion made for both NITMAM Log#108 and #109, and to change the proposed text revisions in both NITMAM Log#108 and #109 – were not performed in accordance with NFPA’s published rules and regulations.

It is therefore our position that these two motions impacting sections 705.11(D) and 705.11(F) should never have been presented to the NFPA membership in the form that they were presented for a membership vote. To support this claim we have included our review of the NFPA regulations and policies documents that we have conducted to come to this conclusion and attach it in Appendix A.

In Mr. Fisher’s testimony at the Technical Session he raised SEIA’s concerns that these motions did not appear to have followed the NFPA documented rules and regulations governing the proper Certification of a motion, nor the presentation of these motions to NFPA membership. Since these questions from SEIA were not addressed prior to the Meeting, or after Mr. Fisher’s testimony, SEIA has chosen to pursue our right to this appeal and make the following request for relief from the Standards Council.

(4) Statement of the precise relief requested:

SEIA requests that the Standards Council act to reverse the Second Revision and First Revision language modification recommendations on Sections 705.11(D) and 705.11(F), resulting from the actions taken by the membership at the June 20th, 2019 Technical Session meeting on Motions 70-45 and 70-46, as well as any resulting actions of Code Making Panel 4 through their balloting on Amendment 70-46.

SEIA requests that the Standards Council act to adopt the language as published in the Second Draft Report dated April 3rd, 2019 as it relates to Sections 705.11(D) and 705.11(F).

(5) Whether a hearing on the appeal is being requested:

SEIA respectfully requests a hearing in front of the Standards Council to address this appeal.
APPENDIX A: Review of NFPA documentation

"Report of the Motions Committee on Certified Amending Motions" – The “Report"

This document, posted May 17, 2019 on NFPA’s website, does not contain a Certified Amended Motion (CAM) addressing NEC section 705.11(F). This document only lists one CAM for Article 705 - Motion Seq #70-43 pertaining to NITMAM Log #108 for 705.11(D).

Note that the Report is the only document shown under the "Motions Committee Report (NITMAM)" section of the NFPA webpage on the Next Edition. This section notifies the public of NITMAMs that have been accepted as certified motions and will be debated and voted on at the meeting.

Within a separate document, found further down on this webpage under “NFPA Technical Meeting”, titled "NFPA Technical Meeting (Tech Session)"4, there is a motion impacting Article 705. It is only in that document, released to the public after the Report, that an additional Motion on Article 705 section 705.11(F), addressing NITMAM Log #109, is identified as potentially addressable at the meeting.

Since the proposed motion on 705.11(F) does not appear in the Report document, we contend that it was not appropriate for this motion to be brought to the floor at the Technical Meeting since the 705.11(F) addition to the Agenda was not made in keeping with the "NFPA Rules and Regulations Governing the Development of NFPA Standards"5 in particular, sections 4.5.2.1, 4.5.2.4, 4.5.2.6, and 4.5.3.2(d).

We note that the Report document on NFPA’s webpage states that "This is the third and final segment of the Motions Committee Report listing Certified Amending Motions that may be presented at the 2019 NFPA Technical Meeting in San Antonio, TX on June 20, 2019."

The Report further states that "The only Amending Motions allowed at an NFPA Technical Meeting are Certified Amending Motions set forth in a report of the Motions Committee and any Follow-Up Motions (e.g. motions that may become necessary as a result of a previous successful Amending Motion)." This statement, from the only document provided under the "Motions Committee Report (NITMAM)" section of the NFPA webpage, indicate that motions not presented in the Report but appearing subsequently in the Agenda, are not to be considered CAMs.

It is stated on page 2 that "Table A summarizes the Motions on NFPA 25, NFPA 70, NFPA 855 and NFPA 1851 that have been reviewed by the Motions Committee and certified as Certified Amending Motions. These motions can be presented for consideration at the 2019 NFPA Technical Meeting in San Antonio, TX on June 20, 2019."
On the same page it states that "Of the ninety-one NITMAMs received on NFPA 2, NFPA 25, NFPA 70, NFPA 855 and NFPA 1851, eleven were not certified by the Motions Committee.

Additionally, the Motions Committee approved the withdrawal of 13 NITMAMs. Table B itemizes the motions that were not certified." The proposed motion on 705.11(F), NITMAM log#109, that SEIA is questioning, is not included in Table A as a CAM in this document. In this Table, the proposed motion in question is marked as rejected in Table B on page 126.

The document says that "[t]he only Amending Motions allowed at an NFPA Technical Meeting are Certified Amending Motions set forth in the comprehensive report of the Motions Committee and any Follow-Up Motions". Note that according to the Convention Rules\(^6\), a follow-up motion "is a motion that becomes necessary as a result of a previous successful amending motion." The 705.11(F) item is not a follow-up motion. Based on input from our membership, and our review of this document on NFPA's website, we contend that a member of the public would therefore justifiably believe that only certified motions noted in the Report document\(^3\) could be brought to the floor of the Technical Session meeting.

"NFPA Rules and Regulations Governing the Development of NFPA Standards"

This document\(^5\) states in section 4.5, in particular subsections 4.5.2.1 titled "Filing of Notice", and section 4.5.2.4, that only accepted NITMAMs (not rejected ones) should be considered as CAMs in the notice and at the meeting. In fact, subsection 4.5.3.2(d) makes this very clear in its statement that "Amendments other than those permitted by these regulations shall not be permitted for NFPA membership consideration."

While in section 4.5.2.1 it states, "unless the motions committee determines, in its discretion, that it can reasonably consider and act on the notice in advance of the timely publication of the final motions committee report and updated NFPA technical meeting agenda", this allowance for some adjustments to motions is provided within the "Filing of Notice" section of the document, which addresses a period of time that comes before the Motions Committee Report is published. The publicized "final" Motions Committee Report\(^3\) does not include the proposed motion in question as a CAM. While section 4.5.2.6 of the Rules and Regulations does provide an allowance to address possible differences between the final motions committee report\(^3\) and the agenda\(^4\), is says that "the agenda of the NFPA technical meeting shall be updated to remove any technical committee reports". Nowhere in the document\(^5\) is it mentioned that new motions, not included in the final motions committee report, may be added to the Agenda.
“2019 Tech Session Agenda” (each of the three dated revision includes this same text)

On page 2 of this document¹, the main paragraph states that:

“This Report contains Certified Amending Motions (CAMs) ... that will be considered at the June, 2019 NFPA Technical Meeting (Tech Session). These motions have been certified and determined as proper by the Motions Committee in accordance with the Regulations Governing the Development of NFPA Standards (Regs) and the NFPA Technical Meeting Convention Rules (Convention Rules). Although the motions as certified will not change, the manner in which they are presented, their layout, and the accompanying supportive material may be modified (solely for presentation), removed or added to.”

Note that the proposed revisions to the Second and First Draft text was changed in both of the motions in questions, between the Report, and between different versions of the Agenda as it was revised.

References:

⁴ https://www.nfpa.org/assets/files/AboutTheCodes/70/A2019_Agenda_Tech_Session.PDF
June 18, 2019

Michael Johnston, NFPA-70 Correlating Committee Chair, NECA
Mark Earley, NFPA-70 Correlating Committee Secretary, NFPA
Jim Rogers, NFPA-70 Code Making Panel 4 Chair, IAEI

National Fire Protection Association
1 Batterymarch Park
Quincy, Massachusetts
USA 02169-7471

Subject: Code Making Panel 4, National Electrical Code
NFPA Technical Meeting on June 20, 2019

Dear Mr. Johnston, Mr. Earley and Mr. Rogers,

On behalf of the Solar Energy Industries Association (SEIA®), we submit the following for your consideration.

SEIA has recently been made aware that a proposed motion included on the agenda for the June 20, 2019 NFPA Technical Meeting has not been previously certified in the NFPA Motions Committee Report. We have concerns that this change has not been properly communicated to the public such that our members would have been made aware of all the items that may be discussed at the meeting in a timely fashion.

The proposed motion is related to clause 705.11(F). Based on a detailed review of the documents available on NFPA’s NFPA-70 "Next Edition" webpage¹, and documents available on NFPA’s "Regulations and policies" webpage², SEIA contends that this item on the agenda is not in accordance with NFPA’s Rules and Regulations governing the motions process which includes notifying the public.

Since the proposed motion could have a major impact on our industry members, we would like to initiate a formal inquiry and we respectfully request that NFPA remove the item from the upcoming Technical Meeting agenda.
We have included a review of the documentation we have conducted to come to this conclusion and attach it as an appendix. Please do reach out to us if you have any questions regarding our review and this request.

Sincerely,

Jason Fisher  
SEIA’s Representative to NFPA 70, Code Making Panel 4  
jason@solartechconsulting.com

Evelyn M. Butler  
Sr. Director, Codes & Standards  
Solar Energy Industries Association  
ebutler@seia.org  
Phone: 1-202-681-4156

Justin Baca  
Vice President, Markets and Research  
Solar Energy Industries Association  
jbaca@seia.org  
Phone: 1-202-556-2889
The voting is closed.
The results of the vote are: 285 in favor of the motion; 96 against the motion. The motion has passed.

Now let's proceed with the discussion on Certified Amending Motion 70-46. Microphone four, please.

TIM CROUSHORE: My name is Tim Croushore. I represent the electric utility industry as a consultant through the Edison Electric Institute. I move to Accept an Identifiable Part of Public Comment No. 315.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Accept an Identifiable Part of Public Comment No. 315. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

TIM CROUSHORE: My name is Tim Croushore. I represent the electric utility industry as a consultant through the Edison Electric Institute.

This issue is relatively the same issue that we talked about of Option 3 of 705.11. As Chairman Rogers had said, there was confusion in this industry, and we're trying to basically clarify this.
But one of the things that the Panel wanted to do was to completely not name this disconnecting means a service disconnecting means. So what they chose to do, and the difference between what you see on the left and what you see on the right, is just a deletion of the word 'not'. Okay. Now, as we all know – or maybe you don't know – Panel 10 did change the definition of service during this 2020 cycle, is these conductors that connect the utility to the premises wiring. It no longer is for the transfer of energy from the utility to the premises wiring. It can flow both ways, per the definition of service. So that's one thing that Panel 10 did.

Panel 10 also initiated 230.85, which they wanted to, wanted for, wanted to family dwellings, limit the number of disconnecting means for emergency response personnel.

What the, what the interconnected generation folks wanted to do was – 'If we don't call this a service disconnecting means, then I can get away from the six disconnect rule of 230.71.' As we know, there are only four disconnects that can be in this case that's not considered a service disconnecting means.

Now, Panel 10 did look at this, and there were requests to Panel 10. They rejected them all. My
suggestion is that we reject these, as well.  

So in addition, 237.70 - basically, the general 
requirement is means shall be provided to disconnect 
all ungrounded conductors in a building or other 
structure from the service conductors. That's one of 
the main requirements, that we want to be able to 
separate the utility from the premises wiring system.  

237.70 also has location, readily accessible 
locations - these things can't be in a bathroom, okay. 
If, if you have a remote control, how that has to 
work. These disconnecting means have to be marked as 
a service disconnecting means in such a way that it's 
understand that this will disconnect from the utility. 
And there's a requirement for the suitability of use, 
so use suitable for use of service of equipment. 

So this device disconnects the power between 
the utility and the interconnected generation. It has 
overcurrent protection. It's in an enclosure, and 
it's listed as - for use as service equipment. It's 
like the old saying - if it flies like a duck, it 
walks like a duck, swims like a duck, and looks like a 
duck, it's a duck. This is a service disconnecting 
means. 

I recommend the Association vote in favor of 
this Certified Amending Motion. Thank you.
JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position?

MICHAEL JOHNSTON: Sure. Thank you, Mr. Chair.

There were no apparent correlating issues or conflicts that were identified by the NEC Correlating Committee. And I would like to defer to the Chair of Code Panel Four, Jim Rogers, at microphone two, for a technical response, please.

JIM ROGERS: Jim Rogers, IEI, Chair of Code-Making Panel 4. So I, I mostly want to talk about what the Panel did. But it was very interesting, watching the Back to the Future talk about the National Electrical Code that I watched yesterday. And part of the rationale for that was looking at how we deal with alternative energy systems, how we keep moving forward with things like alternative energy systems, and, and how does the NEC work in conjunction with that.

Well, here's a perfect example, and why the Panel was so adamant on not calling it one of the service disconnects, as required in 230.70. If you had an existing building that had a service, and you were at the limit - let's say they were in - because even under the new requirements, if they're in separate enclosures, you could still have six
disconnects - so let's say you're at that limit. And you use the permissive language that you find in 230, to either have - use another set of service entrance conductors, or you could have another service for our alternative energy system to tie into. And if you did that, and you called that a service disconnect along with the other ones, then you could be forced to replace the entire service on the building, which could in essence, in some instances, make the installation of an alternative energy system cost prohibitive.

You've got to weigh safety, with the ability to accomplish what you're trying to accomplish. And, and that's one of the main concerns for calling that one of the service disconnects in 230-70, because it - there's other requirements in 705 for placarding, and, and, making sure you disconnect the, all of the conductors at that interconnection point.

So the Panel was very adamant that they felt they had covered safety, but they wanted to have - not include that as one of the service disconnects, to that they wouldn't be - so that the end user wouldn't be forced in that instance to, like I say, change out the entire service just because they wanted to add an alternative energy system - without compromising
safety, like I said. Thank you.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name and affiliation, and whether you are speaking in support, or against the motion. Microphone three, please.

JASON FISHER: Thank you. Jason Fisher, again representing SEIA, speaking against this motion. As with the previous proposed motion, I again have procedural concerns with regards to this motion, since the 2019 Motions Committee Report shows different language than that which is displayed on the screen, and it's different than the original motion - because according to that report, there was a, a effort to strike an entire sentence, and now it - we have something where we're just striking a single word.

So again, I, I have concerns, personal, that this motion is out of order, but since it is there, again, with my apologies, I have to speak against it.

This proposed motion presents some major technical problems for users of the code. This motion is to change language that the Technical Committee deliberated for many hours, through both First and Second Revision meetings, as well as in multiple Task Group meetings. This was not language that was added
in the Second Revision. It started in the First Revision, from many public inputs and comments.

It's also worth noting that this motion if passed would impact any source interconnection that is interconnected with the primary source. It's not just solar, but it's any parallel connected source, such as a energy storage system generator, etc. The language as the Committee wrote it, that these are not service disconnects is true, consistent with how the code has been discussed, and taught for decades. If this sentence was revised as the submitter's request, this section would create a code conflict for many users of the code, since it seems to indicate that other sections that have been referred to would not apply.

So something that many folks in this room might not know about, because it was all new, is because of the hard work of my fellow Committee members, and those on other committees such as CMP 13, concerns over the ability to have indication of the presence of, ready access to, and the control of on site power sources has been addressed substantially in the 2020 Second Draft. Regardless of the type of on site power source, there are now specific requirements for identification of those sources, disconnection of those sources, and ready access to those disconnects,
etc. This — I commend all the committees who worked hard to look forward into the requirements that were the new challenges that we're going to be faced with the interconnection of all these new sources; and that has been done in the relevant articles for those sources.

So again, I'd ask the NFPA Membership to reject this motion. It's better with it.

JAMES GOLINVEAUX: Thank you very much.

Microphone four, please.

JOHN KOVACICH: Thank you, Mr. Chair. John Kovacich, UL LLC, speaking on behalf of the Electrical Section of NFPA as its official representative, and speaking for the motion.

The Electrical Section had its business meeting on Tuesday of this week, and the Section voted to support the motion on the floor. Ladies and gentlemen of this body, I ask for your support in voting for this motion. Thank you.

JAMES GOLINVEAUX: Thank you. And I'm going to go in order of the microphone here. I'm going to go back to four one more time.

LEO ZIEMAN: That's all right. If they want to go ahead first, they can.

JAMES GOLINVEAUX: Microphone four.
LEO ZIEMAN: Oh, I'm sorry. Leo Zieman, with Florida Power and Light, and Edison Electric Institute, and also an alternative voting member for Panel 4, and I speak in favor of this motion.

There were people that came up to these microphones, both in for and against motions, and other amendments. And they spoke about how electrons, electricity doesn't care where it comes from, or where it goes to. The direction if it doesn't matter. It's gonna flow. So here we go - we have a point of connection with a utility, and that is called a disconnecting means. When you have that point there, regardless of whether the premise is using load, or it's actually generating back onto the grid. So therefore, these disconnect means that we were talking about, applies for both load and source.

Again, I will plead to the body to vote in favor of this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Microphone two.

MATT PACE: Thank you, Mr. Chair. My name is Matt Pace, representing the IAFF. I'm also a primary representative on Code Panel 4, and I'm speaking against the measure.

I'm going to make two very brief, short comments. The first one is that in very simple terms,
which is how I have to represent this to the Fire
Service - is that what this could do is rollack
successes that we've had in trying to put disconnects
at a readily accessible location.

We have had great success in recently getting
the emergency disconnect for the utility on the
outside of one and two family homes. This could
eliminate the possibility of putting that disconnect
on the outside. That's going backwards.

The other comment that I'm going to make is
that on the Panel, this passed by a 17 to 1 vote. The
fact that we are even here discussing this almost
means why do we spend our time on code-making panels,
when one person can bring us to a vote of hundreds of
people that are not even involved the code-making
panel, and the hundreds of hours of discussions. I
urge you to vote no on this. Thank you.

JAMES GOLINVEAUX: Thank you. And standing in
order at the microphone - microphone two again.

FRED HARTWELL: Thank you, Mr. Chairman. Fred
Hartwell, speaking for myself, and speaking against
the motion.

In this case, I'm, I'm sorry - I disagree with
the motion's submitter on this one. I don't think
this quacks like a duck, swims like a duck, or does
anything else like a duck. I don't think it's a
service disconnect. It's not necessary to call it a
service disconnect, in order to meet the safety
objectives; and we are in Chapter 7 of the code. I
think that Panel 4 is well within its rights, and
within the, the commonly understood function of these,
to create this requirement.

As I said, I, I, I do have a serious technical
quibble with the outcome of the prior action that we
took - well, the - and which is why I changed my vote
on it from this Electrical Section until - to tonight.
But in this case, it's, it's not necessary to do that.
I think that we should support Panel 4 on this one.

JAMES GOLINVEAUX: Okay. Thank you.
Microphone number four, please.

TIM CROUSHORE: Thank you, Mr. Chairman. Tim
Croushore, representative of the electric utility
industry, as a consultant to the Edison Electric
Institute. Call your attention to the second to the
last sentence --

JAMES GOLINVEAUX: Are you speaking for or
against the motion, please?

TIM CROUSHORE: My apologies. Speaking for the
motion.

JAMES GOLINVEAUX: Thank you.
TIM CROUSHORE: Pay particular attention to the second to the last sentence. You have service conductors. You have service. This disconnect is connected to the service conductors, with nothing in between. This is a service disconnecting means. Okay? By the definition that they're putting in the next to the last sentence, that's exactly what this is. So - and I appreciate Mr. Pace's requirements; vehemently all through the process, we have been against not calling this a service disconnecting means. We have been trying to push all the requirements of Part 6 of Article 230, which covers Article 230-70, 71, 72, all the way through 86 - which is the firefighter disconnect map.

So everything that you see is all included. All we're saying is this is a service disconnecting means. If you don't call this a service disconnecting means, the firefighters can't deal with that section in 230-86. So to have a single disconnecting means for one and two family dwellings, this has to be considered as a service disconnecting means. Thank you.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-46 to Accept an Identifiable Part of Public Comment 315? Mr.
Johnston, do you have any final comment?

MICHAEL JOHNSTON: I have nothing further, Mr. Chair.

JAMES GOLINVEAUX: Thank you. Before we vote, let we restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 315. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results of the ballot is: 246 in favor of the motion; 132 opposed to the motion. The motion has passed.

Now let's proceed to the discussion on Certified Amending Motion 70-47. Microphone four, please.

HOWARD HERNDON: Howard Herndon, representing PEARL for Motion 70-47, Reject Second Revision 7517.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject Second Revision No. 7517. Is there a second?

UNIDENTIFIED SPEAKER: Second.
Dear Ms. Bellis, and Ms Fuller;

The purpose of this e-mail is to address the two appeals in front of the NFPA Standards Council from Mr. Jason Fisher and Mr. Justin Baca representing the Solar Energy Industries Association (SEIA).

I respectfully request the Standards Council deny both appeals as the NFPA process was properly followed.

I am the submitter of both Certified Amending Motions #70-45 and #70-46. These motions were properly moved on the floor of the Technical Session and after deliberations, both were voted and passed successfully by a wide margin. The vote count on 70-45 was 285 For The Amendment and 96 Against the amendment. The vote count on 70-46 was 246 For The Amendment and 132 Against the amendment.

During the process to certify both amending motions, I worked directly with Linda Fuller, Senior Member, Standards Operations in Code and Standards Administration to create these motions based on my submitted NITMAMs by the proper due date. Ms. Fuller and I communicated several times by e-mail, telephone and face-to-face ahead of the Technical Session to make sure these CAMs were proper according to the Regulations Governing the Development of NFPA Standards (Regulations). It is my understanding from Ms. Fuller, that the Motions Committee did review these CAMs thoroughly to assure their compliance with the Regulations. Both CAMs were properly placed on the Technical Session agenda that was followed by the Chair of the session. Both CAMs were properly presented by the Chair, were properly displayed on the screens, and had opportunity for discussion before the votes. I had the opportunity to properly address the motions as did other NFPA members have the opportunity to debate the motions.
As noted in my discussion of the floor of the Technical Session, both of these CAMs were discussed at length at the Electrical Section Meeting and both were supported after technical discussions from the Electrical Section members.

Mr. Michael Johnson and Mr. Mark Early presided over the Electrical Section Meeting.

CAM 70-45 - At the Electrical Section Meeting, members of Code Making Panel 5 (CMP-5) the technical committee on Article 250 covering the issue of grounding and bonding, spoke on CAM 70-45. Several CMP-5 members talked about the technical problems presented in proposed section 705.11 (D) related to grounding and bonding. In addition, CMP-5 had created a new Section 250.25 which would properly address the grounding and bonding issue attempting to be address by the language proposed by CMP-4 in 705.11 (D). It was urged to support the CAM 70-45 and it was voted at the Electrical Section to support this CAM.

CAM 70-46 - At the Electrical Section Meeting, members of Code Making Panel 10 (CMP-10) the technical committee on Article 230 dealing with the issue of services and the service disconnecting means spoke on CAM 70-46. Mr. James Dollard spoke about the change in the definition of "service" in the NEC that CMP-10 revised this cycle and that the disconnect identified in 705.11 (F) would be indeed be a service disconnecting means. He also discussed that there were several attempts to increase the maximum number of disconnects in Section 230.71 beyond the long standing number of 6. Each of these were rejected by CMP-10. It was urged to support the CAM 70-46 and it was voted at the Electrical Section to support this CAM.

There is no previous text in the 2017 NEC for either section 705.11 (D) or 705.11 (F). Those particular two revisions would have created conflicting language in the NEC and would have relaxed requirements that would decrease safety in these installations.

Therefore, I respectfully request that the NFPA Standards Council deny both of these appeals.

Thank you.

Timothy M. Croushore, P.E.
Dear Ms. Bellis;

The purpose of this e-mail is to respond to the attached NFPA Notification of the Amendment Ballot on 70-46 by CMP-4 and provide my input related to the direction of the Standards Council.

I am a representative for the electric utility industry as a consultant for the Edison Electric Institute. I am the submitter of Certified Amending Motion #70-46. This motion was properly moved on the floor of the Technical Session and after deliberations, was voted and passed successfully by a wide margin. However, this motion did not pass ballot in CMP-4.

I am not appealing the ballot of CMP-4, rather I support the direction given in Table 1 of Regulations Governing the Development of NFPA Standards for this situation. Since there is no previous text in the 2017 NEC for section 705.11 (F), I am in complete agreement with the elimination of this particular section. In my ballot, I stated that only the second sentence should be deleted. However, upon further review of the discussion in the CMP-4 ballot, I believe the entire section should be deleted and not appear in the 2020 NEC.

This particular revision in 705.11(F) if allowed to appear as originally proposed by CMP-4 would create conflicting language in the NEC and would have potentially relaxed requirements that would decrease safety in these interconnected electric power installations covered by Article 705.

In short, many of the alternate generation representatives on CMP-4 do not want this disconnect between the electric utility service and the premises wiring to abide by the requirements contained in Part VI. Service Equipment Disconnecting Means in Article 230. The primary purpose of the service disconnecting means covered by these sections is to be able to safely separate and isolate the premises wiring system from the electric utility both for normal operation and during emergencies. Specifically, the alternate generation representatives do not want to be limited by the longstanding 6 disconnect requirement in 230.71, the grouping requirement in 230.72, or the single disconnect for one and two family dwellings in 230.85.

There is no technical reason why the disconnect for an interconnected electric power production system is unique or require special Code treatment. Further, this disconnect should be covered by all of the requirements in Part VI. Service Equipment Disconnecting Means in Article 230. As discussed
Johnston, do you have any final comment?

MICHAEL JOHNSTON: I have nothing further, Mr. Chair.

JAMES GOLINVEAUX: Thank you. Before we vote, let we restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 315. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results of the ballot is: 246 in favor of the motion; 132 opposed to the motion. The motion has passed.

Now let's proceed to the discussion on Certified Amending Motion 70-47. Microphone four, please.

HOWARD HERNDON: Howard Herndon, representing PEARL for Motion 70-47, Reject Second Revision 7517.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Reject Second Revision No. 7517. Is there a second?

UNIDENTIFIED SPEAKER: Second.
JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

HOWARD HERNDON: Quickly, we feel this is new material, and we feel this is a broad brush, sweeping requirement that is not necessary; and some of this equipment is reconditionable.

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position.

MICHAEL JOHNSTON: Thank you, Mr. Chair. The NEC Correlating Committee reviewed the complete record of both public input and comments to ensure there was no new material being introduced. The conclusion was that no new material related to either the definition, or the rules related to it, was introduced. There are no apparent conflicts or correlation issues. I would like to defer to the Chair of Code Panel 13, Linda Little, at microphone three for some technical response.

LINDA LITTLE: Thank you. My name is Linda Little. I'm the Chairman of Code Panel 3. I represent IBEW, and I speak in opposition to the motion. We - anybody on the panel had ample opportunity to discuss this issue. Several manufacturers are represented on the Panel. I ask you to reject this - I - and support the Panel action.
Thank you.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name, affiliation, and whether you're speaking in support, or against the motion. Microphone two, please.

BARRY RODGERS: I am Barry Rodgers. I represent Schneider Electric. We are against this motion.

We support the action by the Code Panel to include this language. Safety is the major reason to adopt these changes. For the reasons already been noted, these devices should not be reconditioned. I urge you to vote against this motion.

JAMES GOLINVEAUX: Thank you. Microphone six, please.

THOMAS DOMITROVICH: Yes. My name is Thomas Domitrovich. I am with Eaton, and I'm speaking against this position - or the motion on the table. I think my little run back here gave me a - a - my second breath.

These changes identify those devices that are not designed, nor expected to be taken apart in the field and put back together, should they reach a state that they need to be restored to an operating
condition. If they no longer function, they cannot be reconditioned, or refurbished. They should be replaced. These are safety items.

We should continue to support the actions of the Panels, and continue to reject these motions that seek to remove the ability to remove the, the allowance of reconditioning this equipment. Thank you.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-47 to Reject Second Revision No. 7517? Mr. Johnston, do you have any final comments?

MICHAEL JOHNSTON: Nothing further, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Reject Second Revision No. 7517. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on the screen, touch 'One' - or touch 'Yes'. Let me reread that.

If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote. Sorry about that.
The voting will close in five seconds.
The voting is closed.
The results of the ballot are: 12 in favor of the motion; 356 against the motion. The motion has failed.

Now let's proceed with the discussion on Certified Amending Motion 70-48. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and I move to Accept Public Comment 501.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Accept Public Comment No. 501. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: I believe I got my second there. Correct? Okay. We do have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: First of all, we're moving into something completely different, nothing to do with anything that we've been dealing with. We're moving basically to fire testing to plenum cables.

This motion is intended to help in the usability of the code for most users. We all know that the requirements for wiring in ducts and plenums
MEMORANDUM

(AMENDMENT)

TO: Code-Making Panel 3

FROM: Sarah Caldwell, Technical Committee Administrator

DATE: July 10, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to return to previous edition text.

17 Members Eligible to Vote
4 Ballots Not Returned (Bassett, Casparro, Krueger, Sleights)

The number of votes needed to recommend approval of the Association Action is 9.
(17 eligible to vote - 4 not returned - 0 abstentions = 13 × 0.66 = 8.58)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2019 NFPA Tech Session are now available at: www.nfpa.org/techsession.
## AMENDMENT BALLOT TEXT

**Code Making Panel 3**  
NFPA 70®,** National Electrical Code®**  
Amendment No. 70-48: Accept Public Comment No. 501  
June 2019  

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

**725.154** Applications of Listed Class 2, Class 3, and PLTC Cables.  
Class 2, Class 3, and PLTC cables shall comply with any of the requirements described in 725.154(A) through (C) and as indicated in Table 725.154.  
Table 725.154 Applications of Listed Class 2, Class 3, CMUC, and PLTC Cables in Buildings

<table>
<thead>
<tr>
<th>Applications</th>
<th>CL2P &amp; CL3P</th>
<th>CL2R &amp; CL3R</th>
<th>CL2 &amp; CL3</th>
<th>CL2X &amp; CL3X</th>
<th>CMUC</th>
<th>PLTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>In ducts specifically fabricated for environmental air as described in 300.22(B)</td>
<td>Exposed to airflow</td>
<td>In fabricated ducts</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(B)</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In other spaces used for environmental air (plenums) as described in 300.22(C)</td>
<td>Exposed to airflow</td>
<td>In other spaces used for environmental air</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(C)</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Supported by open metal cable trays</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Supported by solid bottom metal cable trays with solid metal covers</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In risers</td>
<td>In vertical runs</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Applications</td>
<td>CL2P &amp; CL3P</td>
<td>CL2R &amp; CL3R</td>
<td>CL2 &amp; CL3</td>
<td>CL2X &amp; CL3X</td>
<td>CMUC</td>
<td>PLTC</td>
</tr>
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<td>-------------</td>
<td>-----------</td>
<td>-------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>In metal raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In fireproof shafts</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In riser communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In one- and two-family dwellings</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In one- and two-family dwellings</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In multifamily dwellings</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In nonconcealed spaces</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>Supported by cable trays</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>Under carpet, modular flooring, and planks</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In cross-connect arrays</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In any raceway recognized in Chapter 3</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In riser communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>Applications</td>
<td>CL2P &amp; CL3P</td>
<td>CL2R &amp; CL3R</td>
<td>CL2 &amp; CL3</td>
<td>CL2X &amp; CL3X</td>
<td>CMUC</td>
<td>PLTC</td>
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<td>----------------------------------------------------------------------------</td>
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<td>-----------</td>
<td>-------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
<td></td>
</tr>
<tr>
<td>In general-purpose communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
</tr>
<tr>
<td>In general-purpose cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
<td>N</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 725.130 through 725.143.

(A) Class 2 and Class 3 Cable Substitutions.

The substitutions for Class 2 and Class 3 cables listed in Table 725.154(A) and illustrated in Figure 725.154(A) shall be permitted. Where substitute cables are installed, the wiring requirements of Article 725, Parts I and III, shall apply.

Informational Note: For information on Types CMP, CMR, CM, and CMX, see 805.179.

Table 725.154(A) Cable Substitutions

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL3P</td>
<td>CMP</td>
</tr>
<tr>
<td>CL2P</td>
<td>CMP, CL3P</td>
</tr>
<tr>
<td>CL3R</td>
<td>CMP, CL3P, CMR</td>
</tr>
<tr>
<td>CL2R</td>
<td>CMP, CL3P, CL2P, CMR, CM, CL3R</td>
</tr>
<tr>
<td>PLTC</td>
<td>CMP, CL3P, CMR, CMR, CL3R, CMG, CM, PLTC</td>
</tr>
<tr>
<td>CL3</td>
<td>CMP, CL3P, CMR, CL3R, CMG, CM, PLTC, CL3</td>
</tr>
<tr>
<td>CL3X</td>
<td>CMP, CL3P, CMR, CL3R, CMG, CM, PLTC, CL3, CMX</td>
</tr>
</tbody>
</table>

Figure 725.154(A) Cable Substitution Hierarchy.
Class 2, Class 3, PLTC Circuit Integrity (CI) Cable or Electrical Circuit Protective System. Circuit integrity (CI) cable or a listed electrical circuit protective system shall be permitted for use in remote control, signaling, or power-limited systems that supply critical circuits to ensure survivability for continued circuit operation for a specified time under fire conditions.

Thermocouple Circuits. Conductors in Type PLTC cables used for Class 2 thermocouple circuits shall be permitted to be any of the materials used for thermocouple extension wire.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-48 by the membership by vote at Tech Session, the recommended text would revert to the previous edition text.

725.154 Applications of Listed Class 2, Class 3, and PLTC Cables. Class 2, Class 3, and PLTC cables shall comply with any of the requirements described in 725.154(A) through (C) and as indicated in Table 725.154. Table 725.154 Applications of Listed Class 2, Class 3, CMUC, and PLTC Cables in Buildings
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<th>Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CL2P &amp; CL3P</td>
</tr>
<tr>
<td>In fabricated ducts as described in 300.22(B)</td>
<td>Y*</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 as described in 300.22(C)</td>
<td>Y*</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(C)</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>
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<tr>
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<td>Y*</td>
</tr>
<tr>
<td>In risers</td>
<td>Y*</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>In general</td>
<td>Y*</td>
</tr>
<tr>
<td>In one- and two-family dwellings</td>
<td>Y*</td>
</tr>
<tr>
<td>In multifamily dwellings</td>
<td>Y*</td>
</tr>
<tr>
<td>In nonconcealed spaces</td>
<td>Y*</td>
</tr>
<tr>
<td>Supported by cable trays</td>
<td>Y*</td>
</tr>
<tr>
<td>Under carpet</td>
<td>N</td>
</tr>
<tr>
<td>In cross-connect arrays</td>
<td>Y*</td>
</tr>
<tr>
<td>Applications</td>
<td>CL2P &amp; CL3P</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>-------------</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 725.130 through 725.143.

(A) Class 2 and Class 3 Cable Substitutions.
The substitutions for Class 2 and Class 3 cables listed in Table 725.154(A) and illustrated in Figure 725.154(A) shall be permitted. Where substitute cables are installed, the wiring requirements of Article 725, Parts I and III, shall apply.

Informational Note: For information on Types CMP, CMR, CM, and CMX, see 805.179.

Table 725.154(A) Cable Substitutions

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL3P</td>
<td>CMP</td>
</tr>
<tr>
<td>CL2P</td>
<td>CMP, CL3P</td>
</tr>
<tr>
<td>CL3R</td>
<td>CMP, CL3P, CMR</td>
</tr>
<tr>
<td>CL2R</td>
<td>CMP, CL3P, CL2P, CMR, CL3R</td>
</tr>
<tr>
<td>PLTC</td>
<td>CMP, CL3P, CMR, CL3R, CMG, CM, PLTC</td>
</tr>
<tr>
<td>CL3</td>
<td>CMP, CL3P, CMR, CL3R, CMG, CM, PLTC</td>
</tr>
<tr>
<td>CL3X</td>
<td>CMP, CL3P, CMR, CL3R, CMG, CM, PLTC, CL3, CMX</td>
</tr>
</tbody>
</table>

Figure 725.154(A) Cable Substitution Hierarchy.
(B) Class 2, Class 3, PLTC Circuit Integrity (CI) Cable or Electrical Circuit Protective System. Circuit integrity (CI) cable or a listed electrical circuit protective system shall be permitted for use in remote control, signaling, or power-limited systems that supply critical circuits to ensure survivability for continued circuit operation for a specified time under fire conditions.

(C) Thermocouple Circuits.

Conductors in Type PLTC cables used for Class 2 thermocouple circuits shall be permitted to be any of the materials used for thermocouple extension wire.
Amendment No. 70-48: Accept Public Comment No. 501

Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.

Eligible to Vote: 17
Not Returned: 4
Douglas P. Bassett, Paul J. Casparro, John E. Sleights, Kyle Krueger

<table>
<thead>
<tr>
<th>Vote Selection</th>
<th>Votes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agree</strong></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Shane M. Clary</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Larry G. Brewer</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Steven D. Burlison</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Richard S. Anderson</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Charles J. Palmieri</td>
<td></td>
<td>agree</td>
</tr>
<tr>
<td>William C. Szeto</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Raymond W. Horner</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Steven J. Owen</td>
<td></td>
<td>AGREE</td>
</tr>
<tr>
<td><strong>Disagree</strong></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>David A. Pace</td>
<td></td>
<td>I do not agree with this proposed change.</td>
</tr>
<tr>
<td>Robert A. Jones</td>
<td></td>
<td>I think the change we made is appropriate, however our committee statement for FR 8945 is confusing. Reverting back to the 2017 code text is the best action to take and let's look at this again for the 2023 NEC.</td>
</tr>
</tbody>
</table>
Randolph J. Ivans

The parent row description already describes the row as applying to cables installed in ducts specifically fabricated for environmental air. Having a sub-row “in fabricated ducts” is repetitive to the parent row description and adds no additional information or differentiation form the other sub-row. The top sub-row is intended for cables that are directly exposed to the airflow. Hence the reason that only plenum rated cables are permitted. The bottom sub-row establishes the requirements for cables that are NOT exposed to the airflow but are enclosed in a raceway. This permits other types of cables to be used as shown in the other sub-row columns. The current wording “exposed to airflow” accurately describes the installation conditions the requirements in the sub-row are intended for; cables that are installed in ducts specifically fabricated for environmental air that are exposed to the airflow and are not enclosed in a raceway.

George Allan Zimmerman

The current wording “exposed to airflow” accurately describes the installation conditions the requirements in the sub-row are intended for; cables that are installed in ducts specifically fabricated for environmental air that are exposed to the airflow and are not enclosed in a raceway. I agree with the comments of Randy Ivans, that the proposed new wording is repetitive and adds no differentiation. I believe the best approach is to revert to the 2017 wording and address this in the 2023 cycle.

Chad M. Jones

I agree with Randy's assessment, can't say it any better. I also agree with Robert that we should revert to 2017 and try again for 2023.

Abstain

0
The voting will close in five seconds.
The voting is closed.
The results of the ballot are: 12 in favor of the motion; 356 against the motion. The motion has failed.

Now let's proceed with the discussion on Certified Amending Motion 70-48. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and I move to Accept Public Comment 501.

JAMES GOLINVEAUX: Thank you. There's a motion on the floor to Accept Public Comment No. 501. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: I believe I got my second there. Correct? Okay. We do have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: First of all, we're moving into something completely different, nothing to do with anything that we've been dealing with. We're moving basically to fire testing to plenum cables.

This motion is intended to help in the usability of the code for most users. We all know that the requirements for wiring in ducts and plenums
is the same in Articles 725, 760, 770, 800, which now becomes 805, 820, 830, and 40.

Therefore, using the same terms is what's most helpful to the user, and will improve the usability of the code.

Panel 3's responsible for Articles 725 and 760, which are some of the articles dealing plenums and ducts. Panel 16's responsible Article 770, and the all Articles in Chapter Eight, the remaining Articles deal with plenums and ducts.

Many years ago, Standards Council stated that NFPA 90A was the committee with jurisdiction over requirements for materials, including wires and cables in ducts and plenums, and that the NEC has to be consistent with 90A. I'm a member of 90 - of course, I'm not speaking for the Committee.

Article 770 and 800 from Chapter Eight, where 800 combined, combined the previous 800, now 805, 820, 830, 840, have tables in Section 154, with the same information as the, as the table that we're discussing. The discrepancies in the lines addressing exposed to the airflow, instead of noting the actual location - fabricated ducts or plenums, which in the NEC we call spaces used for environmental air.

Article 725 and 760 talk about exposed to the
air flow, instead of stating the actual location, like
every other line in the table, and like the tables in
other relevant (unintelligible) tables. You can't see
on the screen, but if you look at the Agenda, you can
see it.

This is an inconsistency. It means the user
may be confused as to whether tables in the various
articles mean the same. Cables are exposed to air
flow in all other locations, including risers, trays,
shaft, and so on. NFPA 90A, which is where we should
really look for, does not use the term exposed to the
air flow, other than when dealing with removal of
abandoned cable; does not use the phrase for
(unintelligible) for cable fire test requirements.

You will hear that this is not - it is not
essential that terms in 735 and 60 be aligned with the
Articles from Ballot 16. It's true. But having
alignment is helpful to the user, and not alignment is
not helpful. You will hear the terms fabricated
ducts, and other space (unintelligible) air, already
in the first (unintelligible) column. But the issue
is that the language should be consistent within
articles. Column in the table talk about where the
cables are.

There is no argument, adding consistency will
create more usability to the code, and not cause any problem. It is important that we make the code more user friendly. Thank you.

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position?

MICHAEL JOHNSTON: Thank you, Mr. Chair. There were no correlating issues or conflicts identified by the Correlating Committee, and I'd like to defer to the Chair of Code Panel 3, Robert Jones, at microphone three, please.

ROBERT JONES: Thank you, Mr. Chairman. My name is Robert Jones. I represent Independent Electrical Contractors. I am Chairman of Panel 3. And on behalf of Panel 3, I am speaking against this motion.

Public Comment 501 was rejected by Panel 3 because the phrase 'exposed to air flow' is explanatory, as well as descriptive. The definition is not necessary to understand that cables installed in fabricated ducts will be exposed to air flow.

I ask all voting members to vote against this, this motion, in support of Panel 3.

JAMES GOLINVEAUX: Thank you. With that, we will open up the debate on the motion. Please provide your name, affiliation, and whether you are speaking
Atkinson-Baker, Inc.
www.depo.com

1 in support, or against the motion. Microphone five, please.

GEORGE STRANIERO: George Straniero, AFC Cable Systems, speaking in favor of the motion; member of Panel 398 but speaking on the behalf of myself.

If you look at all the application tables in 725, 760, 770 and 800, they're - they're all consistent, in terms of the application and the headings. Exposed to the air flow that was put in for 725 and 760 is out of context with the other application tables, and out of context with the applications stated in those tables themselves. And those tables, it's - the applications are listed as - in a raceway, in a fireproof shaft, in a cable tray. The application that's being described is actually in a fabricated duct, and that's the language that should be included in the table - not exposed to airflow.

Thank you.

JAMES GOLINVEAUX: Thank you. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International for NAFRA, and in support.

Again, the - you did not hear from the Chairman of the, of the Panel, anything that is wrong with making the change to improve the usability of the
code. You just heard that the Committee didn't like it, but for no apparent reason. The - that - you heard from George Straniero that consistency is to make the change, please. Thank you.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-48 to Accept Public Comment No. 501? Mr. Johnston, do you have any final comment?

MICHAEL JOHNSTON: Nothing further, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 501. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are 192 in favor of the motion; 123 against the motion. The motion has passed.

Now let's proceed with the discussion on Certified Amending Motion 70-49. Microphone four, please.
To: NFPA Standards Council  
From: Marcelo M. Hirschler (GBH International)  
Date: July 11, 2019  

CAMs NFPA 70-48 and NFPA 70-49  

I have been informed that amendment ballots NFPA 70-48 and 70-49 have failed committee ballot. I am hereby appealing the recommendation of the committee. In both cases the vote was in favor of approving the amendments by 8-5, which does not reach the two thirds majority. However, it is clear that both the assembly and the majority of the committee voting members support the change introduced by the CAMs (same change for both motions, in articles 725 and 760).

1. The motions were intended to help in the usability of the code for most users. The requirements for wiring in ducts and plenums are the same in articles 725, 760, 770, 800 (now 805), 820, 830 and 840. Therefore, using the same terms is most helpful to the users and improves the usability of the code.

2. Panel 3 is responsible for articles 725 and 760 (which are some articles dealing with plenums and ducts) while panel 16 is responsible for article 770 and all articles in chapter 8 (the remaining articles dealing with plenums and ducts).

3. Many years ago, Standards Council stated that NFPA 90A had jurisdiction over requirements for materials (including wires and cables) in ducts and plenums and that the NEC had to be consistent with what NFPA 90A required. I am a member of 90A but am not speaking for the committee.

4. Articles 770 and article 800 (from chapter 8, where article 800 combined previous 800, now 805, 820, 830 and 840) have tables in section 154 which has the same information as this table. The discrepancy is in the lines addressing “exposed to airflow” instead of noting the actual location: fabricated ducts or plenums, which in the NEC we call “other spaces used for environmental air”. Articles 725 and 760 talk about “exposed to airflow” instead of stating the actual location, like every other line in the table and like the tables in the other relevant articles. This is an inconsistency and it means that the user may be confused as to whether the tables in the various articles mean the same.

5. Cables are exposed to airflow in all other locations also, including risers, trays, shafts and so on.

6. NFPA 90A does not use the term “exposed to airflow” other than when dealing with removal of abandoned cable and it does not use the phrase for any cable fire test requirements.

7. It is not essential that the terms in 725 and 760 be aligned with those in the articles from panel 16. That is true but it is not helpful to the user.

8. The terms fabricated ducts and other spaces used for environmental air are already in the first column, but the key issue is that the language be consistent and that the column in the table state where the cables are.

9. There is no argument that adding consistency will not cause a problem in the code but it is also clear making the change adds usability to the code.

In summary, I urge standards council to approve the amendments voted on by the membership.

Yours sincerely
I request the Standards Council to deny the appeal for CAMs 70-48 and 70-49. CMP 3 was trying to clarify a condition under the column “Applications” in Tables 725.154 and 760.154. The first column in the first row already describes the condition as applying to fabricated ducts and repeating “in fabricated ducts” in the second column adds no additional information. CMP 3 took the appropriate action with FR 8945 and FR 8950; however, our committee statement is confusing and did not contain a good technical reason for making the change. By disagreeing with the motions, Tables 725.154 and 760.154 will remain as they appear in the 2017 NEC and align with Tables 770.154(a), 800.154(a), and 830.154(a). This should satisfy the concerns of the submitter of the motions. I am sure CMP 3 will receive public input and will be able to address this issue during the next revision cycle.

Robert A. Jones
Chairman CMP 3
MEMORANDUM

(AMENDMENT)

TO: Code-Making Panel 3

FROM: Sarah Caldwell, Technical Committee Administrator

DATE: July 10, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to return to previous edition text.

17 Members Eligible to Vote
4 Ballots Not Returned (Bassett, Casparro, Krueger, Sleights)

The number of votes needed to recommend approval of the Association Action is 9.
(17 eligible to vote - 4 not returned - 0 abstentions = 13 × 0.66 = 8.58)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2019 NFPA Tech Session are now available at:
www.nfpa.org/techsession.
AMENDMENT BALLOT TEXT

Code Making Panel 3
NFPA 70®, National Electrical Code®
Amendment No. 70-49: Accept Public Comment No. 500
June 2019

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

760.154 Applications of Listed PLFA Cables. PLFA cables shall comply with the requirements described in Table 760.154 or where cable substitutions are made as shown in 760.154(A). Where substitute cables are installed, the wiring requirements of Article 760, Parts I and III, shall apply. Types FPLP-CI, FPLR-CI, and FPL-CI cables shall be permitted to be installed to provide 2-hour circuit integrity rated cables.

Table 760.154 Applications of Listed PLFA Cables in Buildings

<table>
<thead>
<tr>
<th>Applications</th>
<th>FPLP &amp; FPLP-CI</th>
<th>FPLR &amp; FPLR-CI</th>
<th>Cable Type FPL &amp; FPL-CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>In ducts specifically fabricated for environmental air as described in 300.22(B)</td>
<td>Exposed to airflow in fabricated ducts</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(B)</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In other spaces used for environmental air (plenums) as described in 300.22(C)</td>
<td>Exposed to airflow in other spaces used for environmental air</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(C)</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Supported by open metal cable trays</td>
<td>Y*</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Applications</td>
<td>FPLP &amp; FPLP-CI</td>
<td>FPLR &amp; FPLR-CI</td>
<td>FPL &amp; FPL-CI</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>In risers</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In vertical runs</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In metal raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In fireproof shafts</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In plenum cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In riser communications raceways</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In riser cable routing assemblies</td>
<td>Y*</td>
<td>Y*</td>
<td>N</td>
</tr>
<tr>
<td>In one- and two-family dwellings</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>Within buildings in other than air-handling spaces and risers</td>
<td>General</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>Supported by cable trays</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In any raceway recognized in Chapter 3</td>
<td>Y*</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>In plenum communications raceway</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>
</tr>
<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 760.130 through 760.145.

(A) Fire Alarm Cable Substitutions.
The substitutions for fire alarm cables listed in Table 760.154(A) and illustrated in Figure 760.154(A) shall be permitted. Where substitute cables are installed, the wiring requirements of Article 760, Parts I and III, shall apply.

Informational Note: For information on communications cables (CMP, CMR, CMG, CM), see 805.179.

Figure 760.154(A) Cable Substitution Hierarchy.

Table 760.154(A) Cable Substitutions

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPLP</td>
<td>CMP</td>
</tr>
<tr>
<td>FPLR</td>
<td>CMP, FPLP, CMR</td>
</tr>
<tr>
<td>FPL</td>
<td>CMP, FPLP, CMR, FPLR, CMG, CM</td>
</tr>
</tbody>
</table>

26 AWG minimum
**IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 70-49** by the membership by vote at Tech Session, the recommended text would revert to the previous edition text.

**760.154 Applications of Listed PLFA Cables.**
PLFA cables shall comply with the requirements described in Table 760.154 or where cable substitutions are made as shown in 760.154(A). Where substitute cables are installed, the wiring requirements of Article 760, Parts I and III, shall apply. Types FPLP-CI, FPLR-CI, and FPL-CI cables shall be permitted to be installed to provide 2-hour circuit integrity rated cables.

Table 760.154 Applications of Listed PLFA Cables in Buildings

<table>
<thead>
<tr>
<th>Applications</th>
<th>Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FPLP &amp; FPLP-CI</td>
</tr>
<tr>
<td></td>
<td>FPLR &amp; FPLR-CI</td>
</tr>
<tr>
<td></td>
<td>FPL &amp; FPL-CI</td>
</tr>
<tr>
<td>In fabricated ducts as described in 300.22(B)</td>
<td>Y*</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 as described in 300.22(C)</td>
<td>Y*</td>
</tr>
<tr>
<td>In metal raceway that complies with 300.22(C)</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>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>Y*</td>
</tr>
<tr>
<td>In vertical runs</td>
<td>Y*</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>Y*</td>
</tr>
<tr>
<td>General</td>
<td>Y*</td>
</tr>
<tr>
<td>Supported by cable trays</td>
<td>Y*</td>
</tr>
</tbody>
</table>

*Y* = Yes, *N* = No
<table>
<thead>
<tr>
<th>Applications</th>
<th>Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>In any raceway recognized in Chapter 3</td>
<td>FPLP &amp; FPLP-CI</td>
</tr>
<tr>
<td>In plenum communications raceway</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 760.130 through 760.145.

(A) Fire Alarm Cable Substitutions.
The substitutions for fire alarm cables listed in Table 760.154(A) and illustrated in Figure 760.154(A) shall be permitted. Where substitute cables are installed, the wiring requirements of Article 760, Parts I and III, shall apply.

Informational Note: For information on communications cables (CMP, CMR, CMG, CM), see 805.179.

Figure 760.154(A) Cable Substitution Hierarchy.
**Table 760.154(A) Cable Substitutions**

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Permitted Substitutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPLP</td>
<td>CMP</td>
</tr>
<tr>
<td>FPLR</td>
<td>CMP, FPLP, CMR</td>
</tr>
<tr>
<td>FPL</td>
<td>CMP, FPLP, CMR, FPLR, CMG, CM</td>
</tr>
</tbody>
</table>

Type CM—Communications wires and cables
Type FPL—Power-limited fire alarm cables

A → B Cable A shall be permitted to be used in place of cable B.

26 AWG minimum

Table 760.154(A) Cable Substitutions
Amendment No. 70-49: Accept Public Comment No. 500 Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.

<table>
<thead>
<tr>
<th>Vote Selection</th>
<th>Votes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>5</td>
<td>David A. Pace: I do not agree with this proposed change.</td>
</tr>
</tbody>
</table>
The parent row description already describes the row as applying to cables installed in ducts specifically fabricated for environmental air. Having a sub-row “in fabricated ducts” is repetitive to the parent row description and adds no additional information or differentiation form the other sub-row. The top sub-row is intended for cables that are directly exposed to the airflow. Hence the reason that only plenum rated cables are permitted. The bottom sub-row establishes the requirements for cables that are NOT exposed to the airflow but are enclosed in a raceway. This permits other types of cables to be used as shown in the other sub-row columns. The current wording “exposed to airflow” accurately describes the installation conditions the requirements in the sub-row are intended for; cables that are installed in ducts specifically fabricated for environmental air that are exposed to the airflow and are not enclosed in a raceway.

The current wording “exposed to airflow” accurately describes the installation conditions the requirements in the sub-row are intended for; cables that are installed in ducts specifically fabricated for environmental air that are exposed to the airflow and are not enclosed in a raceway. I agree with the comments of Randy Ivans, that the proposed new wording is repetitive and adds no differentiation. I believe the best approach is to revert to the 2017 wording and address this in the 2023 cycle.

I agree with Randy’s assessment, can’t say it any better. I also agree with Robert that we should revert to 2017 and try again for 2023.
code. You just heard that the Committee didn't like it, but for no apparent reason. The - that - you heard from George Straniero that consistency is to make the change, please. Thank you.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-48 to Accept Public Comment No. 501? Mr. Johnston, do you have any final comment?

MICHAEL JOHNSTON: Nothing further, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 501. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are 192 in favor of the motion; 123 against the motion. The motion has passed. Now let's proceed with the discussion on Certified Amending Motion 70-49. Microphone four, please.
MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and in support of the motion.

This is identical to what (unintelligible)

JAMES GOLINVEAUX: I'm sorry, Marcelo. You have to make the motion first.


JAMES GOLINVEAUX: I can't pick on you. My daughter would kill me.

(laughter)

JAMES GOLINVEAUX: So there is a motion on the floor to Accept Public Comment No. 500. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: I apologize one more time.

Marcelo Hirschler, GBH International, speaking for NAFRA, in support of the motion.

This motion is identical to the one we just voted on. This is on Article 60. The other one was Article 725. No other difference. Thank you.

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position, please?
MICHAEL JOHNSTON: Thank you, Mr. Chair. No correlating issues or conflicts were identified by the Correlating Committee. And I'd like to defer to the Chair of Code Panel 3, Robert Jones, at microphone number three, please.

ROBERT JONES: Thank you, Mr. Chairman. My name is Robert Jones. I'm representing Independent Electrical Contractors. I am Chairman of Panel 3. And I speak on behalf of Panel 3, in opposition to this, this motion.

But I also agree this is the same as the previous motion. The Panel acted the same way, with the same Panel Statement.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name, affiliation, and whether you are speaking in support of, or against the motion. Microphone five, please.

GEORGE STRANIERO: George Straniero, ARC Cable Systems, speaking in support. My same comments I mentioned previously apply here, as well. Thanks.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-49 to Accept a Public Comment No. 500? Microphone five.

DYAN ALECUMEN (phonetic): Dyan Alecumen,
speaking in favor of the motion. I just wanted to 
bring to the attention that the number on the board up 
there says 725, and we're discussing 760.

JAMES GOLINVEAUX: Okay.

MARCELO HIRSCHLER: Mr. Chairman, yeah - it, it 
should state 760 on all four --

JAMES GOLINVEAUX: You are correct.

MARCELO HIRSCHLER: -- screens.

JAMES GOLINVEAUX: You are correct. Okay?

Noted. Is there any further discussion on Motion 70-
49 to Accept a - Public Comment No. 500? Mr.
Johnston, any final comment?

MICHAEL JOHNSTON: No further comments, Mr.
Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, 
let me restate the motion. The motion on the floor is 
to Accept Public Comment No. 500. To vote, touch the 
'vote' button. If you wish to vote in support of the 
motion, and recommend the text on Screen One, touch 
'Yes'. If you wish to vote against the motion, and 
recommend the text on Screen Two, touch 'No'. Please 
record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 219 in favor of the motion;
90 against the motion. Therefore, the motion has passed.

Now let's proceed with the discussion on Certified Amending Motion 70-50. Microphone four, please.

CHRIS HUNTER: Thank you. I'm Chris Hunter with Serra Wire. I'd like to make a Motion to Reject Section Revision 7509.

JAMES GOLINVEAUX: Thank you. There is a motion on the floor to Reject Second Revision No. 7509. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

CHRIS HUNTER: Thank you. I'm Chris Hunter, with Serra Wire, in support of the motion.

Like in earlier motions, this language appeared in the Second Draft. It was not based on any similar language, or requirement that was considered in the First Draft.

Communications equipment is frequently reconditioned, and a new label is added. However, this requirement would require the removal of the original listing mark, which is unnecessary, and may result to damage to the equipment. Thank you.
To: NFPA Standards Council  
From: Marcelo M. Hirschler (GBH International)  
Date: July 11, 2019  

CAMs NFPA 70-48 and NFPA 70-49  

I have been informed that amendment ballots NFPA 70-48 and 70-49 have failed committee ballot. I am hereby appealing the recommendation of the committee. In both cases the vote was in favor of approving the amendments by 8-5, which does not reach the two thirds majority. However, it is clear that both the assembly and the majority of the committee voting members support the change introduced by the CAMs (same change for both motions, in articles 725 and 760).

1. The motions were intended to help in the usability of the code for most users. The requirements for wiring in ducts and plenums are the same in articles 725, 760, 770, 800 (now 805), 820, 830 and 840. Therefore, using the same terms is most helpful to the users and improves the usability of the code.

2. Panel 3 is responsible for articles 725 and 760 (which are some articles dealing with plenums and ducts) while panel 16 is responsible for article 770 and all articles in chapter 8 (the remaining articles dealing with plenums and ducts).

3. Many years ago, Standards Council stated that NFPA 90A had jurisdiction over requirements for materials (including wires and cables) in ducts and plenums and that the NEC had to be consistent with what NFPA 90A required. I am a member of 90A but am not speaking for the committee.

4. Articles 770 and article 800 (from chapter 8, where article 800 combined previous 800, now 805, 820, 830 and 840) have tables in section 154 which has the same information as this table. The discrepancy is in the lines addressing “exposed to airflow” instead of noting the actual location: fabricated ducts or plenums, which in the NEC we call “other spaces used for environmental air”. Articles 725 and 760 talk about “exposed to airflow” instead of stating the actual location, like every other line in the table and like the tables in the other relevant articles. This is an inconsistency and it means that the user may be confused as to whether the tables in the various articles mean the same.

5. Cables are exposed to airflow in all other locations also, including risers, trays, shafts and so on.

6. NFPA 90A does not use the term “exposed to airflow” other than when dealing with removal of abandoned cable and it does not use the phrase for any cable fire test requirements.

7. It is not essential that the terms in 725 and 760 be aligned with those in the articles from panel 16. That is true but it is not helpful to the user.

8. The terms fabricated ducts and other spaces used for environmental air are already in the first column, but the key issue is that the language be consistent and that the column in the table state where the cables are.

9. There is no argument that adding consistency will not cause a problem in the code but it is also clear making the change adds usability to the code.

In summary, I urge standards council to approve the amendments voted on by the membership.

Yours sincerely

[Signature]
I request the Standards Council to deny the appeal for CAMs 70-48 and 70-49. CMP 3 was trying to clarify a condition under the column “Applications” in Tables 725.154 and 760.154. The first column in the first row already describes the condition as applying to fabricated ducts and repeating “in fabricated ducts” in the second column adds no additional information. CMP 3 took the appropriate action with FR 8945 and FR 8950; however, our committee statement is confusing and did not contain a good technical reason for making the change. By disagreeing with the motions, Tables 725.154 and 760.154 will remain as they appear in the 2017 NEC and align with Tables 770.154(a), 800.154(a), and 830.154(a). This should satisfy the concerns of the submitter of the motions. I am sure CMP 3 will receive public input and will be able to address this issue during the next revision cycle.

Robert A. Jones
Chairman CMP 3
July 7, 2019

Ms. Dawn Michele Bellis
Standards Council Secretary, NFPA
1 Batterymarch Park
Quincy, MA 02169

Re: 2020 NEC; Certified Amending Motions for Reconditioned Equipment

Dear Secretary Bellis:

I respectfully request that the Standards Council reconsider the actions taken on Certified Amending Motions 70-13, 15, 16, 27, 28, 30, 31, 32, 33, 41, 42, 43, 44, 47, and 50 at the NFPA Technical meeting on June 20, 2020. The motions sought to reject the changes (or an identifiable part) in Second Revisions 7657, 7974, 8048, 8187, 8189, 8172, 8162, 8164, 8222, 7522, 7584, 7586, 7588, 7517, and 7509, and the motions did not succeed. I am requesting that all these identified Second Revisions be removed from the 2020 NEC and held as new material for consideration in the 2023 NEC cycle.

Additionally, there was a related change in section 240.88 that was identified at the Technical Meeting as new material but missed in the Motions process; I request that you reject SR 8011 as well in order to provide opportunity for public review of the language that was added in the Second Draft without public review.

A table with all the CAMs, SRs and related NEC sections is attached.

Grounds for Appeal

The grounds for the appeal are: the language included in these Second Revisions was all new material and did not receive appropriate public review. This language appeared in the second draft, and it was not based on any similar language or requirement that was considered in the first draft. There was no public input, no first revision, nor any other appearance of any language like this in the first draft. This conflicts with the requirements in the NFPA Regulations Governing the Development of NFPA standards:

4.4.4.2 Public Comments must be related to material that has received public review either through the submission of Public Input, Committee Input, or Correlating Input or through the first revisions.

Related to this, the regulations also state:
4.4.8.3.1 Criteria for Hold. The technical committee shall reject but hold for processing as Public Input for the next revision cycle, in accordance with 4.4.8.1(d), a Public Comment that meets any of the following criteria: (a) It would introduce a concept that has not had public review by being included in a related input or first revision as shown in the first draft.

The code-making panels should have held the public comments that suggested this new language, but they did not. The public comments requesting the language came from a Correlating Committee Task Group, and I’ve heard more than one CMP member say they were just doing what the Correlating Committee told them to do. It is clear from the panel statements in response to PC 979 (attached) that the panel members believed they were being directed to take action by the Correlating Committee.

The public comments from the Correlating Committee Task Group all sprang from review of Public Input 2935 (attached). That Public Input requested listing of reconditioned equipment, not prohibition of reconditioned equipment. However, the Second Revisions did not limit their direction to listing or not listing of reconditioned equipment under the purview of each CMP. Instead, they went far beyond the issue of listing. In every case except communications equipment, the language explicitly prohibits some or all the referenced reconditioned equipment with no more justification than a policy published by NEMA, a trade group formed to represent the business interests of manufacturers of new electrical equipment.

Requirements prohibiting or restricting remanufactured equipment appeared in over a dozen places in the NEC without public review, and without an opportunity for all the stakeholders who will be affected by these requirements to contribute their expertise, concerns, objections or support. This conflicts with the NFPA regulations, and with fair consideration of interests for standards developed under the ANSI process. I respectfully request that you correct this situation and require each of these changes to follow the established, fair process with adequate public review.

History of New Material Development

The Correlating Committee Task Group of four people that was formed to consider this issue was noticeably bereft of representation from members of the industry that will be most significantly and negatively affected by these last-minute additions: facility owners and equipment reconditioners. Nevertheless, the task group generated the suggested language that appeared nearly verbatim in the second draft.

The task group members were not unaware that there were interested parties, since representatives from both groups submitted public inputs on reconditioned equipment requesting changes to Articles 100 and 110. However, these interested parties were not informed of the task group’s formation, they were not informed of the task group
meetings, they were not invited to contribute to the discussion, and they were not aware of the recommendations from the task group until they were published on the NFPA website as Public Comments on behalf of that small task group. Even at that point, it seemed obvious that this was new material, and the expectation was that the panels would hold the suggested language in accordance with NFPA regulations.

Additional requests

I request that a balanced and representative task group be formed (even prior to the onset of the 2023 NEC cycle) to fairly and fully consider the language that should appear in the NEC. Representatives from organizations that represent equipment reconditioners should be invited to participate, as well as industry representatives of facility owners. As in the NEC CMP balance process, manufacturers of new electrical equipment in the affected categories would not truly represent facility owners who are Users of the NEC.

I also request permission to appear at the Standards Council meeting to be heard on this issue.

Sincerely,

Christel K. Hunter
Director of Codes and Standards

Email: chunter@cerrowire.com
Mobile: 702-271-7400
### Exhibit A

**Table of CAMs, Second Revisions and Related NEC Sections for**

**Appeal on Reconditioned Equipment Language in the 2020 NEC**

<table>
<thead>
<tr>
<th>CAM</th>
<th>Second Revision</th>
<th>NEC Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>70-13</td>
<td>7657</td>
<td>210.15</td>
</tr>
<tr>
<td>70-15</td>
<td>7974</td>
<td>240.62</td>
</tr>
<tr>
<td>none</td>
<td>8011</td>
<td>240.88</td>
</tr>
<tr>
<td>70-16</td>
<td>8048</td>
<td>240.102</td>
</tr>
<tr>
<td>70-27</td>
<td>8187</td>
<td>406.3(A)</td>
</tr>
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<td>70-28</td>
<td>8189</td>
<td>406.7</td>
</tr>
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<td>70-30</td>
<td>8172</td>
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<td>7522</td>
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</tr>
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<td>7586</td>
<td>701.5(C)</td>
</tr>
<tr>
<td>70-44</td>
<td>7588</td>
<td>702.5</td>
</tr>
<tr>
<td>70-47</td>
<td>7517</td>
<td>708.24(A)</td>
</tr>
<tr>
<td>70-50</td>
<td>7509</td>
<td>800.3(G)</td>
</tr>
</tbody>
</table>
Public Input No. 2935-NFPA 70-2017 [ Section No. 110.21(A)(2) ]

(2) Reconditioned Equipment.
Reconditioned equipment shall be marked with the name, trademark, or other descriptive marking by which the organization responsible for reconditioning the electrical equipment can be identified, along with the date of the reconditioning.

Reconditioned equipment shall be identified as “reconditioned” and approval of the reconditioned equipment shall not be based solely on the equipment's original listing.

Exception: In industrial occupancies, where conditions of maintenance and supervision ensure that only qualified persons service the equipment, the markings indicated in 110.21(A)(2) shall not be required.

Informational Note: Industry standards are available for application of reconditioned and refurbished equipment. Normal servicing of equipment that remains within a facility should not be considered reconditioning or refurbishing.

Statement of Problem and Substantiation for Public Input
The presence of the original certification mark on reconditioned equipment suggest to the installer and AHJ that the equipment is compliant with the product safety standard related to that equipment. In reality the actual compliance with the related safety standard is unknown. Third party NRTL certification bodies can offer listing and labeling services to determine compliance of rebuilt, refurbished or reconditioned electrical equipment to related safety standards. Throughout the NEC reference to equipment being listed is made. The use of reconditioned equipment cannot negate this. The level of safety of installed equipment must be the same whether the equipment installed is new or reconditioned.

Submitter Information Verification
Submitter Full Name: Donald Talka
Organization: UL LLC
Street Address:
City:
State:
Zip:
Submittal Date: Tue Aug 29 11:33:09 EDT 2017
Committee:

Committee Statement
Resolution: There are occasions where it is important to maintain the history of the original listing and reconditioning, and that it is preserved by leaving the original listing markings on the product. Labels often contain more information than just the listing mark. If the original equipment manufacturer or authorized agent is performing the reconditioning process it is unnecessary to remove the original listing mark.

Copyright Assignment
I, Donald Talka, hereby irrevocably grant and assign to the National Fire Protection Association (NFPA) all and full rights in copyright in this Public Input (including both the Proposed Change and the Statement of Problem and Substantiation). I understand and intend that I acquire no rights, including rights as a joint author, in any publication of the NFPA in which this
240.88 Reconditioned Equipment. Reconditioned equipment shall be listed as "reconditioned" and the original listing mark removed.

(A) Circuit Breakers. The use of reconditioned circuit breakers shall comply with (1) through (3):

(1) Molded-case circuit breakers shall not be permitted to be reconditioned.

(2) Low- and medium-voltage power circuit breakers shall be permitted to be reconditioned.

(3) High-voltage circuit breakers shall be permitted to be reconditioned.

(B) Components. The use of reconditioned trip units, protective relays, and current transformers shall comply with (1) and (2):

(1) Low-voltage power circuit breaker electronic trip units shall not be permitted to be reconditioned.

(2) Electromechanical protective relays and current transformers shall be permitted to be reconditioned.

Submitter Information Verification

Committee: NEC-P10
Submittal Date: Mon Oct 29 19:41:54 EDT 2018

Committee Statement and Meeting Notes

Committee Statement: Public Comment 980 was submitted by an NEC Correlating Committee appointed task group to address the global impacts of PI 2935. PI 2935 would have required that “Reconditioned Equipment” be “listed as reconditioned” and the “original listing marks removed”. PI 2935 has ramifications that are global in nature and impacts all products referenced in the NEC under the purview of every CMP. Proposed new section 240.88 is safety-driven and is necessary to prevent the reconditioning of products that cannot be safely reconditioned. Public Comment 980 was based on the global impact of PI 2935 and does not represent new material.

Response Message: SR-8011-NFPA 70-2018

Committee Notes:

Date Submitted By
Oct 29, 2018 Chelsea Rubadou

This is a new section to be placed after 240.87.

Public Comment No. 980-NFPA 70-2018 [New Section after 240.87(B)]

Ballot Results

This item has passed ballot

12 Eligible Voters
0 Not Returned
12 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Affirmative All
Barnhart, Paul D.
Blizard, Scott A.
Burns, Julian R.
Dollard, Jr., James T.
Koepke, Ed
Philips, Nathan
Rempe, Kenneth J.
Saporita, Vincent J.
Sparks, Ill, Roy K.
Townsend, Steven E.
Vance, Christopher R.
Williams, David A.

Editorial Comment
Click here
speaking in favor of the motion. I just wanted to
bring to the attention that the number on the board up
there says 725, and we're discussing 760.

JAMES GOLINVEAUX: Okay.

MARCELO HIRSCHLER: Mr. Chairman, yeah - it, it
should state 760 on all four --

JAMES GOLINVEAUX: You are correct.

MARCELO HIRSCHLER: -- screens.

JAMES GOLINVEAUX: You are correct. Okay?

Noted. Is there any further discussion on Motion 70-
49 to Accept a - Public Comment No. 500? Mr.
Johnston, any final comment?

MICHAEL JOHNSTON: No further comments, Mr.
Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote,
let me restate the motion. The motion on the floor is
to Accept Public Comment No. 500. To vote, touch the
'veote' button. If you wish to vote in support of the
motion, and recommend the text on Screen One, touch
'Yes'. If you wish to vote against the motion, and
recommend the text on Screen Two, touch 'No'. Please
record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 219 in favor of the motion;
90 against the motion. Therefore, the motion has passed.

Now let's proceed with the discussion on Certified Amending Motion 70-50. Microphone four, please.

CHRIS HUNTER: Thank you. I'm Chris Hunter with Serra Wire. I'd like to make a Motion to Reject Section Revision 7509.

JAMES GOLINVEAUX: Thank you. There is a motion on the floor to Reject Second Revision No. 7509. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

CHRIS HUNTER: Thank you. I'm Chris Hunter, with Serra Wire, in support of the motion.

Like in earlier motions, this language appeared in the Second Draft. It was not based on any similar language, or requirement that was considered in the First Draft.

Communications equipment is frequently reconditioned, and a new label is added. However, this requirement would require the removal of the original listing mark, which is unnecessary, and may result to damage to the equipment. Thank you.
JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position, please.

MICHAEL JOHNSTON: Thank you, Mr. Chair. Since the new material issue was brought up again, the same statement is in order.

The NEC Correlating Committee did review the complete record of public comments and inputs to ensure that no new material was being introduced. Nothing was identified; no holds were place. The Correlating Committee concluded that there was no new material related to either the definition of reconditioned, or any new rules related to it. There were no apparent conflicts or correlation issue. I'd like to defer to the Chair of Code Panel 16, Thomas Moore. He's at microphone three, please.

TOM MOORE: Thank you, Mr. Chairman. My name is Tom Moore, representing the International Association of Electrical Inspectors, as Chair of CMP 16, speaking in opposition of the motion on the floor. CMP 16 acted on Global Public Comment 979, thereby creating Second Revision 7509. CMP 16 reviewed, and affirmed with the Correlating Committee that this was not new material.

As indicated in the Panel's Committee Statement, there are certain types of communication
equipment covered in Chapter 8 that may be reconditioned. Furthermore, during the discussions, it is clear that reconditioning of certain types of communications equipment has been performed under recognized product standards for many years. By virtue of NEC 90.3, Chapter 8 is a standalone chapter, and 110.21(A)(2) would not be applicable if not referenced in new 800.3(G), other articles. Thank you.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name, affiliation, and whether you are speaking in support, and/or against the motion. Microphone three.

THOMAS DOMITROVICH: Thomas Domitrovich with Eaton. I continue to speak against the motion that's on the floor. I would ask everyone else to do the same. Thank you.

JAMES GOLINVEAUX: Okay. Thank you. I'm not seeing anyone at a microphone. Is there any further discussion of Motion 70-50 to Reject a Second Revision 7509? Mr. Johnston, do you have any final comment?

MICHAEL JOHNSTON: I have no additional comments, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is...
to Reject Second Revision 7509. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results of the vote are: 11 in favor of the motion: 337 against the motion. The motion has failed.

Now let's proceed with the discussion on Certified Amending Motion 70-51. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International for NAFRA, and I move to Accept Public Comment No. 516, please.

JAMES GOLINVEAUX: Thank you. There, there is a motion on the floor to Accept Public Comment No. 516. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: Thank you. Marcelo Hirschler, GBH International, speaking for NAFRA, and
MEMORANDUM

(AMENDMENT)

TO: Code-Making Panel 16

FROM: Sarah Caldwell, Technical Committee Administrator

DATE: July 10, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to return to previous edition text.

18 Members Eligible to Vote
1 Ballots Not Returned (Murphy)

The number of votes needed to recommend approval of the Association Action is 12.
(18 eligible to vote - 1 not returned - 0 abstentions = 17 × 0.66 = 11.22)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2019 NFPA Tech Session are now available at: www.nfpa.org/techsession.
IF YOU AGREE TO SUPPORT AMENDMENT 70-51 as recommended by the membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

800.182(A) Plenum Cable Routing Assemblies and Plenum Communications Raceways.
Plenum cable routing assemblies and plenum communications raceways shall be listed as having adequate fire-resistant and low-smoke-producing characteristics.

Informational Note No. 1: One method of defining cable routing assemblies and communications raceways that have adequate fire-resistant and low-smoke-producing characteristics is that they exhibit a maximum flame spread index of 25 and a maximum smoke developed index of 50 when tested in accordance with ASTM E84-17a, Standard Test Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723-2013, Standard Test Method for Surface Burning Characteristics of Building Materials.

Informational Note No. 2: Another method of defining communications raceways that have adequate fire-resistant and low-smoke-producing characteristics is that they exhibit 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 262-2015, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.

Informational Note No. 3: See NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems, for information on materials exposed to the airflow in ceiling cavity and raised floor plenums.

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

(A) Plenum Cable Routing Assemblies and Plenum Communications Raceways.
Plenum cable routing assemblies and plenum communications raceways shall be listed as having adequate fire-resistant and low-smoke-producing characteristics.

Informational Note No. 1: One method of defining cable routing assemblies and communications raceways that have adequate fire-resistant and low-smoke-producing characteristics is that they exhibit a maximum flame spread index of 25 and a maximum smoke developed index of 50 when tested in accordance with ASTM E84-15a, Standard Test Method for Surface Burning Characteristics of Building Materials.

Informational Note No. 2: Another method of defining communications raceways that have adequate fire-resistant and low-smoke-producing characteristics is that they exhibit 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 262-2015, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.

Informational Note No. 3: See 4.3.11.2.6 or 4.3.11.5.5 of NFPA 90A-2015, Standard for the Installation of Air-Conditioning and Ventilating Systems, for information on materials exposed to the airflow in ceiling cavity and raised floor plenums.
Amendment 70-51: Accept Public Comment No. 516. Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.

Eligible to Vote: 18
Not Returned: 1
Michael F. Murphy

**Vote Selection**

<table>
<thead>
<tr>
<th>Agree</th>
<th>Votes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Bish</td>
<td>8</td>
<td>Agree with updating year of publication</td>
</tr>
<tr>
<td>James E. Brunssen</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Luigi G. Prezioso</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Thomas E. Moore</td>
<td></td>
<td>FR 8014 was created at the First Draft meeting by updating ASTM E84 15a to 17a in Informational Note No. 1 of 800.182(A). Additionally during the First Draft Meeting Article 800 became General Requirements for Communications Systems and the existing Article 800 Communications Circuits become new Article 805. During the Second Draft Meeting CMP 16 took action based on Public Comment 516 also by the submitter of this related NITMAM to update reference ASTM E84 17a to 18a in 805.182(A) Informational Note No. 1. Second Revision 7746 encompassed said revision along with relocating all of 805.182 to the general requirements Article under 800.182. As part of the relocation the updated reference did on appear in the second draft report. As indicated in the actions taken it was the intent of CMP 16 that Informational Note No. 1 to 800.182(A) reference ASTM E84 18a.</td>
</tr>
</tbody>
</table>

Leo Zieman
Fred C. Dawson
John A. Kacperski
Roy Pollack

I agree, however since the ASTM E-84 standard changes frequently it would be preferable to reference "the current version" although I recognize this is problematic as well.
Disagree

Rodger Reiswig
Current edition referenced should be used.

Thomas J. Parrish
Current edition referenced should be used.

Gerald Lee Dorna
The referenced ASTM standard is not the latest or the current edition. PC # 516 references "E84-18a" when in fact the latest edition is "E84-19a".

Terry C. Coleman
The words “current edition of” be used instead of stating a edition/date. Place “current edition of” ahead of ASTM E84 and remove the edition reference following ASTM E84. E.g. Informational Note No. 1: One method of defining cable routing assemblies and communications raceways that have adequate fire-resistant and low-smoke-producing characteristics is that they exhibit a maximum flame spread index of 25 and a maximum smoke developed index of 50 when tested in accordance with the "current edition of" ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723-2013, Standard Test Method for Surface Burning Characteristics of Building Materials

Anthony Tassone
The latest version of the standard should be referenced. However, it is NOT 18a but ASTM E84 - 19a (according to the ASTM website). If the change is accepted as written it will be a little more up to date but still not correct. If the change is rejected it would be more out of date and not correct. We propose that the wording should read: .....when tested in accordance with the current edition of ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723-2013, Standard Test Method for Surface Burning Characteristics of Building Materials. These words are already used seven (7) times in the 2017 edition of the NEC.

William J. McCoy
The E84 standard states “This standard is issued under the fixed designation E84; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision”. Since the E84 standard has typically been revised annually, as opposed to the 3-year NEC revision cycle, changing from a specific E84 revision year to the phrase “current edition” of E84 will maintain the current E84 reference in the NEC.
the words “current edition” should be used in lieu of a specific year code for the referenced standards or procedure. These words are already used seven (7) times in the 2017 edition of the NEC.

Current Edition

Public comment No.516 has been overtaken by publication of a new version of ASTAM E84 and therefore uses an outdated reference. However, CMP16 should consider the intent of PC 516 and accommodate it within the governing principles of NFPA 70 and CMP16. Hence, my position is to disagree with the exact reference, but agree in principle with the intent of the comment. In general CMP16 should reference the latest test methods, unless there is a specific valid reason to reference an older test method. For example if a particular section is referenced, then the older reference has to remain since the new version may have a different section number. The more serious example is when the content of the section is key, and therefore new versions with new content that has not been reviewed by CMP16 cannot be referenced carte blanche. In this particular case, my understanding is that the whole document is referenced and not a particular section inside the document, so the reference is general and should track the latest version. I believe we can accommodate the intent of PC 516, while adhering to CMP16 principles of considering individual section references vs. general references by amending the comment by simply deleting the reference to the version 17a. Per international ISO standards convention, which I believe is also the ANSI convention, references without a version or date automatically imply the current version.

Informational Note No. 1: One method of defining cable routing assemblies and communications raceways that have adequate fire-resistant and lowsmoke-producing characteristics is that they exhibit a maximum flame spread index of 25 and a maximum smoke developed index of 50 when tested in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723-2013, Standard Test Method for Surface Burning Characteristics of Building Materials.
to Reject Second Revision 7509. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.
The voting is closed.
The results of the vote are: 11 in favor of the motion: 337 against the motion. The motion has failed.

Now let's proceed with the discussion on Certified Amending Motion 70-51. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International for NAFRA, and I move to Accept Public Comment No. 516, please.

JAMES GOLINVEAUX: Thank you. There, there is a motion on the floor to Accept Public Comment No. 516. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: Thank you. Marcelo Hirschler, GBH International, speaking for NAFRA, and
in support of the motion.

This is a very simple motion. I don't know if it was because of the, of the Panel, or because of staff or whatever. The date of the ASTM E84 Standard was not updated to (unintelligible) in the comment. So all this is doing is just simply update the date of the ASTM E84 Standard to the one that was at the time that the comment was submitted. Thank you.

JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to state the Panel's position, please.

MICHAEL JOHNSTON: Thank you, Mr. Chair. No correlation issues or conflicts were identified by the NEC Correlating Committee. And I would defer to the Chair of Code Panel 16, Thomas Moore, for an additional response.

TOM MOORE: Thank you, Mr. Chairman. My name's Tom Moore, representing the International Association of Electric Inspectors, a Chair of CMP 16, speaking in favor of the motion on the floor.

It gets a little bit confusing, but First Revision 8014 was created at the First Draft meeting by updating ASTM E8(4), 15(A) to 17(A), and Informational Note No. 1 to 800.182(A).

Additionally, during the First Draft Meeting, Article 800 became General Requirements to
Communication Systems, and the existing Article 800 Communication Circuits become new Article 805.

During the Second Draft meeting, CMP 16 took action based on Public Comment 516, also by the submitter of this related NITMAM, to update ASTM E84 17(A) to 18(A), and 805.182(A), Information Note One.

Second Revision 7746 encompassed said revision along with relocating all of Article 805-182 to the General Requirements Article under 800-182.

As part of the relocation, the updated reference did not appear in the Second Draft Report. As indicated in the actions taken, it was the intent of CMP 16 that Information Note Number One to 182, 800-182(A) reference ASTM E18(A).

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on this motion. Please provide your name, affiliation, whether you are speaking in support of, or against the motion. Microphone four, please.

JOHN KOVACHIC: Thank you, Mr. Chair. John Kovachic, UL LLC, speaking on behalf of the Electrical Section of NFPA as its official representative, and speaking for the motion. The Electrical Section had its business meeting on Tuesday of this week, and the Section voted to support this motion.
I ask the members of this body to vote in favor of this motion. Thank you.

JAMES GOLINVEAUX: Thank you. Is there any further discussion on Motion 70-51 to Accept a Public Comment No. 516? Mr. Johnston, do you have any final comments?

MICHAEL JOHNSTON: I have nothing further, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 516. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, text - touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results of the motion is 328 in favor of the motion; 9 against the motion. The motion has passed.

And before I read the last ballot, I know there may be a reaction from you. So I'm going to have a few more things to tell you what to do with your iPad, and how to turn it in. So please, let, let's get
To: NFPA Standards Council
From: Marcelo M. Hirschler (GBH International)
Date: July 11, 2019

CAM NFPA 70-51

I have been informed that amendment ballot NFPA 70-51 has failed committee ballot. I am hereby appealing the recommendation of the committee.

This motion simply updates the date of the ASTM E84 standard to the most recent edition at the time that the public comments to NFPA 70 were submitted, which was the 2018a edition. The CMP 16 chair (Thomas Moore) explains that it was always the intent of the panel to update the reference to ASTM E84 to the edition in the public comment but this was lost when the sections were moved from Article 800 to Article 805. Thus, the fact that the change in edition for ASTM E84 was not made was simply an editorial mistake.

The most recent edition of ASTM E84 as of this letter is 2019a but a 2019b edition will be available in about a month (since changes to ASTM E84 2019a have been approved). Note that not changing the edition of ASTM E84 from 2017a to 2018a means that the edition to be shown in the 2020 edition of NFPA 70 will be the 2015 edition of ASTM E84, meaning that the code will refer to an edition that is several editions in the past and that will not incorporate many changes made to the standard.

With regard to several of the comments that “the most recent edition” should be referenced, that is not a viable solution with the NFPA rules and would also cause confusion. If the most recent edition is referenced, does this mean the edition at the time a certain edition of NFPA 70 (such as NFPA 70-2020) is published or the edition at the time a certain user chooses to use NFPA 70? Every referenced standard in NFPA 70 is accompanied by a date. In fact, the informational note following 410.136 (B) in the upcoming 2020 edition of NFPA 70 references the 2018a edition of ASTM E84.

I am a member of several NFPA technical committees and all referenced standards in an NFPA document are always referred to by their date (even NFPA codes and standards), which means that following the wishes of CMP 16 members would cause contradiction both within the same edition of NFPA 70 and with other NFPA documents.

In summary, I urge standards council to approve the amendment voted on by the membership.

Yours sincerely

[Signature]

[Attachment: 19-8-3-jj-1]
FR 8014 was created at the First Draft meeting by updating ASTM E84 15a to 17a in Informational Note No. 1 of 800.182(A). Additionally during the First Draft Meeting Article 800 became General Requirements for Communications Systems and the existing Article 800 Communications Circuits become new Article 805. During the Second Draft Meeting CMP 16 took action based on Public Comment 516 also by the submitter of this related NITMAM to update reference ASTM E84 17a to 18a in 805.182(A) Informational Note No. 1. Second Revision 7746 encompassed said revision along with relocating all of 805.182 to the general requirements Article under 800.182. As part of the relocation the updated reference did on appear in the second draft report. As indicated in the actions taken it was the intent of CMP 16 that Informational Note No. 1 to 800.182(A) reference ASTM E84 18a. It is additionally obvious by statements contained in the CMP Amended Ballot by those members voting negative in the statements were in favor of revising the standard to even a newer version. ASTM84 ever changing standard and would never be current through any code cycle. By revising to any ASTM84 currently would be new material with no public input or public comment.
Dear Ms. Bellis and Ms. Fuller,

Please accept this as notice that the Healthcare Section wishes to appeal 3 items during the August Standards Council Meeting. The three items are the following: 1) NEC Panel 2 action on FR 7977 to require AFCIs in patient sleeping rooms in nursing homes and limited-care facilities; 2) NEC Correlating Committee action SCR 38 regarding reconditioned equipment in healthcare occupancies; and 3) NEC Correlating Committee action SCR 39 regarding demand factors for health care facilities. These are three separate issues, and we request that they be considered as separate appeals.

We'd like to request a hearing on these items. Although each appeal has its own merits, the overarching issue is the continuing jurisdictional issue between the scopes of the NEC and NFPA 99. This issue was first addressed by the Council in 2007 when a Task Group was formed to delineate the jurisdictions; performance requirements in healthcare belong to NFPA 99 and electrical installation issues are within the jurisdiction of the NEC. We believe that relief is necessary through the actions requested in the appeals, and that additional Council guidance is needed to ensure these jurisdictional issues do not continue.

If the appeals are accepted, please let me know when the written materials are needed for the agenda, and when the hearing will occur. Those who plan to be in attendance are: James Peterkin (Healthcare Section, Executive Board Chair), Dave Dagenais (Partners Healthcare), Michael Crowley (Jensen-Hughes) and Mark Howell (American Hospital Association).

I appreciate your consideration.

James Peterkin, PE
Healthcare Section, Executive Board Chair
215-360-4144

James Peterkin, PE, LEED AP, SASHE
Principal | Life Safety Consultant
jim.peterkin@tlc-eng.com

TLC ENGINEERING SOLUTIONS
1601 Market St., 19th Fl
Philadelphia, PA 19103
Main: 267.538.0940
Cell: 215.360.4144

www.tlc-engineers.com
Dawn Michele Bellis  
Standards Council Secretary  
National Fire Protection Association  
1 Batterymarch Park  
Quincy, MA 02169

RE: Appeal on CMP-2 Action on FR 7977

Ms. Bellis,

Please accept the following appeal materials for the August Standards Council meeting.

APPELLANT

At the NFPA Health Care Section Business meeting held in San Antonio, Texas on June 19, 2019, the Health Care Section voted to file an appeal to the Standards Council regarding the actions of CMP-2 to add arc fault circuit interrupters (AFCIs) to Action on FR 7977. Specifically representing the Healthcare Section are the following members:

James Peterkin, PE  
Representing Health Care Section  
TLC Engineering Solutions  
1601 Market St., 19th Fl  
Philadelphia, PA 19103  
(215) 360-4144  
jim.peterkin@tlc-eng.com

Michael Crowley  
Representing the American Health Care Association  
Jensen Hughes  
8827 W Sam Houston Pkwy  
Suite 150  
Houston, TX 77040-5399  
(281) 838-6007  
mcrowley@jensenhughes.com

Dave Dagenais  
Partners Healthcare  
Wentworth Douglass Hospital  
789 Central Ave, Dover, NH 03820  
(603) 740-2474  
dave.dagenais@wdhospital.com

Mark A. Howell  
American Hospital Association  
800 10th Street, NW  
Two CityCenter, Suite 400  
Washington, DC 20001-4956  
(202) 626-2317  
mhowell@aha.org

ACTION TO WHICH THE APPEAL RELATES

For the 2020 code, Panel 2 made FR 7977 to 210.12(C) (with no comments or second revisions to change it) that refers the wiring of patient sleeping rooms in nursing homes and limited-care facilities to the methods in 210.12(A)(1) through (6).

This change means AFCIs would be mandatory in patient sleeping rooms in nursing homes and limited-care facilities. The text change and panel statement are as follows:

(C) Guest Rooms and, Guest Suites, and Patient Sleeping Rooms in Nursing Homes and Limited-Care Facilities.  
All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in guest rooms and guest suites of hotels and motels and patient
sleeping rooms in nursing homes and limited-care facilities shall be protected by any of the means described in 210.12(A)(1) through (6).

Panel Statement: Areas of limited care facilities used exclusively as patient sleeping rooms may be wired in accordance with Chapters 1 through 4 of the NEC per 517.10(B)(2). AFCIs will provide to the occupants of these rooms protection from the danger of arcing faults.

ARGUMENTS IN SUPPORT OF THE APPEAL

Outside the scope of CMP-2. We believe that occupancy-specific requirements are outside the scope of CMP-2, which covers general requirements for branch circuits. The NEC is organized with the first four chapters providing specific requirements and chapter 5 - 7 providing supplemental or modifications to chapters 1-7.

210.1 Scope. This article provides the general requirements for branch circuits.

The organization of the NEC specifically provides for the special occupancies, such as Article 517 Healthcare, to supplement or modify the general requirement of the core chapters 1 through 4. CMP-2 does not have the health care expertise to make decisions about performance of electrical distribution and equipment within health care facilities. Those decisions fall under the scope of CMP-15.

Special occupancy concerns not taken into account. CMP-2’s decision disregards the sensitive patient/resident care equipment within these institutions and potentially places patient/residents at harm. AFCIs have a known history of nuisance trips in general use. We currently do not know how AFCIs will impact health care equipment because no study was completed or provided to CMP-15.

No correlation with Code Making Panel 15. We also believe the correlating committee failed to correlate this requirement with CMP-15. The correlating committee not only failed to ensure that due consideration was given to this change as indicated by the negative votes in the CMP-2 ballot, but also neglected to coordinate this change with CMP-15 as required by 3.4.3(g) of the Regulations Governing the Development of NFPA Standards.

3.4.3 (g) Determining whether the technical committee has given due consideration to all evidence presented to it in connection with the preparation of its report, including all comments relating to negative votes committees and to write text, but only as necessary for correlation, consistency, and the correction of errors and omissions.

Negative votes from Panel 2. The three of fourteen panel members noted in their negative votes that there are no data to prove the benefit of AFCIs and there is no substantiation to expand the requirements for AFCIs. It was noted that there was no Public Input to merit this change.
Expansion of AFCIs failed in other Panel 2 actions. During balloting in the first and second drafts, expansion of AFCIs throughout the dwelling unit failed. This decision was later upheld by Panel 2 in the amendment ballot for CAM 70-11. Because the healthcare interest was not aware of this change, no one advocated to include this change to add AFCIs to healthcare occupancies to be changed. For consistency, the Panel should’ve also voted against FR 7977.

**No Public Comment submitted.** There was no Public Comment from the Healthcare contingent because they were unaware of the change. There is no member on Panel 2 representing the healthcare sector. Panel 15 is the committee tasked with reviewing and making code changes that are relevant to healthcare facilities.

Additionally, with the new electronic system, it is difficult to view all the other changes in other sections that typically don’t make changes to healthcare interests. In the First Draft, one would have to view every section and every FR to be able to see all potential changes. One would have to read the entire NEC Second Draft to ensure that changes weren’t made inappropriately as in the case of Panel 2 with FR 7977. The healthcare interest wasn’t made aware of the change until after the NITMAM deadline. However, the issue wouldn’t have been eligible for a NITMAM as there were no Public Comments submitted.

**PRECISE RELIEF REQUESTED**
The relief sought is twofold. First, we request that the changes made in FR 7977 be overturned. Second, we seek to have better communication with the NEC panels regarding changes affecting health care. There have been numerous issues like this in the past, and early coordination could serve to solve problems during the revision cycle instead of after the revision process through the Standards Council. We request that any changes made to the healthcare industry shall be communicated to the Healthcare Section, with the representative on Panel 15 being the conduit. That member currently is Dave Dagenais.

Thank you for your consideration. We look forward to discussing this further with the Council on Tuesday, August 6, 2019 at the Boston Marriott Quincy, 1000 Marriott Drive, Quincy, MA 02169. Please do not hesitate to contact me if you have any questions.

James Peterkin, PE
Principal, Life Safety Consultant
TLC Engineering Solutions
At its meeting of 24-27 July 2007, the Standards Council considered an appeal from Douglas Erickson of the American Society for Healthcare Engineering requesting the acceptance of Comment 15-35. Specifically, the appeal requests that section 517.26 of NFPA 70, *National Electrical Code®* (NEC®) concerning the life safety branch of the emergency system, as revised by Proposal 15-43, be renumbered as section 517.3 and not be included with other requirements pertaining to essential electrical systems. Article 517 of the NEC pertains to health care facilities. Section 517.26 is located in section III of Article 517 which pertains to essential electrical systems while renumbered section 517.3 would be located in section I of Article 517 which addresses general requirements.

As background, Proposal 15-43 recommended revisions to section 517.26 and was accepted by Code Making Panel 15 (CMP 15) and the Technical Correlating Committee (TCC) of the NEC. Subsequently, Comment 15-35 was submitted recommending that section 517.26 as revised by Proposal 15-43 be reconsidered and renumbered as section 517.3. At its meeting, CMP 15 accepted Comment 15-35 but during the letter ballot of CMP 15 that followed, the Comment failed to achieve the two-thirds affirmative vote necessary under NFPA rules to achieve final acceptance by CMP 15. Accordingly, the TCC directed that the action on Comment 15-35 be reported as reject. In addition, the TCC directed that the action on Proposal 15-43 also be recorded as reject since CMP 15 no longer appeared to have consensus on the issue. A certified amending motion seeking acceptance of Comment 15-35 was made at the Technical Committee Report Session of the June 2007 Association membership meeting. The motion failed to obtain the support of the general NFPA membership in attendance.

This appeal requests that the Standards Council overturn the action that was recommended by the full NFPA codes and standards development process. This recommendation represents the consensus judgment of the responsible technical committee or code making panel, a judgment that was also supported by a vote of the NFPA membership at the Technical Committee Report Session of the June 2007 Association membership meeting. The appellant has had the opportunity to advocate his position at each stage of the full codes and standards process, and failed to persuade the consensus process to adopt his position.

On an appeal, the Standards Council accords great respect and deference to the NFPA codes and standards development process. In conducting its review, the Council will overturn the result recommended through that process, only where a clear and substantial basis for doing so is demonstrated. The Council has reviewed the entire record concerning this matter and has considered all of the arguments raised in this appeal. In the view of the Council, this appeal does not present any clear and substantial basis on which to overturn the results recommended by the NFPA codes and standards development process. Accordingly, the Council has voted to deny the appeal. The effect of this action is that the 2008 edition of the NEC will not include Comment 15-35 and Proposal 15-43, and the text of section 517.26 will read as it appears in the 2005 edition of the NEC.
While the Council has voted to deny this appeal, it acknowledges that inter-committee coordination issues between the NEC and other NFPA documents exist on the subject of performance requirements for the life safety systems branch, critical systems branch and equipment branch for emergency electrical systems. The Council, therefore, is directing that NEC TCC Chair, Jim Carpenter, establish and chair a task group to address and make recommendations concerning these inter-committee coordination issues, including the use of consistent terminology among the various documents. The task group should contain representation from the following NFPA Technical Committee projects:

- NEC (CMP 15)
- NFPA 20, Standard for the Installation of Stationary Pumps for Fire Protection
- NFPA 72, National Fire Alarm Code,
- NFPA 99, Standard for Health Care Facilities
- NFPA 110, Standard for Emergency and Standby Power Systems
- NFPA 5000, Building Construction and Safety Code

Proposed changes to the text of NFPA 70 or any other affected NFPA document are to be pursued during the document’s next revision cycle or as Tentative Interim Amendments as appropriate.

Council members Carpenter and Pauley recused themselves from the deliberations and vote on this issue.
• Validate whether or not bonding of CSST is an adequate solution to lightning exposure problem.
• If bonding is the solution, validate how bonding should be done.
• If bonding is the solution, validate the size of the bonding jumpers.
• Determine if bonding should be done at a location or locations other than where the gas pipe enters the building.
• Determine if alternate methods can be used for safe installation, i.e., separation from other equipment.

The CSST Task Group’s conclusion that there is inadequate substantiation regarding the safe use of CSST echoes the previously expressed concerns that prompted the Council to form the task group in the first place. See Standards Council Decision #09-18 (Agenda Item SC#09-8-16[d], August 6, 2009). Because so little information was provided to the task group, it is unclear whether and to what extent a problem exists. The paucity of the submissions to the task group, however, confirms the Council’s view that the concerns that have been raised about CSST should be addressed and resolved. After review of the CSST task group report and other information available to it, the Council agrees that further research must be produced to technically substantiate whether and, if so, how and in what conditions CSST can be safely used, with respect to lightning, in gas piping systems.

Over the next full revision currently scheduled to be in the Annual 2014 revision cycle, the industry or others advocating the continued use of CSST in gas piping systems shall validate the safe use of the product through independent third-party validated research and testing that can be reviewed and evaluated by standards developers in a timely way. Without prescribing who would be most appropriate to organize or conduct this independent research, the Council notes that the NFPA 54 CSST Task Group may be useful in providing input into the scope of research necessary to allow standards developers to establish adequate provisions concerning CSST. In addition, the Council’s CSST Task Group noted that the Fire Protection Research Foundation is discussing the possibility of undertaking a research program related to CSST and lightning protection. The Research Foundation frequently can play a useful role in identifying research needs or in conducting research. The Standards Council, however, wishes to emphasize that it is primarily for the participants in the NFPA standards development process to fund and produce the technical substantiation necessary to support the technical content of codes and standards. See, e.g., Standards Council Decision #00-22 at p. 5 (SC#00-60, July 20, 2000); Standards Council Decision #00-30 (SC#00-60, October 6, 2000).

Whether through the auspices of the Research Foundation or through other means, it is incumbent upon the manufacturers or others promoting the use of CSST in gas piping systems to provide independently validated and reliable technical substantiation demonstrating that CSST can be safely used. If such substantiation is not provided, the Technical Committee on the National Fuel Gas Code must consider prohibiting the use of CSST in NFPA 54, *National Fuel Gas Code*. In addition, should the issues not be reasonably addressed by the end of the next full revision cycle, Annual 2014, the Council may take action as it deems appropriate up to and including the prohibition of the use of CSST in NFPA 54.

10-3-21

The Task Group on Inter-Committee Coordination on Emergency Electrical Systems provided its Report to the Council in August, 2009. Without deciding in advance what the Council would do regarding specific jurisdictional issues relating to this topic, the Council considers the guidance in the report to be useful. The Task Group has provided some guidance to the Technical Committees in the form of two definitions as follows:

Performance Requirement. A specification of the manner in which equipment or a
<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-3-22</td>
<td>Consider a request from the Douglas Erickson, Health Care Facilities Technical Correlating Committee requesting that the Standards Council review scoping issues within the Health Care Facilities Project. This Agenda Item was ADMINISTRATIVELY WITHDRAWN FROM THE AGENDA AT THE REQUEST OF THE SUBMITTER.</td>
</tr>
<tr>
<td>10-3-23</td>
<td>The Council approved the Report of the Technical Committee Membership Task Group as indicated in Minute Item 10-3-23-a.</td>
</tr>
<tr>
<td>10-3-23-a</td>
<td>The Council considered the Technical Committee (TC) Membership Task Group’s recommendations on pending TC applications for committee membership and took appropriate action on each. Changes in TC membership approved by the Council can be found in Minute Attachment 10-3-23-a.</td>
</tr>
<tr>
<td>10-3-24</td>
<td>The Council acted on the recommendations of the Awards Task Group which included a recommendation for a recipient of the Standards Medal, fifteen Committee Service Awards, and three Special Achievement Awards.</td>
</tr>
<tr>
<td>10-3-25</td>
<td>The Council heard the Report of the Policy &amp; Procedures Task Group. Proposed changes to the Regs. being considered by the Council are contained in Minute Attachment 10-3-25.</td>
</tr>
<tr>
<td>10-3-26</td>
<td>The Council heard the Report of the Recording Secretary and voted to approve the Minutes of October 28, 2009 meeting.</td>
</tr>
<tr>
<td>10-3-27</td>
<td>The Council approved the dates of the next upcoming meetings, as follows:</td>
</tr>
<tr>
<td></td>
<td>August 2 (noon Task Group)</td>
</tr>
<tr>
<td></td>
<td>Full Council August 3-5, 2010 Quincy, MA</td>
</tr>
<tr>
<td></td>
<td>October 19 (noon Task Group)</td>
</tr>
<tr>
<td></td>
<td>Full Council October 20-21, 2010 San Antonio, TX</td>
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<tr>
<td></td>
<td>February 28 (noon Task Group)</td>
</tr>
<tr>
<td></td>
<td>Full Council March 1-2, 2011 San Juan, PR</td>
</tr>
<tr>
<td>10-3-28</td>
<td>The Council heard a Report from the Secretary of the Council on the Re-engineering of the Codes and Standards Making Process. The Council gave their general approval of the concept presented and understands that work will now proceed to transfer this concept into draft changes to the Regs.</td>
</tr>
<tr>
<td>10-3-29</td>
<td>It was voted to approve the request of the Technical Committee on Pyrotechnics for a one-time cycle change for NFPA 1124, Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles to move from Annual 2011 to Annual 2012.</td>
</tr>
<tr>
<td>10-3-30</td>
<td>It was voted to approve the request of the Technical Committee (TC) on Explosives for a one-time cycle change for NFPA 495, Explosive Materials Code to move from F2014 to F2012. The TC is</td>
</tr>
</tbody>
</table>
At its meeting of August 9-10, 2011, the Standards Council considered two appeals from Malcolm Allison from the National Electric Fuse Association (NEFA) on the 2012 edition of NFPA 99, *Health Care Facilities Code* as follows.

The first appeal requested that NFPA 99 be issued with the acceptance of Certified Amending Motion (CAM) 99-6, which sought to Return a Portion of a Report in the form of Proposals 99-39, 99-40 and 99-108 and related Comments 99-35, 99-36, 99-37, 99-123 and 99-124. Specifically, the CAM sought to return Section 4.4.2.2 to previous edition text and also return the following definitions to previous edition text: 3.3.26 Critical Branch, 3.3.29 Critical System, 3.3.41 Emergency System, 3.3.43 Equipment System, 3.3.96 Life Safety Branch, and 3.3.153 Quiet Ground.


The second appeal requested that NFPA 99 be issued with the acceptance of CAM 99-10 (which is a Related Motion to CAMs 99-11 through 99-14) to accept Comment 99-115, which sought to reject Proposal 99-107 that would delete the three proposed new sections providing requirements for selective coordination.

As background on the second appeal, the TC and the TCC accepted Committee Proposal 99-107 that would add three proposed new sections (4.4.2.1.2, 4.5.2.1.1, 4.6.2.1.1 [renumbered as 6.4.2.1.2, 6.5.2.1.1 and 6.6.2.1.1 in the 2012 edition]) providing requirements for selective coordination. Comment 99-115 recommended rejection of Proposal 99-107 and was rejected by the TC and TCC. A CAM seeking acceptance of CAM 99-10 which sought to delete the three proposed new sections providing requirements for selective coordination was made at the 2011 Association Technical Meeting (Tech Session). The motion failed.

Both appeals request that the Council overturn the actions that were recommended by the NFPA codes and standards development process. This recommendation represents the
consensus judgment of the responsible TC and TCC, a judgment that was also supported by votes of the NFPA membership at the 2011 Tech Session. The appellant has had the opportunity to advocate his position at each stage of the process and failed at every stage to achieve acceptance of his positions. On appeal, the Council accords great respect and deference to the NFPA codes and standards development process. In conducting its review, the Council will overturn the result recommended through that process only where a clear and substantial basis for doing so is demonstrated. The Council has reviewed the entire record concerning these matters and has considered all the arguments put forth in the appeals. In the view of the Council, these appeals do not present any clear and substantial basis on which to overturn the results yielded by the NFPA codes and standards development process. Accordingly, the Council has voted to deny both appeals. The effect of these actions is that the proposed new edition of NFPA 99 is issued with the modifications approved by the TC and TCC with respect to the items in CAM 99-6, and the document is also issued with the three proposed new sections providing requirements for selective coordination with respect to the items in CAM 99-10.

Without attempting to review each argument that the Council has considered and rejected as part of this appeal, the Council wishes to make several points. First, underlying this appeal is disagreement over whether the selective coordination provisions that are the subject of the appeals are within the jurisdiction of the NFPA 99 committee project or within the jurisdiction of the National Electrical Code® (NEC®) committee project. The assignment of jurisdictional scopes among technical committee projects is the direct responsibility of the Standards Council. See, generally, NFPA Regulations Governing Committee Projects (Regs) at Section 3.1. In assigning jurisdictional responsibilities among NFPA committees, the Council seeks to maximize coordination and avoid overlap and conflict among NFPA codes and standards. The Council has been aware of coordination issues between the NEC and other NFPA documents with respect to performance requirements for the life safety branch, critical branch and equipment system for emergency systems. In previous Council Decision No. 07-6 (SC#07-7-5-1, July 27, 2007), the Council established the Intercommittee Coordination Task Group on Emergency Electrical Systems to study these issues. The task group has provided useful guidance and recommendations to the relevant technical committees and the Council. (See Standards Council Minute Item 10-3-21, March 2010). Based on the input of the task group and on its own independent assessment, the Council has no difficulty in concluding that the prevention of cascading outages (achieving selective coordination) is a performance requirement belonging to NFPA 99, not an installation requirement within the jurisdiction of the NEC. The NFPA 99 committees, therefore, had the authority to develop the selective coordination performance requirements that have been challenged on this appeal.

Second, the appellant has requested that the Council add new sections in NFPA 99 to clarify that any part of the essential electrical system or any of its branches must comply with the relevant Articles of the NEC. The text proposed was not presented to the TC or the TCC in any form, including as a proposal or comment, therefore, the Council will not
consider the new text. The Council notes, however, the new edition of NFPA 99, Section 6.3.2.1 reads as follows:

6.3.2.1 Electrical installation. Installation shall be in accordance with NFPA 70®, National Electrical Code®.

Accordingly, the Council believes that NFPA 99 sufficiently refers to NFPA 70®, National Electrical Code®, for issues relating to installation, and that this deference is sufficiently clear. There was also a request to remove the word “installation” from the Purpose of NFPA 99 in Section 1.2. Again, this deletion was not presented to the TC or the TCC in any form, including as a proposal or comment, and the Council, therefore, will not consider the new text. The Council notes, however, that the word “installation” only appears in the chapter scope of Chapter 5, Gas and Vacuum Systems, and does not appear in the Chapter 6, Electrical Systems. It is clear that the word “installation” applies to the installation of gas and vacuum systems, and not the installation of electrical systems.

Third, the appellant, in various ways seeks to challenge NFPA’s compliance with the American National Standards Institute (ANSI) Essential Requirements (ANSI Essential Requirements.) ANSI is the oversight body for U.S. voluntary consensus standards developers such as NFPA, and the NFPA Regulations Governing Committee Projects (Regs) are approved by ANSI as meeting the ANSI Essential Requirements. It is through adherence to those Regs that NFPA ensures that the principles of openness, fairness and balance reflected in the ANSI Essential Requirements are met. It is difficult to locate in the submissions and presentations of the appellant any provision of the Regs that he contends has been violated. The Council, in any event, has reviewed the entire record before it and has found no violation of the Regs or indeed any unfairness that would implicate the ANSI Essential Requirements.

For example, the appellant spends much effort suggesting improprieties in the composition and activities of the Task Group on Inter-committee Coordination on Emergency Electrical Systems and its sub-groups. It is not clear how the activities of the task group are directly relevant to the appeal. The task group was entirely advisory, it had no decision-making authority, and it was clearly not a consensus body as defined by ANSI. Task groups often contribute input to standards development and there is no requirement that task groups meet any particular requirements such as balance requirements. Cf. Regs Section 3.1.3.4 (task groups need not be balanced by interest). In any case, the decisions with which the appellant takes issue were made, not by any task group, but by the TC and TCC and now by this Council.

Fourth, the appellant sought to have the Council accept NEFA’s newly submitted application for membership on the Technical Committee on Electrical Systems (HEA-ELS) in the NFPA 99 project. As background, another NEFA nominee’s application for this TC was considered at the October 2008 Standards Council meeting, and was rejected by the Council because the interest NEFA represents has only a limited interest in the total scope of the TC. An in-person reconsideration of this and other NEFA applications was heard by the Council in March 2009, and the respective decisions on the various TC applications for several NFPA TCs were reaffirmed. The new application from NEFA seeking membership on HEA-ELS will be reviewed and acted on in the normal course.
Finally, there has been the suggestion that the issues of intercommittee coordination merit the creation of a new task group to conduct further study. The Council does not, at this time, believe that creation of another task group is warranted. The Council believes that the distinction between performance requirements and installation requirements is reasonably clear and the Council reiterates that “without deciding in advance what the Council would do regarding specific jurisdictional issues relating to this topic, the Council considers the guidance [from the previous task group] to be useful”. (See Standards Council Minute Item 10-3-21, March 2010). In this Decision, the Council has concluded that selective coordination (cascading outages) properly falls within the jurisdiction of NFPA 99. The NEC project should proceed, as part of its standards development activities, to harmonize the NEC with the relevant provisions of NFPA 99.

Standards Council Members Jim Pauley and Dick Owen recused themselves during the hearing, deliberation and vote on these issues.
8 October 2013

To: Interested Parties

Subject:

<table>
<thead>
<tr>
<th>Standards Council Decision (Final):</th>
<th>D#13-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards Council Agenda Item:</td>
<td>SC#13-8-3-o</td>
</tr>
<tr>
<td>Date of Decision:</td>
<td>31 July 2013</td>
</tr>
</tbody>
</table>

NFPA 70®, National Electrical Code®, 2014 Edition

Dear Interested Parties:

At its meeting of July 29 – July 31, 2013, the Standards Council considered an appeal on the above referenced matter. On August 1, 2013, NFPA issued the Council’s decision on the appeal in the form of a “Short” decision which briefly stated the outcome of the appeal and which indicated that a full Final decision on the appeal would be issued in due course and sent to all interested parties as soon as it became available.

The Council’s Final decision is now available and is attached herewith.

Sincerely,

Christian Dubay, P.E.
Secretary, NFPA Standards Council

c: D. Berry, M. Brodoff, L. Fuller, M. Earley, W. Burke, J. Hart, R. Bielen
   Members, NEC Code-Making Panel 15 (NEC-P15)
   Members, NEC Correlating Committee (NEC-AAC)
   Members, TC on Electrical Systems (HEA-ELS)
   Members, CC on Health Care Facilities (HEA-AAC)
   Members, NFPA Standards Council (AAD-AAA)
   Individuals Providing Appeal Commentary
SUMMARY OF ACTION (for convenience only; not part of official decision): The Standards Council voted to uphold the appeal and Reject Proposal 15-64.

DECISION:
At its meeting of July 29 – July 31, 2013, the Standards Council considered an appeal from Walt Vernon from Mazzetti Engineers. The appeal requests that the 2014 edition of NFPA 70®, National Electrical Code® (NEC®) be issued with the rejection of Proposal 15-64. Specifically, the appeal seeks to delete a proposed new requirement in Section 517.30(E) which calls for certain receptacles to have a means to indicate power is being supplied to the receptacle. The proposed receptacle indicator requirement reads as follows:

....Non-locking-type, 125-volt, 15- and 20-ampere receptacles shall have an illuminated face or an indicator light to indicate that there is power to the receptacle.

As background, Code-Making Panel 15 (NEC Panel 15) accepted Proposal 15-64. No related Public Comment was submitted, and Panel 15 did not change or revise its action on Proposal 15-64 during the Comment Stage. No Amending Motion seeking the rejection of Proposal 15-64 could, therefore, be pursued at the 2013 Association Technical Meeting. This means, under NFPA rules, that the recommendation that comes to the Council is to include the receptacle indicator requirement of Proposal 15-64 in the new edition of the NEC.

The appeal requests that the Standards Council overturn the recommendation of the standards development process on the grounds that receptacle indicator requirement of Proposal 15-64 is a performance requirement for healthcare facilities, which is properly within the jurisdiction of NFPA 99, Healthcare Facilities Code, not the NEC.

On appeal, the Council accords great respect and deference to the NFPA standards development process. In conducting its review, the Council will overturn the results of that process only where a clear and substantial basis for doing so is demonstrated. In this case, the Council has found such a basis in its authority to assign jurisdictional scopes among NFPA Committees so as to maximize coordination and avoid overlap and conflict among NFPA Standards. Accordingly the Council has voted to uphold the appeal and issue the new edition of the NEC without the receptacle indicator requirement of Proposal 15-64.

The assignment of jurisdictional scopes among Committees is the direct responsibility of the Standards Council. See, generally, Regulations Governing Committee Projects
at Section 3.1. The Council is reluctant, even with jurisdictional scope issues, to reject the result arrived at during the revision process. In this case, however, the Council believes it is appropriate to act. The Council believes that the distinction between performance requirements belonging to NFPA 99 and installation requirements belonging to the NEC is reasonably clear, and that the receptacle indicator requirement is a performance requirement properly within the jurisdiction of NFPA 99. Moreover, the inter-committee coordination between the NEC and other technical committees, including the NFPA 99 Correlating Committee and Technical Committee on Electrical Systems, is an important issue, and the Council, in recent years, has worked to clarify the scopes and responsibilities of the relevant committees. See Standards Council Decision Number D#07-6 (Standards Council Agenda Item #07-7-5-l, July 27, 2007); Standards Council Minute Item SC #10-3-21, March 3, 2010; Standards Council Decision Number D#11-7 (Standards Council Agenda Items #11-8-6-a and #11-8-6-c, August 10, 2011). The Council believes it is important to clarify and implement the guidance expressed in those decisions.

The Council recognizes that the NEC Committees have been diligent in its efforts to implement the Council’s decisions regarding jurisdiction. For healthcare-related requirements, the NEC Correlating Committee has set up an intercommittee coordination task group that has already successfully addressed correlation issues with collaboration and input from members of NFPA 99 Committees and from NEC Panel 15. It is regrettable that the situation in this case, through an oversight of the NFPA 99 Committees, was not adequately brought to the attention of the intercommittee task group or NEC Panel 15 so that resolution could have been achieved during the revision process. The Council stresses that the coordination and harmonization among NFPA standards, in accordance with the jurisdictional scopes assigned by the Council, is an important responsibility of NFPA Committees, and, in addition to participating on the intercommittee task group, the membership of the NFPA 99 Committees should, as appropriate, set forth their positions with respect to jurisdictional issues that arise within the NEC through the submission of Public Input and Public Comments on the NEC.
First Revision No. 7977-NFPA 70-2018 [ Section No. 210.12(C) ]

(C) Guest Rooms and Guest Suites and Patient Sleeping Rooms in Nursing Homes and Limited-Care Facilities.

All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in guest rooms and guest suites of hotels and motels and patient sleeping rooms in nursing homes and limited-care facilities shall be protected by any of the means described in 210.12(A)(1) through (6).

Submitter Information Verification

Submitter Full Name: NEC-CMP Panel 02
Committee: 
Submittal Date: Thu Jan 11 14:24:51 EST 2018

Committee Statement and Meeting Notes

Committee Statement: Areas of limited care facilities used exclusively as patient sleeping rooms may be wired in accordance with Chapters 1 through 4 of the NEC per 517.10(B)(2). AFCIs will provide to the occupants of these rooms protection from the danger of arcing faults.

Response Message: FR-7977-NFPA 70-2018

Ballot Results

✔ This item has passed ballot

15 Eligible Voters
1 Not Returned
10 Affirmative All
1 Affirmative with Comments
3 Negative with Comments
0 Abstention

Not Returned
McGovern, William J.

Affirmative All
Campolo, Steve
Domitrovich, Thomas A.
El-Sherif, Nehad
Harman, Thomas L.
Hilbert, Mark R.
Manche, Alan
McCamish, John
Pavese, Christopher J.
Reyes, Frederick P.
Weaver, Michael
Affirmative with Comment
Abbassi, Mathher
Agree

Negative with Comment
Boynton, Charles L.
There continues to be no data that prove the cost to benefit of these devices. Therefore expansion of ACFI's is not substantiated.
Buuck, Daniel
I agree with the other comments citing the lack of data to support the expansion of AFCIs.
Johnson, David W.
IEC does not support the committee action to add Patient Sleeping Rooms in Nursing Homes and Limited-Care Facilities to section 210.12(C). There was no Public Input nor substantiation to merit this change.

Editorial Comment
Click here
CMP 2 response to a request for Appeal on First Revision 7977 regarding AFCIs in patient sleeping rooms in nursing homes and limited-care facilities.

Basic Facts:
The requirements being contested were introduced as part of the First Draft for the 2020 NEC and were never contested throughout the process until this point.

1. First Draft: First Revision 7977 added the requirements for AFCI for branch circuits serving 15 and 20 ampere, 120 volt, outlets in nursing homes and limited-care facilities. The First Draft voting by CMP 2 members on First Revision 7977 was as follows:

- Total of 15 voting members
- 1-Not returned
- 10-Affirmative
- 1-Affirmative with Comment
  - Mather Abbassi New York City Department of Buildings (E)
    - Agreed
- 3-Negative
  - Charles L. Boynton - The DuPont Company, Inc. (U)
    - There continues to be no data that prove the cost to benefit of these devices. Therefore, expansion of AFCI's is not substantiated.
  - David W. Johnson- CenTex IEC (I/M)
    - IEC does not support the committee action to add Patient Sleeping Rooms in Nursing Homes and Limited-Care Facilities to section 210.12(C). There was no Public Input nor substantiation to merit this change.
  - Daniel Buuck - National Association of Home Builders (U)
    - I agree with the other comments citing the lack of data to support the expansion of AFCIs

2. Second Draft: No Public Comments were submitted to modify the actions taken in FR 7977.

3. NFPA Technical Session: There were no related NITMAMs filed nor CAMs addressed at the Technical Session held in San Antonio, TX on June 20, 2019.

Scope:
CMP 2 did not act outside their purview, the requirements in First Revision 7977 are under the scope of the NEC.

- Per 90.3, Article 210 (CMP 2) has the overall responsibility for branch circuits throughout the NEC unless the general requirements are amended or supplemented elsewhere in Chapters 1 through 7.
- Article 210 includes requirements for protection of branch circuits from overload and short-circuit conditions in addition to conditions that create arcing and sparking. Protection of conductors from these damaging currents is accomplished through the installation of protective devices listed to provide said protection. AFCI technology is a technology that helps provide this type of protection.
The NEC includes overcurrent protection requirements in the form of overload protection, short-circuit protection, ground fault circuit interrupter (GFCI) protection for personnel and arc-fault circuit-interrupter (AFCI) protection in Chapter 2, none of which are outside of the scope of the NEC and none of which are performance-based requirements.

Section 517.10(B)(2) is in Part II of Article 517 and titled “Wiring and Protection”. This section identifies that “Areas of nursing homes and limited care facilities wired in accordance with Chapters 1 through 4 of this Code where these areas are used exclusively as patient sleeping rooms” are NOT covered by Article 517. The language of 210.12(C) and the title, “Guest Rooms, Guest Suites, and Patient Sleeping Rooms in Nursing Homes and Limited-Care Facilities,” is well in line with what CMP 15 clearly identified as NOT being covered by Part II of Article 517.

Construction and Installation Specific:

- The new requirements of First Revision 7977 are not occupancy or performance specific, but rather they are construction and installation specific.
  - These protective devices are part of the installation requirements as they serve to protect persons and property from electrical hazards.
  - As noted in the Panel statement on First Revision 7977, the requirements added to 210.12(C) are specific to patient sleeping rooms in nursing homes and limited care facilities.

Determining if Requirements are Performance Related:

- AFCI requirements are not performance related.
  - In this case, the installations they protect are for areas that are exempted from Part II of Article 517 by 517.10(B)(2) as “patient sleeping rooms that are wired in accordance with Chapters 1 though 4 of the NEC.” This was clearly noted in the Panel’s Statement on First Revision 7977.

In implementing these new requirements, it was the Panel’s intent that persons using these areas and these types of properties should be afforded the same level of safeguarding as other similar areas covered in 210.12.
Maynard, Mary

From: Peterkin, Jim <jim.peterkin@tlc-eng.com>
Sent: Tuesday, July 2, 2019 12:13 PM
To: Bellis, Dawn; Fuller, Linda
Cc: Maynard, Mary
Subject: RE: APPEAL REQUEST ON THE NEC

Dear Ms. Bellis and Ms. Fuller,

Please accept this as notice that the Healthcare Section wishes to appeal 3 items during the August Standards Council Meeting. The three items are the following: 1) NEC Panel 2 action on FR 7977 to require AFCIs in patient sleeping rooms in nursing homes and limited-care facilities; 2) NEC Correlating Committee action SCR 38 regarding reconditioned equipment in healthcare occupancies; and 3) NEC Correlating Committee action SCR 39 regarding demand factors for health care facilities. These are three separate issues, and we request that they be considered as separate appeals.

We'd like to request a hearing on these items. Although each appeal has its own merits, the overarching issue is the continuing jurisdictional issue between the scopes of the NEC and NFPA 99. This issue was first addressed by the Council in 2007 when a Task Group was formed to delineate the jurisdictions; performance requirements in healthcare belong to NFPA 99 and electrical installation issues are within the jurisdiction of the NEC. We believe that relief is necessary through the actions requested in the appeals, and that additional Council guidance is needed to ensure these jurisdictional issues do not continue.

If the appeals are accepted, please let me know when the written materials are needed for the agenda, and when the hearing will occur. Those who plan to be in attendance are: James Peterkin (Healthcare Section, Executive Board Chair), Dave Dagenais (Partners Healthcare), Michael Crowley (Jensen-Hughes) and Mark Howell (American Hospital Association).

I appreciate your consideration.

James Peterkin, PE
Healthcare Section, Executive Board Chair
215-360-4144

James Peterkin, PE, LEED AP, SASHE
Principal | Life Safety Consultant
jim.peterkin@tlc-eng.com

TLC ENGINEERING SOLUTIONS
1601 Market St., 19th Fl
Philadelphia, PA 19103
Main: 267.538.0940
Cell: 215.360.4144

www.tlc-engineers.com
Dawn Michele Bellis  
Standards Council Secretary  
National Fire Protection Association  
1 Batterymarch Park  
Quincy, MA 02169

RE: NEC Correlating Committee Action, SCR 38, Reconditioned Equipment

Ms. Bellis,
Please accept the following appeal materials for the August Standards Council meeting.

APPELLANT
At the NFPA Health Care Section Business meeting held in San Antonio, Texas on June 19, 2019, the Health Care Section voted to file an appeal to the Standards Council regarding the actions of the Correlating Committee, Second Correlating Revision (SCR) 38 to delete proposed new §517.5 Reconditioned Equipment that was approved as Second Revision (SR) 7851 by Panel 15. Specifically representing the Healthcare Section are the following members:

James Peterkin, PE  
Representing the Health Care Section, TLC Engineering Solutions  
1601 Market St., 19th Floor  
Philadelphia, PA 19103  
(215) 360-4144  
jim.peterkin@tlc-eng.com

Dave Dagenais  
Partners Healthcare  
Wentworth Douglass Hospital  
789 Central Ave, Dover, NH 03820  
(603) 740-2474  
dave.dagenais@wdhospital.com

Michael Crowley  
Representing the American Health Care Association (AHCA)  
Jensen Hughes  
8827 W Sam Houston Pkwy  
Suite 150  
Houston, TX 77040-5399  
(281) 838-6007  
mcrowley@jensenhughes.com

Mark A. Howell  
American Hospital Association  
800 10th Street, NW  
Two CityCenter, Suite 400  
Washington, DC 20001-4956  
(202) 626-2317  
mhowell@aha.org

ACTION TO WHICH THE APPEAL RELATES
For the 2020 code, Panel 15 approved SR 7851 to create a new section 517.5 Reconditioned Equipment. The Correlating Committee deleted this section in SCR 38, resulting in SR 7851 to become Committee Comment (CC) 7851.

This change by the Correlating Committee means that the requirements for listing of reconditioned equipment will apply to health care facilities. Also deleted was an informational note advising that refurbished medical equipment and other electrical distribution equipment is common in health care facilities. The text that was deleted is as follows:

517.5 Reconditioned Equipment,  
The requirements for listing of reconditioned equipment shall not apply to health care facilities.
**Informational Note:** It is common to use refurbished medical equipment and other electrical distribution equipment in health care facilities.

The intent is to permit certified, reconditioned medical equipment and certified reconditioned distribution equipment.

**ARGUMENTS IN SUPPORT OF THE APPEAL**

**No reason to prohibit refurbished or reconditioned equipment in health care occupancies.** The proponents of the reconditioning changes to the NEC did not provide any data or substantiation to Panel15 to justify the need to prohibit the use of refurbished or reconditioned equipment. In addition, the Correlating Committee failed to recognize the significant hazard associated with prohibiting the use of refurbished equipment. The significant hazard relates to equipment that is necessary to life safety being out of service due to unavailability or delay in obtaining replacement parts.

Health care has a long history of utilizing reconditioned electrical equipment with no records of a reduction in safety. This poses an extreme burden on the ability to provide patient care. The availability of this equipment is important to reduce the potential hazards that would exist with system outages due to unavailability of replacement parts or parts that are no longer in production.

**There are unique circumstances in health care occupancies.** It is problematic when the Correlating Committee makes occupancy-specific technical decision without having the occupancy-specific expertise on the Committee. This should be a red flag for the Standards Council, and input or jurisdiction should be sought from committees with the necessary expertise. In this case, the NEC already has a committee specific to health care, Panel 15.

**Panel 15 exercised one of two options provided by Correlating Committee.** At the Second Draft meeting, Panel 15 was directed by the Correlating Committee to consider two options regarding equipment reconditioning:

*Option 1 - Equipment NOT suitable for Reconditioning,* and

*Option 2 - Equipment which MAY BE suitable for Reconditioning*

As a result, Panel 15 added the new text of §517.5, taking into account the special circumstances found in health care occupancies.

**Using certified reconditioned equipment.** Certified reconditioned equipment offers a level of safety in the absence of such availability or prohibition of, forces organizations to acquire used equipment with unknown conditions to when used to provide continued operation until new equipment can be provided.

**Reconditioned equipment is a design (performance) consideration not an installation issue.** Reconditioned equipment relates to the way the occupancy needs to perform, and as such, it is a performance-based design decision and should not be made without the occupancy input. Furthermore, we would like the Standards Council to review previous Standards Council Decision SC #11-6-a and 11-8-6-c D#11-7, which establishes jurisdiction for design with the occupancy document (or Panel in this case) versus installation which is the jurisdiction of the NEC as a whole.
Reconditioned equipment in health care occupancies not a correlation issue. The Correlating Committee acted outside of its scope of correlation and made a technical change to the document contrary to the Panel actions. In the Correlating Committee statement for the change they noted: “The Correlating Committee deleted the section to resolve potential conflicts with the NEC in accordance with 3.4.3(a) and (b)”. We don’t believe that the proposed CMP-15 language conflicted with any other section within the NEC.

New material. Panel 15 was not provided information during the first draft regarding equipment reconditioning. Introduction of this material in the second draft should be considered new material per §4.4.4.2 of the Regulations Governing the Development of NFPA Standards. While the information may have been submitted as a first revision to a different code-making panel, it was resolved in the first draft. When presented to Panel 15 with the two options to consider allowing or not allowing reconditioned equipment, this was the first opportunity for the code making panel to consider this requirement.

4.4.4.2 Public Comments must be related to material that has received public review either through the submission of Public Input, Committee Input, or Correlating Input or through the first revisions. The technical committee may reject but hold any Public Comment that introduces “new material” or that has not had adequate public review. See 4.4.8.3.

Transparency not achieved in Terra – no opportunity to NITMAM. The electronic system used to document the actions did not include the Second Correlating Revisions (SCRs), including the relevant SCR 38. The SCRs were only added long after the deadline for filing a NITMAM had passed; in fact, the missing SCRs were added after the San Antonio Technical Meeting when the omission was highlighted by a member of the public. Transparency is the hallmark of NFPA, and it was not achieved in this case, and there was no opportunity to submit a NITMAM.

PRECISE RELIEF REQUESTED

The relief sought is twofold. First, we request that the changes made in FR 7977 be overturned. Second, we seek to have better communication with the NEC panels regarding changes affecting health care. There have been numerous issues like this in the past, and early coordination could serve to solve problems during the revision cycle instead of after the revision process through the Standards Council. We request that any changes made to the healthcare industry shall be communicated to the Healthcare Section, with the representative on Panel 15 being the conduit. That member currently is Dave Dagenais.

Thank you for your consideration. We look forward to discussing this further with the Council on Tuesday, August 6, 2019 at the Boston Marriott Quincy, 1000 Marriott Drive, Quincy, MA 02169. Please do not hesitate to contact me if you have any questions.

James Peterkin, PE
Principal, Life Safety Consultant
TLC Engineering Solutions
Committee Comment No. 7908-NFPA 70-2018 [New Section after 517.21]

This was a Second Revision that has been modified or deleted as the result of Second Correlating Revision:

517.24 Demand Factors.
Rating of feeders, busses, transformers, generators, and services shall be calculated in accordance with Table 517.24(a) and Table 517.24(b), with respect to cord-connected equipment.

- Table 517.24(a) Receptacle Outlet Demand Factors for Health Care Facilities

<table>
<thead>
<tr>
<th>Portion of Receptacle Load to Which Demand Factor Applies</th>
<th>Demand Factor (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 5.0 kVA or less</td>
<td>100</td>
</tr>
<tr>
<td>Second 5.0 kVA to 10 kVA</td>
<td>50</td>
</tr>
<tr>
<td>Remainder over 10 kVA</td>
<td>25</td>
</tr>
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</table>

- Table 517.24(b) Cord-Connected Equipment Demand Factors for Health Care Facilities

<table>
<thead>
<tr>
<th>Number of Cord-Connected Equipment</th>
<th>Percent of Full Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest 1 to 5 pieces</td>
<td>100</td>
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<tr>
<td>Additional (more than 5)</td>
<td>50</td>
</tr>
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</table>

Supplemental Information

File Name Description Approved
70_CMP15_SR7908_517.24.docx for staff use ✓

Submitter Information Verification

Committee: NEC-P15
Submittal Date: Mon Oct 29 14:12:10 EDT 2018

Committee Statement and Meeting Notes

Committee Statement: The revised text reduces oversizing of hospital electrical systems, as justified by the hospital power study provided to the panel.

Per Section 90.3, Chapters 5, 6, and 7 apply to special occupancies, special equipment, or other special conditions and may supplement or modify the requirements in Chapters 1 through 7. Therefore, it is the opinion of Panel 15 that this information belongs in Article 517 instead of Chapter 2.

Response Message: CC-7908-NFPA 70-2018

Public Comment No. 2165-NFPA 70-2018 [New Section after 517.21]
Public Comment No. 2172-NFPA 70-2018 [New Section after 517.21]
Public Comment No. 2170-NFPA 70-2018 [New Section after 517.21]

Ballot Results

✔ This item has passed ballot

19 Eligible Voters
2 Not Returned
13 Affirmative All
1 Affirmative with Comments
3 Negative with Comments
0 Abstention

Not Returned
Dagenais, David A.
Jones, Kim

Affirmative All
Beebe, Chad E.
DuPriest, Joe L.
Gilbert, Kenneth J.
Gwynn, Pamela
Heff er, Mitchell K.
Kramer, Edwin S.
Porter, Kevin T.
Rabel, Don
Seabury III, James C.
Skinner, Michael D.
Terry, Steven R.
Todd, Lawrence E.
Vernon, IV, Walter N.

Affirmative with Comment
Krupa, Gary J.
I presume a decision was made that this table does fall under the jurisdiction of CMP 15 and not under CMP 2.

Negative with Comment
Beckstrand, Gary A.
This Section and its accompanying Table belong in Article 220 not in 517. CMP-2 has purview over demand factors. Little if any substation was given for inclusion of these demand factors in 517 and the public has not had a chance to comment on this action as it was rejected in the first draft edition. While there may be a need for additional demand factors for service and feeder calculation in a healthcare facility, this information does not belong here. This section needs to be removed from the 2020 edition and readdressed by CMP-2 in the next edition.

Dozier, Matthew B.
Data provided was based on only 2 weeks of monitoring. Only 2 hospitals were evaluated for the entire country. No data was provided on loading needed during a mass casualty event. Of the 2 hospitals, only 1 contained an ED. No data was presented on how weather across the country could create an issue in respect to loading. The NEC Correlating committee stated that demand factor evaluation belonged in CMP 2. CMP 2 voted to reject these demand factor changes with similar question list.

Rock, Brian E.
NEMA considers it essential that the requirements of Chapter 2 for Wiring and Protection should remain there for coordination and expertise, and should not be dispersed throughout the Code. This particularly applies to load calculations. Furthermore, CMP-2 rejected associated Public Comments PC-2178, PC-2182, PC-2192, PC-2200, having conveyed concerns to the presenter regarding load characteristics not adequately considered in the submitter’s analysis: • ERs and trauma centers under peak conditions • major events NOT resulting in advance evacuation (e.g., a hurricane) • the 2-week period of the study, insufficient for seasonal factors • % occupancy level • lack of geographic
diversity • data not identified by Normal Power/Equipment Branch versus Critical Branch versus Life Safety Branch.

Editorial Comment

Click here
Second Correlating Revision No. 38-NFPA 70-2019 [ New Section after 517.2 ]

Supplemental Information

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Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Wed Feb 20 16:16:48 EST 2019

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee deleted this section. In accordance with 3.4.3(a) and (b) of the Regulations Governing the Development of NFPA Standards, this new section has been deleted to resolve a potential conflict within or between NFPA standards and overlapping functions in Technical Committee scopes. Requirements for reconditioned electrical distribution equipment are not occupancy specific and are under the purview of other Code-Making Panels with expertise in the specific equipment areas. The construction, operation, maintenance, and reconditioning of electrical distribution equipment are installation issues rather than performance issues.

Ballot Results

✔ This item has passed ballot

12 Eligible Voters
0 Not Returned
12 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Affirmative All
Brunssen, James E.
Dressman, Kevin L.
Hickman, Palmer L.
Hittinger, David L.
Holub, Richard A.
Johnston, Michael J.
Kovacik, John R.
Manche, Alan
McDaniel, Roger D.
Porter, Christine T.
Straniero, George A.
Williams, David A.
Maynard, Mary

From: Peterkin, Jim <jim.peterkin@tlc-eng.com>
Sent: Tuesday, July 2, 2019 12:13 PM
To: Bellis, Dawn; Fuller, Linda
Cc: Maynard, Mary
Subject: RE: APPEAL REQUEST ON THE NEC

Dear Ms. Bellis and Ms. Fuller,

Please accept this as notice that the Healthcare Section wishes to appeal 3 items during the August Standards Council Meeting. The three items are the following: 1) NEC Panel 2 action on FR 7977 to require AFCIs in patient sleeping rooms in nursing homes and limited-care facilities; 2) NEC Correlating Committee action SCR 38 regarding reconditioned equipment in healthcare occupancies; and 3) NEC Correlating Committee action SCR 39 regarding demand factors for health care facilities. These are three separate issues, and we request that they be considered as separate appeals.

We'd like to request a hearing on these items. Although each appeal has its own merits, the overarching issue is the continuing jurisdictional issue between the scopes of the NEC and NFPA 99. This issue was first addressed by the Council in 2007 when a Task Group was formed to delineate the jurisdictions; performance requirements in healthcare belong to NFPA 99 and electrical installation issues are within the jurisdiction of the NEC. We believe that relief is necessary through the actions requested in the appeals, and that additional Council guidance is needed to ensure these jurisdictional issues do not continue.

If the appeals are accepted, please let me know when the written materials are needed for the agenda, and when the hearing will occur. Those who plan to be in attendance are: James Peterkin (Healthcare Section, Executive Board Chair), Dave Dagenais (Partners Healthcare), Michael Crowley (Jensen-Hughes) and Mark Howell (American Hospital Association).

I appreciate your consideration.

James Peterkin, PE
Healthcare Section, Executive Board Chair
215-360-4144

James Peterkin, PE, LEED AP, SASHE
Principal | Life Safety Consultant
jim.peterkin@tlc-eng.com

TLC ENGINEERING SOLUTIONS
1601 Market St., 19th Fl
Philadelphia, PA 19103
Main: 267.538.0940
Cell: 215.360.4144

www.tlc-engineers.com

LinkedIn Facebook Twitter
DEPARTMENT OF DEFENSE

Dawn Michele Bellis  
Standards Council Secretary  
National Fire Protection Association  
1 Batterymarch Park  
Quincy, MA 02169

RE: NEC Correlating Committee Action, SCR 39, Demand Factors

Ms. Bellis,  
Please accept the following appeal materials for the August Standards Council meeting.

APPELLANT  
At the NFPA Health Care Section Business meeting held in San Antonio, Texas on June 19, 2019, the Health Care Section voted to file an appeal to the Standards Council regarding the actions of the Correlating Committee, Second Correlating Revision (SCR) 39 to delete proposed new §517.24 Demand Factors and new Tables 517.24(a) and (b) that were approved as Second Revision (SR) 7908 by Code Making Panel (CMP) 15. Specifically representing the Healthcare Section are the following members:

James Peterkin, PE  
Representing the Health Care Section,  
TLC Engineering Solutions  
1601 Market St., 19th Floor  
Philadelphia, PA 19103  
(215) 360-4144  
jim.peterkin@tlc-eng.com

Dave Dagenais  
Partners Healthcare  
Wentworth Douglass Hospital  
789 Central Ave, Dover, NH 03820  
(603) 740-2474  
dave.dagenais@wdhospital.com

Michael Crowley  
Representing the American Health Care Association (AHCA)  
Jensen Hughes  
8827 W Sam Houston Pkwy  
Suite 150  
Houston, TX 77040-5399  
(281) 838-6007  
mcrowley@jensenhughes.com

Mark A. Howell  
American Hospital Association  
800 10th Street, NW  
Two CityCenter, Suite 400  
Washington, DC 20001-4956  
(202) 626-2317  
mhowell@aha.org

ACTION TO WHICH THE APPEAL RELATES  
Panel 15 considered demand factors through Public Inputs (PIs) 3565, 3573 and 3577. In the Panel statement, a note to the Correlating Committee sought guidance to determine if the demand factors were within the purview of Panel 15 or Panel 2. It was not clear that the Correlating Committee ever provided an answer to this Panel’s question, hence in the Second Draft meetings, the Panel assumed it was within their jurisdiction. This apparent lack of response is noted by Panel member Gary Krupa in his affirmative comment on the written 2nd Draft ballot for SR 7908, noting that he assumed the Correlating Committee determined it was within the purview of Panel 15.
In the Second Draft meetings, Panel 15 approved SR 7908 to create a new §517.24 *Demand Factors* and new Tables 517.24(a) and (b). The Correlating Committee deleted this section and two tables in SCR 39, resulting in SR 7908 to become Committee Comment (CC) 7908. Other actions to which the appeal relates is a previous Standards Council decision (D#11-7, SC #11-6-a and 11-8-6-c) regarding the clear delineation of performance-related requirements versus installation requirement.

This change by the Correlating Committee means that there will be no health care specific demand factors; the generic demand factors created by Panel 2 must be used.

**ARGUMENTS IN SUPPORT OF THE APPEAL**

**Special occupancy concerns not taken into account.** It is problematic when code making panels make occupancy-specific decisions without having the occupancy-specific expertise on the committee. CMP-2 acknowledged during the First Draft meeting that health care was outside of their expertise, noting that only one panel member had health care experience, which was from a single hospital project. This should be a red flag for the Standards Council, and input or jurisdiction should be sought from committees with the necessary expertise. In this case, the National Electrical Code already has a committee specific to health care, CMP-15.

**Demand factors are design (performance) considerations not installation issues.** The topic of Branch-Circuit, Feeder, and Service Load Calculations is a design consideration where different values are used to correctly size the electrical distribution system to ensure adequate power is provided. This is based on the way the occupancy needs to perform, and as such, it is a performance-based design decision and should not be made without the occupancy input. Furthermore, we would like the Standards Council to review previous Standards Council Decision SC #11-6-a and 11-8-6-c D#11-7, which establishes jurisdiction for design with the occupancy document (or Panel in this case) versus installation which is the jurisdiction of the NEC as a whole.

**Demand factors not a correlation issue.** The Correlating Committee acted outside of its scope of correlation and made a technical change to the document contrary to the Panel actions. In the Correlating Committee statement for the change they noted: “The Correlating Committee deleted the section to resolve potential conflicts with the NEC in accordance with 3.4.3(a) and (b)” We don’t believe that the proposed CMP-15 language conflicted with any other section within the NEC. Additionally, CMP 15 asked the Correlating Committee for guidance (in the Committee Statements for PIs 3565, 3573 and 3577) on whether the demand factors were within the jurisdiction of CMP 15, and apparently there was no response that was conveyed to the Panel to resolve the scope.

**Transparency not achieved in Terra – no opportunity to NITMAM.** The electronic system used to document the actions did not include the Second Correlating Revisions (SCRs), including the relevant SCR 39. The SCRs were only added long after the deadline for filing a NITMAM had passed; in fact, the missing SCRs were added after the San Antonio Technical Meeting when the omission was highlighted by a member of the public. Transparency is the hallmark of NFPA, and it was not achieved in this case, and there was no opportunity to submit a NITMAM.

**PRECISE RELIEF REQUESTED**

The relief sought is to reinstate SR 7908 approved by Panel 15. This means that new §517.24 *Demand Factors* and new Tables 517.24(a) and (b) will be reinstated.
Thank you for your consideration. We look forward to discussing this further with the Council on Tuesday, August 6, 2019 at the Boston Marriott Quincy, 1000 Marriott Drive, Quincy, MA 02169. Please do not hesitate to contact me if you have any questions.

James Peterkin, PE
Principal, Life Safety Consultant
TLC Engineering Solutions
Second Correlating Revision No. 39-NFPA 70-2019 [New Section after 517.21]

Supplemental Information

File Name: NEC_SCR-39_New_section_being_deleted_with_SCR.docx
Description: Approved

Submitter Information Verification

Committee: NEC-AC
Submitter Date: Wed Feb 20 16:59:01 EST 2019

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee deleted the section to resolve potential conflicts with the NEC in accordance with 3.4.3(a) and (b) of the Regulations Governing the Development of NFPA Standards. C1P-2 has pursued over general load calculations that are occupancy based throughout the NEC. The Fire Protection Research Foundation has initiated a research project that will seek to provide the necessary data and analysis to support appropriate demand and loading of electrical receptacles, including 120 volt, 15 or 20 amp receptacle circuits for general office areas, conference rooms, and exits within occupancies, educational facilities, and healthcare facilities. This research project data will further seek to address the following occupancy area loading concerns found in the C1P-2 panel statement as follows: various health care facilities, hospitals with intensive care units, emergency, data for departments associated with health care facilities portion of the building, geographic diversity, identification of critical life safety branches, the impact from a disaster scenario that increases demand on the electrical system, logical impact on the use of auxiliary equipment, and when major events occur and a hospital is under full operation. The Correlating Committee is appointing a task group between C1P-2, C1P-15, and Correlating Committee members to formulate public inputs for the 2023 NEC to address concerns in the CMP-2 panel statement for PC-2152 utilizing data from a Fire Protection Research Foundation research project. The Correlating Committee directs the submission of any other data used to develop this proposed section should be coordinated with the NFPA research project data in addition to the ongoing work of the Correlating Committee appointed energy task group.

Committee Notes:

Date: 
Submitted By: 

Note: Supports most recent versions of Firefox, Google Chrome, or Internet Explorer
July 7, 2019

Ms. Dawn Michele Bellis
Standards Council Secretary, NFPA
1 Batterymarch Park
Quincy, MA 02169

Re: 2020 NEC; Certified Amending Motions for Reconditioned Equipment

Dear Secretary Bellis:

I respectfully request that the Standards Council reconsider the actions taken on Certified Amending Motions 70-13, 15, 16, 27, 28, 30, 31, 32, 33, 41, 42, 43, 44, 47, and 50 at the NFPA Technical meeting on June 20, 2020. The motions sought to reject the changes (or an identifiable part) in Second Revisions 7657, 7974, 8048, 8187, 8189, 8172, 8162, 8164, 8222, 7522, 7584, 7586, 7588, 7517, and 7509, and the motions did not succeed. I am requesting that all these identified Second Revisions be removed from the 2020 NEC and held as new material for consideration in the 2023 NEC cycle.

Additionally, there was a related change in section 240.88 that was identified at the Technical Meeting as new material but missed in the Motions process; I request that you reject SR 8011 as well in order to provide opportunity for public review of the language that was added in the Second Draft without public review.

A table with all the CAMs, SRs and related NEC sections is attached.

Grounds for Appeal

The grounds for the appeal are: the language included in these Second Revisions was all new material and did not receive appropriate public review. This language appeared in the second draft, and it was not based on any similar language or requirement that was considered in the first draft. There was no public input, no first revision, nor any other appearance of any language like this in the first draft. This conflicts with the requirements in the NFPA Regulations Governing the Development of NFPA standards:

4.4.4.2 Public Comments must be related to material that has received public review either through the submission of Public Input, Committee Input, or Correlating Input or through the first revisions.

Related to this, the regulations also state:
4.4.8.3.1 Criteria for Hold. The technical committee shall reject but hold for processing as Public Input for the next revision cycle, in accordance with 4.4.8.1(d), a Public Comment that meets any of the following criteria: (a) It would introduce a concept that has not had public review by being included in a related input or first revision as shown in the first draft.

The code-making panels should have held the public comments that suggested this new language, but they did not. The public comments requesting the language came from a Correlating Committee Task Group, and I've heard more than one CMP member say they were just doing what the Correlating Committee told them to do. It is clear from the panel statements in response to PC 979 (attached) that the panel members believed they were being directed to take action by the Correlating Committee.

The public comments from the Correlating Committee Task Group all sprang from review of Public Input 2935 (attached). That Public Input requested listing of reconditioned equipment, not prohibition of reconditioned equipment. However, the Second Revisions did not limit their direction to listing or not listing of reconditioned equipment under the purview of each CMP. Instead, they went far beyond the issue of listing. In every case except communications equipment, the language explicitly prohibits some or all the referenced reconditioned equipment with no more justification than a policy published by NEMA, a trade group formed to represent the business interests of manufacturers of new electrical equipment.

Requirements prohibiting or restricting remanufactured equipment appeared in over a dozen places in the NEC without public review, and without an opportunity for all the stakeholders who will be affected by these requirements to contribute their expertise, concerns, objections or support. This conflicts with the NFPA regulations, and with fair consideration of interests for standards developed under the ANSI process. I respectfully request that you correct this situation and require each of these changes to follow the established, fair process with adequate public review.

History of New Material Development

The Correlating Committee Task Group of four people that was formed to consider this issue was noticeably bereft of representation from members of the industry that will be most significantly and negatively affected by these last-minute additions: facility owners and equipment reconditioners. Nevertheless, the task group generated the suggested language that appeared nearly verbatim in the second draft.

The task group members were not unaware that there were interested parties, since representatives from both groups submitted public inputs on reconditioned equipment requesting changes to Articles 100 and 110. However, these interested parties were not informed of the task group’s formation, they were not informed of the task group
meetings, they were not invited to contribute to the discussion, and they were not aware of the recommendations from the task group until they were published on the NFPA website as Public Comments on behalf of that small task group. Even at that point, it seemed obvious that this was new material, and the expectation was that the panels would hold the suggested language in accordance with NFPA regulations.

Additional requests

I request that a balanced and representative task group be formed (even prior to the onset of the 2023 NEC cycle) to fairly and fully consider the language that should appear in the NEC. Representatives from organizations that represent equipment reconditioners should be invited to participate, as well as industry representatives of facility owners. As in the NEC CMP balance process, manufacturers of new electrical equipment in the affected categories would not truly represent facility owners who are Users of the NEC.

I also request permission to appear at the Standards Council meeting to be heard on this issue.

Sincerely,

Christel K. Hunter
Director of Codes and Standards

Email: chunter@cerrowire.com
Mobile: 702-271-7400
## Exhibit A

### Table of CAMs, Second Revisions and Related NEC Sections for Appeal on Reconditioned Equipment Language in the 2020 NEC

<table>
<thead>
<tr>
<th>CAM</th>
<th>Second Revision</th>
<th>NEC Section</th>
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Public Input No. 2935-NFPA 70-2017 [ Section No. 110.21(A)(2) ]

(2) Reconditioned Equipment.

Reconditioned equipment shall be marked with the name, trademark, or other descriptive marking by which the organization responsible for reconditioning the electrical equipment can be identified, along with the date of the reconditioning.

Reconditioned equipment shall be identified as “reconditioned” and approval original listing marks removed. Approval of the reconditioned equipment shall not be based solely on the equipment's original listing.

Exception: In industrial occupancies, where conditions of maintenance and supervision ensure that only qualified persons service the equipment, the markings indicated in 110.21(A)(2) shall not be required.

Informational Note: Industry standards are available for application of reconditioned and refurbished equipment. Normal servicing of equipment that remains within a facility should not be considered reconditioning or refurbishing.

Statement of Problem and Substantiation for Public Input

The presence of the original certification mark on reconditioned equipment suggest to the installer and AHJ that the equipment is compliant with the product safety standard related to that equipment. In reality the actual compliance with the related safety standard is unknown. Third party NRTL certification bodies can offer listing and labeling services to determine compliance of rebuilt, refurbished or reconditioned electrical equipment to related safety standards. Throughout the NEC reference to equipment being listed is made. The use of reconditioned equipment cannot negate this. The level of safety of installed equipment must be the same whether the equipment installed is new or reconditioned.

Submitter Information Verification

Submitter Full Name: Donald Talka
Organization: UL LLC
Street Address:
City:
State:
Zip:
Submittal Date: Tue Aug 29 11:33:09 EDT 2017
Committee:

Committee Statement

Resolution: There are occasions where it is important to maintain the history of the original listing and reconditioning, and that it is preserved by leaving the original listing markings on the product. Labels often contain more information than just the listing mark. If the original equipment manufacturer or authorized agent is performing the reconditioning process it is unnecessary to remove the original listing mark.

Copyright Assignment

I, Donald Talka, hereby irrevocably grant and assign to the National Fire Protection Association (NFPA) all and full rights in copyright in this Public Input (including both the Proposed Change and the Statement of Problem and Substantiation). I understand and intend that I acquire no rights, including rights as a joint author, in any publication of the NFPA in which this work is included.
240.88 **Reconditioned Equipment.**
Reconditioned equipment shall be listed as "reconditioned" and the original listing mark removed.

**(A) Circuit Breakers.**
The use of reconditioned circuit breakers shall comply with (1) through (3):

1. Molded-case circuit breakers shall not be permitted to be reconditioned.
2. Low- and medium-voltage power circuit breakers shall be permitted to be reconditioned.
3. High-voltage circuit breakers shall be permitted to be reconditioned.

**(B) Components.**
The use of reconditioned trip units, protective relays, and current transformers shall comply with (1) and (2):

1. Low-voltage power circuit breaker electronic trip units shall not be permitted to be reconditioned.
2. Electromechanical protective relays and current transformers shall be permitted to be reconditioned.

Submitter Information Verification

**Committee:** NEC-P10

**Submittal Date:** Mon Oct 29 19:41:54 EDT 2018

Committee Statement and Meeting Notes

**Committee Statement:** Public Comment 980 was submitted by an NEC Correlating Committee appointed task group to address the global impacts of PI 2935. PI 2935 would have required that “Reconditioned Equipment” be “listed as reconditioned” and the “original listing marks removed”. PI 2935 has ramifications that are global in nature and impacts all products referenced in the NEC under the purview of every CMP. Proposed new section 240.88 is safety-driven and is necessary to prevent the reconditioning of products that cannot be safely reconditioned. Public Comment 980 was based on the global impact of PI 2935 and does not represent new material.

**Response Message:** SR-8011-NFPA 70-2018

**Committee Notes:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Submitted By</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>Oct 29, 2018</td>
<td>Chelsea Rubadou</td>
<td>This is a new section to be placed after 240.87.</td>
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</tbody>
</table>

Public Comment No. 980-NFPA 70-2018 [New Section after 240.87(B)]

Ballot Results

- **This item has passed ballot**
  - 12 Eligible Voters
  - 0 Not Returned
  - 12 Affirmative All
  - 0 Affirmative with Comments
  - 0 Negative with Comments
Absention

Affirmative All
Barnhart, Paul D.
Blizard, Scott A.
Burns, Julian R.
Dollard, Jr., James T.
Koepke, Ed
Philips, Nathan
Rempe, Kenneth J.
Saporita, Vincent J.
Sparks, III, Roy K.
Townsend, Steven E.
Vance, Christopher R.
Williams, David A.

Editorial Comment

Click here
speaking in favor of the motion. I just wanted to bring to the attention that the number on the board up there says 725, and we're discussing 760.

JAMES GOLINVEAUX: Okay.

MARCELO HIRSCHLER: Mr. Chairman, yeah - it, it should state 760 on all four --

JAMES GOLINVEAUX: You are correct.

MARCELO HIRSCHLER: -- screens.

JAMES GOLINVEAUX: You are correct. Okay?

Noted. Is there any further discussion on Motion 70-49 to Accept a - Public Comment No. 500? Mr. Johnston, any final comment?

MICHAEL JOHNSTON: No further comments, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 500. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed.

The results are: 219 in favor of the motion;
90 against the motion. Therefore, the motion has passed.

Now let's proceed with the discussion on Certified Amending Motion 70-50. Microphone four, please.

CHRIS HUNTER: Thank you. I'm Chris Hunter with Serra Wire. I'd like to make a Motion to Reject Section Revision 7509.

JAMES GOLINVEAUX: Thank you. There is a motion on the floor to Reject Second Revision No. 7509. Is there a second?

UNIDENTIFIED SPEAKER: Second.

JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

CHRIS HUNTER: Thank you. I'm Chris Hunter, with Serra Wire, in support of the motion.

Like in earlier motions, this language appeared in the Second Draft. It was not based on any similar language, or requirement that was considered in the First Draft.

Communications equipment is frequently reconditioned, and a new label is added. However, this requirement would require the removal of the original listing mark, which is unnecessary, and may result to damage to the equipment. Thank you.
JAMES GOLINVEAUX: Thank you. Mr. Johnston, would you like to offer the Panel's position, please.

MICHAEL JOHNSTON: Thank you, Mr. Chair. Since the new material issue was brought up again, the same statement is in order.

The NEC Correlating Committee did review the complete record of public comments and inputs to ensure that no new material was being introduced. Nothing was identified; no holds were place. The Correlating Committee concluded that there was no new material related to either the definition of reconditioned, or any new rules related to it. There were no apparent conflicts or correlation issue. I'd like to defer to the Chair of Code Panel 16, Thomas Moore. He's at microphone three, please.

TOM MOORE: Thank you, Mr. Chairman. My name is Tom Moore, representing the International Association of Electrical Inspectors, as Chair of CMP 16, speaking in opposition of the motion on the floor.

CMP 16 acted on Global Public Comment 979, thereby creating Second Revision 7509. CMP 16 reviewed, and affirmed with the Correlating Committee that this was not new material.

As indicated in the Panel's Committee Statement, there are certain types of communication
equipment covered in Chapter 8 that may be reconditioned. Furthermore, during the discussions, it is clear that reconditioning of certain types of communications equipment has been performed under recognized product standards for many years. By virtue of NEC 90.3, Chapter 8 is a standalone chapter, and 110.21(A)(2) would not be applicable if not referenced in new 800.3(G), other articles. Thank you.

JAMES GOLINVEAUX: Thank you. With that, we'll open up the debate on the motion. Please provide your name, affiliation, and whether you are speaking in support, and/or against the motion. Microphone three.

THOMAS DOMITROVICH: Thomas Domitrovich with Eaton. I continue to speak against the motion that's on the floor. I would ask everyone else to do the same. Thank you.

JAMES GOLINVEAUX: Okay. Thank you. I'm not seeing anyone at a microphone. Is there any further discussion of Motion 70-50 to Reject a Second Revision 7509? Mr. Johnston, do you have any final comment?

MICHAEL JOHNSTON: I have no additional comments, Mr. Chair. Thank you.

JAMES GOLINVEAUX: Thank you. Before we vote, let me restate the motion. The motion on the floor is
to Reject Second Revision 7509. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

    The voting will close in five seconds.
    The voting is closed.
    The results of the vote are: 11 in favor of the motion: 337 against the motion. The motion has failed.

    Now let's proceed with the discussion on Certified Amending Motion 70-51. Microphone four, please.

    MARCELO HIRSCHLER: Marcelo Hirschler, GBH International for NAFRA, and I move to Accept Public Comment No. 516, please.

    JAMES GOLINVEAUX: Thank you. There, there is a motion on the floor to Accept Public Comment No. 516. Is there a second?

    UNIDENTIFIED SPEAKER: Second.

    JAMES GOLINVEAUX: We do have a second. Please proceed with the discussion on the motion.

    MARCELO HIRSCHLER: Thank you. Marcelo Hirschler, GBH International, speaking for NAFRA, and
is the First and Second Draft Reports, is located on
the Document Information Page for NFPA 130 on the NFPA
website. All Certified Amending Motions are contained
in the NFPA Technical Meeting (Tech Session) Agenda,
and will be displayed behind me on the screen as they
are under debate. Mr. Alston, will you present the
Chair Report.

JARROD ALSTON: Mr. Chair, ladies and
gentlemen, the Report of the Technical Committee on
Fixed Guideway Transit and Passenger Rail Systems is
presented as found in the First Draft Report, and
Second Draft Report for the 2019 annual revision
cycle. The Technical Committee has published a First
and Second Draft Report consisting of revisions to
NFPA 130, Standard for Fixed Guideway Transit and
Passenger Rail Systems. The revisions were submitted
to letter ballot of the responsible Technical
Committee. The reports and ballot results can be
found on the Next Edition tab of the Document
Information Page for NFPA 130 at www.nfpa.org/130next.

Mr. Chair, I move for Standards Council issuance the
Committee's Report on NFPA 130.

KENNETH BUSH: Thank you, Mr. Alston. Let's
now with the discussion of the Certifying Amending
Motions on NFPA 130. Microphone four, please.
MARCELO HIRSCHLER: I - Marcelo Hirschler, GBH International, for the Vinyl Institute, and I move to Reject an Identifiable Part of Second Revision No. 23.

KENNETH BUSH: Thank you, Sir. As a reminder, Motion 130-1 has been changed to Reject an Identifiable Part of Second Revision 23. The text shown on the screens behind me reflects the proposed action for the Membership's consideration.

There is a motion on the floor to Reject an Identifiable Part of Second Revision No. 23. Is there a second?

UNIDENTIFIED SPEAKER: Second.

KENNETH BUSH: We do have a second. Please proceed with the discussion on the motion. Microphone four.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for the Vinyl Institute, and in support of the motion. This is a fairly simple issue, but just changing a definition.

The concept is that something critical, such in this case a critical velocity, is an absolute term, not a relative term. The existing definition, as accepted by the Committee, says that a critical velocity, one that controls back-layering, such a tenable environment is maintained. That's not
critical, because it depends on concept obtainable, on the environment, on the point of safety.

Critical velocity has to be a critical thing – one that prevents back-layering. It's not necessary to reach your critical velocity of a safe passage. That's just the ultimate goal. It's an (unintelligible). The same when we're talking about critical flux for ignition. It's not the flux at which it will ignite; it's the minimum flux that will, which will ignite. Critical temperature is not the critical, any temperature will ignite - critical, minimum temperature will ignite. So critical is an absolute term. Thank you.

KENNETH BUSH: Thank you. Mr. Alston, would you like to offer the Committee's position.

JARROD ALSTON: Thank you. It was the Committee's position that the qualifier on the definition of 'critical velocity' was required to provide clarification on its intent, and application to real tunnels. This came in response largely to changes in the formulation of the critical velocity expression adopted in Annex D of the 2017 Edition of NFPA 502. That reformulation was the result of work of Lee (phonetic) and Engison (phonetic) of the Research Institutes of Sweden. The practical outcome
of their work was to effectively change the definition of critical velocity, to one of an absolute theoretical, or mathematical zero back-layering distance, from one of finite back-layering, based on the outcomes of the Memorial Tunnel Fire Ventilation Test Program.

The results of that testing had served for decades as the basis for assessment, and then establish an acceptable degree of back-layering.

According from a report on the, on the tests, generally when back-layering was prevented, smoke was contained within 40 feet upgrade of the fire.

Therefore, the objective of the modification to the definition in NFPA 130 was to realign with, with this previously accepted practical definition.

It is notable that NFPA 502 similarly clarifies the definition, albeit it in Annex material, as achieving the limitation of back-layering such that it does not extend beyond the untenable zone, should be accepted as effectively preventing back-layering.

While it is acknowledged that the Committee action creates a minor departure in definition of the similar term in NFPA 102, the intent is the same.

Therefore, the Committee viewed it as wholly appropriate to elaborate on, and clarify the intent.
for use in tunnel ventilation of real tunnels.

KENNETH BUSH: Thank you, gentlemen. With that, we will open up debate on the motion. Please provide your name, affiliation, and whether you're speaking in support or against the motion. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for the Vinyl Institute, in support of the motion. I think Jarrod Alston explained that what you have in 502 talks about an effective critical velocity. And that's fine; that's what we're talking about. The effective critical velocity is one that will control back-layering. But if you want to prevent back-layering, the absolute term, that is what is critical. Thank you.

KENNETH BUSH: Thank you. Is there any further discussion on Motion 130-1, to Reject an Identifiable Part of Section Revision No. 23? Seeing none, we will move on to a vote. Mr. Chair, do you have any final comments?

JARROD ALSTON: No further comments. Thank you.

KENNETH BUSH: Seeing no further comments, we will move to a vote. Before we vote, let me restate the motion. The motion on the floor is to Reject an
Identifiable Part of Second Revision No. 23. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

UNIDENTIFIED SPEAKER: Yes.

KENNETH BUSH: The voting will close in five seconds.

The voting is closed.

The results of the vote are: Two hundred and - I'm sorry, 111 in favor of the motion; 208 against the motion, and the recommended text on Screen Two. The motion has failed.

Let's now proceed with the discussion on the Certified Amending Motion 130-2. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for the Vinyl Institute, and I, I move to Reject an Identifiable Part of Second Revision No. 19.

KENNETH BUSH: Thank you. There is a motion on the floor to Reject an Identifiable Part of Second Revision No. 19. Is there a second?

UNIDENTIFIED SPEAKER: Second.
KENNETH BUSH: There is a second. We do have a second. Please proceed with a discussion on the motion. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for the Vinyl Institute, and in support of the motion.

It's unfortunate that the, at least the beginning of the, of the table is not shown. What, what we're talking about is that there is a table in the Annex that shows what a number of tests that were conducted with various rail cars. The first column of the table shows what the tests were, with the reference and all that. The next table shows the peak heat release. The next - sorry, not the - next column shows the peak heat release rate, and the third one shows the time for the peak heat release rate.

Then there's a fourth column, that I hope you can look at your Agendas, because there are the details in there. The - that describes, to some extent, what the materials are. But this can be very misleading because it's not detailed enough.

The table itself is very valuable, and needs to remain, and the references to each test will give all the details you need about materials or products used, as opposed to the scanty detail shown.
For example, if one of the columns says, 'Legacy Interior Materials' - I'm not sure what the hell that means. One of --

(laughter)

MARCELO HIRSCHLER: -- it could be wood, leather, horsehair - I don't know what a legacy material is. And some legacy materials behave better than others.

Another table - another column says, '90% of interior materials were considered to be combustible' - okay, probably most of them were combustible. But what does that tell you about what the materials were? In other cases it said, 'Seek materials of latest design at the time of test.' What does that tell you? That is confusing, potentially misleading.

I'm not sure that does help the user at all. In the contrary, it confuses. The key information is what's found in columns one, two, and three - the reference; the type of train; peak heat release; the time to peak heat release rate. Anything else, much more information is needed, if you really want details and want to reproduce to some extent, the test method. That will be found in the reference, and not in some sketchy statements in a misleading column.

So again, what this does, and again, I, I urge
you to look at the Agenda, because this won't show you. The table is an excellent table, and needs to remain. And the table is a summary of measured and estimated heat release rates, and associated context. And the, the context is what's in the first column – heat release rate, and time to peak heat release rate is in the second and third column. The fourth, the fourth column is just some - some sketchy information that you really need to look at in the actual text.

Thank you.

KENNETH BUSH: Thank you. Mr. Alston, would you like to offer the Committee's position?

JARROD ALSTON: Sure. The incorporation of Table B924 in NFPA 130 was part of the much larger and more extensive effort by the Committee to reorganize the rather sprawling of the Annex material in 130.

That table in particular builds upon information that had previously been touched on in general terms within the prior Annex H, specifically around, quote, 'Modern trains that are fire hardened have not been readily tested. Research has been on older model trains, where the degree of fire hardening has not been quantified.'

It was the view of the Committee that it was appropriate, and a service to the industry to provide
additional information against each test within the fourth column, rather than discussing in general terms, as had been previously done in Annex H, in order to provide appropriate context to the values documented in the second and third columns of the table.

The reason behind the rather generic language utilized in, in column four is actually in response to Mr. Hirschler's comments at our Second Draft meeting, where he had raised concerns about commercial or trademarked material names utilized within, within the table. So that naming, and that nomenclature had been stripped out, in favor of the more generic, legacy, or modern material designation.

It's the view of the Committee that that information is essential to provide the desired context to the experimental results, in order to avoid adoption of inappropriate fire sizes for design purposes based solely on conservative, and ill informed selection of numerical values.

While it's acknowledged that the, the information is, is limited, it does provide a jumping off point for additional research.

KENNETH BUSH: Thank you, gentlemen. With that, we will open up debate on the motion. Please
provide your name, affiliation, and whether you are speaking in support of, or against the motion.

Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for the Vinyl Institute, in support of the motion. I'm going to read a couple of things in this. German IC train with steel body, with legacy interior materials. German ICE train with modern materials at the time of test. Seat materials of latest design at time of test. Other interior materials of former design. Train approximately 30 years old, with 90% interior materials estimated re-combustible. Train dating to 1970s, with original combustible interior lining, and an additional fire load. Refurbished X1 train. And so on, and so forth. I mean, I - you - again, if you, if you look at the Agenda, you'll, you'll see the details. That information doesn't help the user, and it potentially confuses, because it will give you inadequate information.

I agree that what was - the first time this was, was put forward in front of the Committee - I'm not a member of the Committee, but I, I'm a regular attendee. I've been attending those meetings for probably 25 years or so. The - what was put first in
front of the Committee was even worse, because some of the materials were identified, without identifying in detail what the material was. This is very vague, and it really just serves to confuse, confuse.

There is no debate that Annex B is fabulous. I'm 100% in favor of Annex B. There's no debate that Table B924 is a very important table. I'm fully in favor of that table remaining. I'm strongly opposed to this information about materials, which is vague and misleading. Thank you.

KENNETH BUSH: Thank you. Is there any further discussion on Motion 130-2 to Reject an Identifiable Part of Second Revision No. 19? Mr. Chair, any (unintelligible)?

JARROD ALSTON: I just wanted to raise one other point - that there is additional information within the fourth column, particularly around the ignition source, and ventilation conditions, if that was reported on in the testing - both of which are important to understand the outcomes of those tests.

KENNETH BUSH: Seeing no further discussion, we will move to a vote. Before we vote, let me restate the motion. The motion on the floor is to Reject an Identifiable Part of Second Revision No. 19. To vote, touch the 'vote' button. If you wish to vote in
support of the motion, and recommend the text on
Screen One, touch 'Yes'. If you wish to vote against
the motion, and recommend the text on Screen Two,
touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed. The results of the vote
are: 129 in support of the motion; 228 against the
motion. The motion has failed.

Is there any further discussion on NFPA 130?
Seeing none, we will move on to the next document.

Thank you, Mr. Alston.

JARROD ALSTON: Thank you, Mr. Chair.

(applause)

KENNETH BUSH: The next report under
consideration is that of the Technical Committee on
Road Tunnel and Highway Fire Protection. Here to
present the Committee Report is Technical Committee
Chair, Antonio Marino, of the Port Authority of New

The Committee Report, that is the First and
Second Draft Reports, is located on the Document
Information Page for NFPA 502 on the NFPA website.
All Certified Amending Motions are contained in the
NFPA Technical Committee - Technical Meeting (Tech
Session) Agenda, and will be displayed behind me on
MEMORANDUM
(AMENDMENT)

TO: Technical Committee on Motor Craft

FROM: Diane Matthews Technical Committee Administrator

DATE: July 15, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to return to previous text (NFPA 302 2015 edition).

19 Members Eligible to Vote

1 Ballot Not Returned (Game)

The number of votes needed to recommend approval of the Association Action is 12. (19 eligible to vote - 1 not returned - 1 abstention = 17 x 0.66 = 11.22)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2020 NFPA Tech Session are now available at: www.nfpa.org/techsession.

The Regs at 1.6.2.(b) state: An appeal relating to an Association Technical Meeting Amendment that has been submitted shall be filed no later than 5 days after the notice of the amendment final ballot results are published in accordance with 4.2.6.

Appeal Closing Date for this Amendment is July 20, 2019.
NFPA 302-1 AMENDMENT BALLOT FINAL RESULTS

Amendment 302-1: Accept Public Comment No. 3. Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.

Eligible to Vote: 19
Not Returned: 1
E. C. Game

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- Michael Taylor agree
- Kenneth J. Weinbrecht agree
- Alan Ross Hugenot I agree
- David L. Bowman Agree
- Charles Fort Agree
- Joseph A. Derie Agree.
- Sarkis Keuleyan Agree
- David McFarlin ok
- Larry Akins Agree
- Robert Yates Agree

DISAGREE 7
Kim I. MacCartney  
This individual has made it cost prohibitive to manufacture a vessel where 99.9% are unmanned engine rooms and even manned engine rooms have smoke and heat detectors to warn people to evacuate. As the original submitter of this requirement approximately 30+ years ago it has worked fine during the subsequent years and this additional testing is something no vessel manufacturer will specify as they will install the least expensive acoustical insulation possible that meets the standard as written. I cannot see where this individual has anything to do with the marine industry and therefore has no knowledge of vessel construction or operation. He needs to show the benefits with real world statistics of the advantages of this change to the requirements before his recommended change is accepted.

John J. McDevitt  
Not an appropriate requirement for a small boat.

Christopher J. Bloom  
The TC discussed and considered the proposal (and the issues) and by consensus for many different reasons, voted against the proposals.

Eric Johnson  
Commenter was never able to provide justification as to how this would be a minimum safety requirement for unmanned recreational boat engine rooms, and the actual problem we are seeing in the market that it is attempting to fix.

Brian J. Cornell  
Same reason as used for 302-2

James Coté  
Unnecessary for boats with small unmanned engine compartments. Could place an unreasonable burden on vessel builders. What existing problem would this amendment solve?

Brian Goodwin  
Further investigation is needed to understand the impacts of this change on safety and if this is an achievable requirement.

**ABSTAIN** 1

Robert E. Newsome  
no comment
AMENDMENT BALLOT TEXT

Technical Committee on Motor Craft
NFPA 302, *Fire Protection Standard for Pleasure and Commercial Motor Craft*
Amendment No. 302-1: Accept Public Comment No. 3
June 2019

IF YOU AGREE TO SUPPORT AMENDMENT 302-1 as recommended by the membership by vote at Tech Session, the recommended text reads as follows (*changes shown legislatively to the Second Draft*):

4.1.6.1 Materials used for thermal and acoustical insulation in any compartment or enclosure containing an internal combustion engine or heater shall have a flame spread index of 75 or less and a smoke developed index of 450 or less, when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 302-1 by the membership by vote at Tech Session, the recommended text is shown clean below. If no previous edition text exists, the text is simply deleted.

4.1.6.1 Materials used for thermal and acoustical insulation in any compartment or enclosure containing an internal combustion engine or heater shall have a flame spread index of 75 or less, when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*. 

Mr. Chairman, I move the Standards Council issuance of the Committee's Report on NFPA 302.

DAN O'CONNOR: Thank you, Mr. McDevitt. Let's now proceed with the discussion on Certified Amending Motion 302-1. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, and I move to Accept Public Comment No. 3.

DAN O'CONNOR: Thank you. There is a motion on the floor to Accept Public Comment No. 3. Is there a second?

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: Okay. Yes, we have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and maker of the motion.

First of all, let me apologize to the audience, because I have a whole bunch of Certified Amending Motions, that they all, most of them come now, one after the other, so you're going to have to listen to me for a while. But anyway - dealing with this particular CAM - in every single transportation
environment, we have a requirement that we measure smoke; we have some requirement for smoke obscuration. We - if we're dealing with aircraft, it's the FAA. If we're dealing with ships, it's NFPA 301, the International Maritime Organization, the Coast Guard.

DAN O'CONNOR: Mr. Hirschler, could you just stay closer to the mic, please?

MARCELO HIRSCHLER: If we - if we're dealing with NFPA - with trains, it's the NFPA, and the Federal Railroad Administration. If we're dealing with subways underground, it's NFPA 130, and the individual requirements of the authorities having jurisdiction. Dealing with busses, it's the FTA guidelines.

NFPA 302 deals with small craft, but it does not deal with personal watercraft. I am reading from the scope, or application, actually. NFPA 302 deals with the following - boats of less than 300 gross tons used for pleasure or commercial purposes; boats that use energy for propulsion; they use engines for generating power; they use cooking, heating, or auxiliary appliances, permanently installed ignition sources, permanently installed electrical systems.

The motion recommends that when you conduct an ASTM 84 test - that's the Standard (unintelligible)
for some of you who may not be as familiar as I am -
you also - you also get smoke measurements. You
always get them when you run the test, so it doesn't
mean that you have to do any additional tests. You
just do the same test over. This doesn't require any
additional test; you get the smoke values.

Class - Section 4.1.6.1 says you need an FSI of 25, but it doesn't require smoke. So I'm recommending
that you add smoke, the Standard Class A smoke of SDI under 450. Thank you.

DAN O'CONNOR: Thank you, Sir. Mr. McDevitt, would you like to offer the Committee's position?

JOHN MCDEVITT: Yes, Sir. The majority of vessels covered in NFPA 302 are pleasure craft -
pleasure crafts or small boats used for pleasure,
family, or sportsmen recreation. Generally, pleasure craft is understood to be small to moderate sized boat under 26 feet. The Technical Committee on Motor Craft includes surveyors, retired US Coast Guard inspectors, and these members have experience in the investigation of incidents, including fires, and review of claims and fire losses aboard small pleasure boats. No one can recall an issue where smoke from insulating materials ever being a concern, or contributor to loss of life, additional property damage, or a hindrance in
firefighting efforts on a small pleasure craft.

In the First Draft, the Committee requested the submitter to provide documentation or other information to verify that smoke obscuration was a factor or an important consideration in the size and type of vessels covered by 302. Instead, the submitter's public comments stated that other NFPA Standards use smoke developed index of 450 or less. Among those listed was NFPA 301, which is a Standard for merchant vessels or larger ships where egress could be confused by smoke saturation.

It is important to note that marine vessels over the - greater than 300 gross tons were different from, very different from small pleasure craft. NFPA 301 was created to address hazards on larger passenger vessels and commercial ships. Larger passenger vessels are vessels with multiple desks, numerous passageways, and carrying passengers who are unfamiliar with the vessel layout. Small pleasure craft, fitted with cabin, typically have a single below deck space that is accessed by a central passageway, with egress forward and aft. Persons are boat owners, and are very familiar with the layout of the vessel.

The Committee knows no static - no statistic
that is available to the public through the United States Coast Guard database, fire losses during the past 20 years when smoke was a contributory factor to increasing the fire hazard on any small vessel covered by NFPA 302.

ASTM 84 is a Standard for surface burning materials, and as described in the title and scope, for building materials.

The revision that the submitter is presenting in this Certified Motion simply does not apply to vessels that are covered by NFPA 302.

DAN O'CONNOR: Thank you, gentlemen. With that, we will open debate on the motion. If you come to the mic, please provide your name, affiliation, whether you are speaking in support of, or against the motion. Microphone number four.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for - speaking for NAFRA in favor of the motion.

It's very interesting that the Chairman says that ASTM E84 is not applicable, and yet 4161 tells you have to test the materials to ASTM E84. Every material used for thermal and acoustical insulation sold in this country - every material used for thermal and acoustical insulation sold in this country, is
required to have a flame spread index of 75 or less, and a smoke develop index of 450 or less. And I am absolutely convinced that the materials that are used for 302 are not magically coming from outer space into these vessels. They are - they are materials sold in this country.

So it's - second point - we, we are dealing with commercial craft. Yes, they're much smaller than, than ships. They, they are small craft. But when you are in the water, you have no egress capability, which is what happens with all transportation environments, and disorientation as a result of lack of smoke is an important consideration everywhere in transportation environments. Please support the motion, and add this requirement for measuring smoke. Thank you.

DAN O'CONNOR: Okay. Is there any further discussion on Motion 302-1 to Accept Public Comment No. 3? Mr. Chair, do you have any final comments?

JOHN MCDEVITT: No, Sir.

DAN O'CONNOR: Thank you, Mr. Chair. Before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 3. To vote, touch the 'vote' button, and if you wish to vote in support of the motion, and recommend the text on
Screen One, touch 'Yes'. If you wish to vote against
the motion, and recommend the text on Screen Two,
touch 'No'. Please record your vote.

The voting will close in five seconds.
Voting will end in five seconds.
The voting is closed. Thank you.
The results of the vote are: 235 in support of
the motion, and recommend the text on Screen One; 233
against the motion, and recommend the text on Screen
Two. The motion has passed.

Let's now proceed with the discussion on
Certified Amending Motion 302-2. Microphone number
four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH
International, and I move to Accept Public Comment No.
4.

DAN O'CONNOR: Thank you. Is there, a, a
motion - there is a motion on the floor to Accept
Public Comment No. 4. Is there a second?

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: We have a second. Thank you.
Please proceed with the discussion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH
International, speaking for NAFRA in support of the
motion.
To: NFPA Standards Council  
From: Marcelo M. Hirschler (GBH International) 
Date: July 15, 2019  

CAMs NFPA 302-1, 302-3, 302-5 and NFPA 302-7

I have been informed that amendment ballots NFPA 302-1, 302-3, 302-5 and 302-7 have failed committee ballot. I am hereby appealing the recommendation of the committee. In all cases the vote was in favor of approving the amendments but did not reach the needed two thirds majority. However, it is clear that both the assembly and the majority of the committee members who voted support the change introduced by the CAMs (same change for all the motions, in different sections).

All 4 motions address the same issue: whether there should be smoke developed requirements for materials in a small vessel. Note that each section covered by any one of the motions requires (irrespective of whether the CAM is approved) that the material be tested to ASTM E84, which is a test for both flame spread and smoke development. However, the requirements in NFPA 302 address purely flame spread and not smoke development. Any time a test is conducted to ASTM E84 both the flame spread index and the smoke developed index are being assessed and the results are included in the fire test report. Thus, adding a requirement for smoke developed index will not add any testing costs.

When considering fire safety of means of public transportation, it is always critical to realize that escape is very difficult in case of fire, as no areas of refuge typically exist (in this case: escape would mean jumping into the water). Therefore, standards, guidelines and requirements for transportation occupancies include requirements for smoke. That is the case for aircraft (Federal Aviation Administration materials handbook requirements), ships (NFPA 301 code, as well as IMO and US Coast Guard rules), trains (NFPA 130 and Federal Railroad Administration), underground/subways (NFPA 130 and individual operator requirements), buses (Federal Transit Administration guidelines). NFPA 302 is silent on smoke developed requirements and should not be silent.

Separately, note that the scope of NFPA 302 is not for personal boats. In fact, it states explicitly that NFPA 302 does not apply to “personal watercraft”. NFPA 302 deals with the following boats of less than 300 gross tons that are used for pleasure or commercial purposes: (1) Boats that use engines for propulsion, (2) Boats that use engines for generating power, (3) Boats that use cooking, heating, or auxiliary appliances, (4) Boats that have permanently installed ignition source(s) and (5) Boats that have permanently installed electrical systems.

In summary, I urge standards council to approve the amendments voted on by the membership.

Yours sincerely

[Signature]
MEMORANDUM

(AMENDMENT)

TO: Technical Committee on Motor Craft

FROM: Diane Matthews Technical Committee Administrator

DATE: July 15, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to return to previous text (NFPA 302 2015 edition).

19 Members Eligible to Vote
1 Ballot Not Returned (Game)

The number of votes needed to recommend approval of the Association Action is 12. (19 eligible to vote - 1 not returned - 1 abstention = 17 × 0.66 = 11.22)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2020 NFPA Tech Session are now available at: www.nfpa.org/techsession.

The Regs at 1.6.2.(b) state: An appeal relating to an Association Technical Meeting Amendment that has been submitted shall be filed no later than 5 days after the notice of the amendment final ballot results are published in accordance with 4.2.6.

Appeal Closing Date for this Amendment is July 20, 2019.
### NFPA 302-2 AMENDMENT BALLOT FINAL RESULTS

**Amendment 302-2: Accept Public Comment No. 4. Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.**

Eligible to Vote: 19  
Not Returned: 1

E. C. Game

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<tr>
<th>Vote Selection</th>
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<td>David McFarlin</td>
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<td>Larry Akins</td>
<td></td>
<td>Agree</td>
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<td>Robert Yates</td>
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**DISAGREE**

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Kim I. MacCartney: This individual has made it cost prohibitive to manufacture a vessel where 99.9% are unmanned engine rooms and even manned engine rooms have smoke and heat detectors to warn people to evacuate. As the original submitter of this requirement approximately 30+ years ago it has worked fine during the subsequent years and this additional testing is something no vessel manufacturer will specify as they will install the least expensive acoustical insulation possible that meets the standard as written. I cannot see where this individual has anything to do with the marine industry and therefore has no knowledge of vessel construction or operation. He needs to show the benefits with real world statistics of the advantages of this change to the requirements before his recommended change is accepted.

John J. McDevitt: Not an appropriate requirement for a small boat.

Christopher J. Bloom: The TC discussed and considered the proposal (and the issues) and by consensus for many different reasons, voted against the proposals.

Eric Johnson: Commenter was never able to provide justification as to why "listing" of these components are a minimum safety standard. The committee worded it previously with the intent of not requiring a listing simply that it was tested to the standard and was labeled to indicate that. Proposed wording will require manufacturer to spend significantly more money in testing when no substantiated need was presented.

Brian Goodwin: Requiring materials to be listed only increases the cost of materials and does not increase the level of safety.

Brian J. Cornell: No good reason to have a requirement to list and label materials.

James Coté: Requiring labeled and listed appears to be unnecessary and may place undue burden on small boat builders. Recommend input from the boat building community

ABSTAIN: 1

Robert E. Newsome: no comment
AMENDMENT BALLOT TEXT

Technical Committee on Motor Craft
NFPA 302, Fire Protection Standard for Pleasure and Commercial Motor Craft
Amendment No. 302-2: Accept Public Comment No. 4
June 2019

IF YOU AGREE TO SUPPORT AMENDMENT 302-2 as recommended by the membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

4.1.6.2 Material shall be listed and labeled or listed as having been tested to meet the requirements of in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials to meet the requirements in 4.1.6.1.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 302-2 by the membership by vote at Tech Session, the recommended text is shown clean below. If no previous edition text exists, the text is simply deleted.

4.1.6.2 Material shall be labeled or listed as having been tested to meet the requirements of ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials.
myself, in opposition to the motion.

Listed and labeled are both defined terms within NFPA. And the definition of labeled automatically includes listing. So to say 'listed and labelled' is redundant there.

DAN O'CONNOR: Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and in support.

That - this is just editorial, listed and labelled, or labelled or listed. Both terms were there originally. So that doesn't make any change. The real change is the other one.

At, at present, this section does not send you to 4.1.6.1. So if it doesn't send you to 4.1.6.1, it doesn't tell you what the requirements are, what criteria you need to meet. So because ASTM E84 does not have criteria, if you leave this here, you have no way of knowing what you need to meet. Thank you.

DAN O'CONNOR: Thank you, Sir. Is there any further discussion on Motion 302-2 to Accept Public Comment No. 4? Mr. Chair, do you have any further comments?

JOHN MCDEVITT: No, Sir.

DAN O'CONNOR: Okay. Thank you, Mr. Chair.

Before we vote, let me restate the motion. The motion
on the floor is to Accept Public Comment No. 4. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.
The voting is closed. Thank you.
The results of the vote are: 370 in support of the motion, and recommend the text on Screen One; 120 against the motion, and recommend the text on Screen Two. The motion has passed.

Okay. Moving on, we will now proceed with the discussion on Certified Amending Motion 302-3. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, and I move to Accept an Identifiable Part of Public Comment No. 5.

DAN O'CONNOR: Thank you. There is a motion on the floor to Accept an Identifiable Part of Public Comment No. 5. Is there a second?

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: Okay, we have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH
To: NFPA Standards Council  
From: Marcelo M. Hirschler (GBH International)  
Date: July 15, 2019  

CAMs NFPA 302-2 and NFPA 302-4

I have been informed that amendment ballots NFPA 302-2 and 302-4 have failed committee ballot. I am hereby appealing the recommendation of the committee. In both cases the vote was in favor of approving the amendments but did not reach the needed two thirds majority. However, it is clear that both the assembly and the majority of the committee members who voted support the change introduced by the CAMs (same change for both motions, in different sections).

This proposed change provides the needed link between 4.1.6.2 and 4.1.6.1 (for CAM 302-2). Without this link the material just has to be listed or labeled that it “met the requirements of ASTM E84” but ASTM E84 has no requirements. The actual requirements intended by NFPA 302 are in 4.1.6.1 but there is no link between the two sections. As written, it says the material has to meet requirements which are simply that the material was tested, and the result could be an FSI of 500 and the material would comply because it was tested. Of course, that is not what was intended, but that is what it says. There is a need to link 4.1.6.2 to 4.1.6.1 for there to be an actual requirement.

The exact same issue applies to 5.5.3.2.2 and 5.5.3.2.1 for CAM 302-4. The text, as written, simply requires the material to be tested to ASTM E84 without specifying the required result, because ASTM E84 has no requirements.

Separately, note that the scope of NFPA 302 is not for personal boats. In fact, it states explicitly that NFPA 302 does not apply to “personal watercraft”. NFPA 302 deals with the following boats of less than 300 gross tons that are used for pleasure or commercial purposes: (1) Boats that use engines for propulsion, (2) Boats that use engines for generating power, (3) Boats that use cooking, heating, or auxiliary appliances, (4) Boats that have permanently installed ignition source(s) and (5) Boats that have permanently installed electrical systems.

In summary, I urge standards council to approve the amendments voted on by the membership.

Yours sincerely

[Signature]
MEMORANDUM

(AMENDMENT)

TO: Technical Committee on Motor Craft

FROM: Diane Matthews Technical Committee Administrator

DATE: July 15, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to return to previous text (NFPA 302 2015 edition).

19 Members Eligible to Vote
1 Ballot Not Returned (Game)

The number of votes needed to recommend approval of the Association Action is 12. (19 eligible to vote - 1 not returned - 1 abstention = 17 × 0.66 = 11.22)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2020 NFPA Tech Session are now available at: www.nfpa.org/techsession.

The Regs at 1.6.2.(b) state: An appeal relating to an Association Technical Meeting Amendment that has been submitted shall be filed no later than 5 days after the notice of the amendment final ballot results are published in accordance with 4.2.6.

Appeal Closing Date for this Amendment is July 20, 2019.
NFPA 302-3 AMENDMENT BALLOT FINAL RESULTS

Amendment 302-3: Accept An Identifiable Part of Public Comment No. 5. Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.

Eligible to Vote: 19
Not Returned: 1
E. C. Game

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<td>Name</td>
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<td>This individual has made it cost prohibitive to manufacture a vessel where 99.9% have their ductwork enclosed and as such smoke is not a concern. As the original submitter of this requirement approximately 30+ years ago it has worked fine during the subsequent years and this additional testing is something no vessel manufacturer will specify as they will install the least expensive acoustical insulation possible that meets the standard as written. I cannot see where this individual has anything to do with the marine industry and therefore has no knowledge of vessel construction or operation. He needs to show the benefits with real world statistics of the advantages of this change to the requirements before his recommended change is accepted.</td>
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<td>Christopher J. Bloom</td>
<td>The TC discussed and considered the proposal (and the issues) and by consensus for many different reasons, voted against the proposals.</td>
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<tr>
<td>Eric Johnson</td>
<td>Commenter was never able to provide justification as to how this would be a minimum safety requirement for unmanned recreational boat engine rooms, and the actual problem we are seeing in the market that it is attempting to fix.</td>
<td></td>
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<tr>
<td>Brian J. Cornell</td>
<td>I do not see a need to add SDI to this standard. E84 was primarily developed for testing of materials used in the construction of buildings not boats. There could be a benefit to developing a standard for a SDI for Marine Vessels, just not sure it is this one.</td>
<td></td>
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<tr>
<td>James Coté</td>
<td>Unnecessary and burdensome for small boat manufacturers. No safety advantage can be imagined on small craft</td>
<td></td>
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<tr>
<td>Brian Goodwin</td>
<td>Further investigation is needed to understand the impacts of this change on safety and if this is an achievable requirement.</td>
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<tr>
<td>ABSTAIN</td>
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<tr>
<td>Robert E. Newsome</td>
<td>no comment</td>
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AMENDMENT BALLOT TEXT

Technical Committee on Motor Craft
NFPA 302, Fire Protection Standard for Pleasure and Commercial Motor Craft
Amendment No. 302-3: Accept an Identifiable Part of Public Comment No. 5
June 2019

IF YOU AGREE TO SUPPORT AMENDMENT 302-3 as recommended by the membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

5.5.3.2.1 Ducts for engine-cooling air shall have a flame spread index of 75 or less and a smoke developed index of 450 or less, when tested in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 302-3 by the membership by vote at Tech Session, the recommended text is shown clean below. If no previous edition text exists, the text is simply deleted.

5.5.3.2.1 Ducts for engine-cooling air shall have a flame spread index of 75 or less, when tested in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials.
on the floor is to Accept Public Comment No. 4. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed. Thank you.

The results of the vote are: 370 in support of the motion, and recommend the text on Screen One; 120 against the motion, and recommend the text on Screen Two. The motion has passed.

Okay. Moving on, we will now proceed with the discussion on Certified Amending Motion 302-3. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, and I move to Accept an Identifiable Part of Public Comment No. 5.

DAN O'CONNOR: Thank you. There is a motion on the floor to Accept an Identifiable Part of Public Comment No. 5. Is there a second?

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: Okay, we have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH
International, speaking for NAFRA and in support of the motion.

This is the same issue that we discussed in - two motions ago, 302-1. We're dealing with ducts instead of dealing with insulation. And again, because this is a transportation environment, I urge you to support the motion and add smoked developed requirements. Thank you.

DAN O'CONNOR: Mr. McDevitt, would you like to offer the Committee's position.

JOHN McDEVITT: Our response will be similar. The majority of the vessels covered in 302 are pleasure craft. Pleasure craft are boats that are used for personal family and sportsmen recreation. Generally pleasure craft are understood to be small vessels under 26 feet. Once again, our Committee has no experience with incidents where smoke generation was a complication of an already complicated situation.

I, I will add that the Coast Guard has developed some recent standards, which - known as Sub-Chapter M, where - they were detailed developments for - or require, requirements for commercial craft, and these did not have any kind of reference to smoke generation at all. So.
DAN O'CONNOR: Thank you. With that, we will open up the debate on the motion. Name, affiliation, whether you're speaking for or against. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, in support of the motion. The, the Coast Guard requirements always use ASTM E84, and use - include smoke. Thank you.

DAN O'CONNOR: Thank you. Is there any further discussion on Motion 302-3, to Accept an Identifiable Part of Public Comment No. 5? Mr. Chair, any further comments?

JOHN MCDEVITT: Only that the Coast Guard Sub-Chapter M recent release does not reference E84.

DAN O'CONNOR: Thank you, Mr. Chair. Okay, before we vote, I will restate the motion. That motion on the floor is to Accept an Identifiable Part of Public Comment No. 5. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed. Thank you.
And the results of the vote are: 283 in support of the motion, and recommend the text on Screen One; 180 against the motion, and recommend the text on Screen Two. The motion has passed.

Okay. Moving on, we will now proceed with the discussion on Certified Amending Motion 302-4. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and I move to Accept an Identifiable Part of Public Comment No. 5.

DAN O'CONNOR: Okay. There is a motion on the floor to Accept an Identifiable Part of Public Comment No. 5. Is there a second?

UNIDENTIFIED SPEAKER: Second.

UNIDENTIFIED SPEAKER: (unintelligible)

DAN O'CONNOR: Thank you. We do have a second. Please proceed with discussion on the motion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and in support of the motion. This is identical to what you did in 302-2. It's just simply pointing out where the requirements are. Otherwise, there's, there's nothing to meet there. Thank you.

DAN O'CONNOR: Okay. Mr. McDevitt, would you like to offer the Committee's position on this?
MEMORANDUM

(AMENDMENT)

TO: Technical Committee on Motor Craft

FROM: Diane Matthews Technical Committee Administrator

DATE: July 15, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to return to previous text (NFPA 302 2015 edition).

19 Members Eligible to Vote
1 Ballot Not Returned (Game)

The number of votes needed to recommend approval of the Association Action is 11. (19 eligible to vote - 1 not returned - 2 abstentions = 16 \times 0.66 = 10.56)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2020 NFPA Tech Session are now available at: www.nfpa.org/techsession.

The Regs at 1.6.2.(b) state: An appeal relating to an Association Technical Meeting Amendment that has been submitted shall be filed no later than 5 days after the notice of the amendment final ballot results are published in accordance with 4.2.6.

Appeal Closing Date for this Amendment is July 20, 2019.
NFPA 302-4 AMENDMENT BALLOT FINAL RESULTS

Amendment 302-4: Accept An Identifiable Part of Public Comment No. 5. Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.

Eligible to Vote: 19
Not Returned: 1
E. C. Game

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<td>Kenneth J. Weinbrecht</td>
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<tr>
<td>David McFarlin</td>
<td>ok</td>
<td></td>
</tr>
<tr>
<td>Larry Akins</td>
<td>Agree</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DISAGREE</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kim I. MacCartney</td>
<td>Same reason as 302.3. I cannot see where this individual has anything to do with the marine industry and therefore has no knowledge of vessel construction or operation. He needs to show the benefits with real world statistics of the advantages of this change to the requirements before his recommended change is accepted.</td>
</tr>
<tr>
<td>John J. McDevitt</td>
<td>Not an appropriate requirement for a small boat.</td>
</tr>
<tr>
<td>Christopher J. Bloom</td>
<td>The TC discussed and considered the proposal (and the issues) and by consensus for many different reasons, voted against the proposals.</td>
</tr>
<tr>
<td>Commenter</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Eric Johnson</td>
<td>Commenter was never able to provide justification as to how this would be a minimum safety requirement for recreational boats, and the actual problem we are seeing in the market that it is attempting to fix.</td>
</tr>
<tr>
<td>Brian Goodwin</td>
<td>Requiring a material to be listed does not increase the level of safety and only increases the cost of materials. Should be &quot;labeled or listed&quot;</td>
</tr>
<tr>
<td>Brian J. Cornell</td>
<td>No good reason to require both listed and labeled.</td>
</tr>
<tr>
<td>James Coté</td>
<td>Requiring materials to be listed and labeled may place an unreasonable burden on small boat builders. Is there a documented problem of life safety or injury hazards that this amendment is intended to solve? Industry input should be sought.</td>
</tr>
<tr>
<td>ABSTAIN</td>
<td>2</td>
</tr>
<tr>
<td>Robert E. Newsome</td>
<td>no comment</td>
</tr>
<tr>
<td>Robert Yates</td>
<td>I don't have the electrical background to vote knowledgeabley</td>
</tr>
</tbody>
</table>
AMENDMENT BALLOT TEXT

Technical Committee on Motor Craft
NFPA 302, Fire Protection Standard for Pleasure and Commercial Motor Craft Amendment No. 302-4: Accept an Identifiable Part of Public Comment No. 5 June 2019

IF YOU AGREE TO SUPPORT AMENDMENT 302-4 as recommended by the membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

5.5.3.2.2 Materials used for ducts for engine-cooling air shall be listed and labeled or listed as having been tested in accordance with to meet the requirement of ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials to meet the requirements of section 5.5.3.2.1.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 302-4 by the membership by vote at Tech Session, the recommended text is shown clean below. If no previous edition text exists, the text is simply deleted.

5.5.3.2.2 Material used for ducts for engine-cooling air shall be labeled or listed as having been tested to meet the requirements of ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials.
And the results of the vote are: 283 in support of the motion, and recommend the text on Screen One; 180 against the motion, and recommend the text on Screen Two. The motion has passed.

Okay. Moving on, we will now proceed with the discussion on Certified Amending Motion 302-4.

Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and I move to Accept an Identifiable Part of Public Comment No. 5.

DAN O'CONNOR: Okay. There is a motion on the floor to Accept an Identifiable Part of Public Comment No. 5. Is there a second?

UNIDENTIFIED SPEAKER: Second.

UNIDENTIFIED SPEAKER: (unintelligible)

DAN O'CONNOR: Thank you. We do have a second. Please proceed with discussion on the motion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and in support of the motion. This is identical to what you did in 302-2. It's just simply pointing out where the requirements are. Otherwise, there's, there's nothing to meet there. Thank you.

DAN O'CONNOR: Okay. Mr. McDevitt, would you like to offer the Committee's position on this?
JOHN MCDEVITT: Yes, Sir. The revision that is presented by the submitter is an editorial change that is unnecessary, in the opinion of the Technical Committee.

DAN O'CONNOR: Thank you, gentlemen. With that, we will open it up for debate. Name, affiliation, whether you are speaking in support of, or against the motion, please. Seeing no one at the mics, I will ask if there is any further discussion on Motion 302-4, to Accept an Identifiable Part of Public Comment No. 5. Nothing further? Mr. Chair, do you have any final comments?

MR. MCDEVITT: No, Sir.

DAN O'CONNOR: Thank you. Before we vote, let me restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 5. And to vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. And if you wish to vote against this motion, recommend the text on Screen Two, touch 'No'. Please record your vote.

The vote will close in five seconds.

The voting is closed. Thank you.

The results of the vote are: 347 in support of the motion, and recommend the text on Screen One; 124
against the motion, and recommend the text on Screen Two. The motion has passed.

Let's now proceed with the discussion on Certified Amending Motion 302-5. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and I move to Accept Public Comment No. 6.

DAN O'CONNOR: Thank you. There is a motion on the floor to Accept Public Comment No. 6. Is there a second?

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: Thank you. We do have a second. And please proceed with the discussion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, in support of the motion. This is identical to what you have done in two cases before. This deals with exposed materials, and finishes within 24 inches of heat generation surfaces. Other than that, it's the same thing, just adding the smoke requirements. Thank you.

DAN O'CONNOR: Mr. McDevitt, the Committee's position?

MR. MCDEVITT: The Committee's response is the same. The Standard is for small craft, and we don't
MEMORANDUM

(AMENDMENT)

TO: Technical Committee on Motor Craft

FROM: Diane Matthews Technical Committee Administrator

DATE: July 15, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to return to previous text (NFPA 302 2015 edition).

19 Members Eligible to Vote
1 Ballot Not Returned (Game)

The number of votes needed to recommend approval of the Association Action is 12.
(19 eligible to vote - 1 not returned - 1 abstention = 17 x 0.66 = 11.22)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2020 NFPA Tech Session are now available at: www.nfpa.org/techsession.

The Regs at 1.6.2.(b) state: An appeal relating to an Association Technical Meeting Amendment that has been submitted shall be filed no later than 5 days after the notice of the amendment final ballot results are published in accordance with 4.2.6.

Appeal Closing Date for this Amendment is July 20, 2019.
NFPA 302-5 AMENDMENT BALLOT FINAL RESULTS

Amendment 302-5: Accept Public Comment No. 6. Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.

Eligible to Vote: 19
Not Returned: 1
E. C. Game

<table>
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<th>Vote Selection</th>
<th>Votes</th>
<th>Comments</th>
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<tr>
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<td></td>
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<tr>
<td>Alan Ross Hugenot</td>
<td></td>
<td>I agree</td>
</tr>
<tr>
<td>Kenneth J. Weinbrecht</td>
<td></td>
<td>agree</td>
</tr>
<tr>
<td>Michael Taylor</td>
<td></td>
<td>agree</td>
</tr>
<tr>
<td>David L. Bowman</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Charles Fort</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Joseph A. Derie</td>
<td></td>
<td>Agree.</td>
</tr>
<tr>
<td>Sarkis Keuleyan</td>
<td></td>
<td>Agree</td>
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<td></td>
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<td>Larry Akins</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Robert Yates</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>DISAGREE</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>
Kim I. MacCartney  
This individual has made it cost prohibitive to manufacture a vessel where very little if any cooking is done onboard; especially while underway. Most now have smoke detectors to warn people to evacuate and if a vessel manufacturer is not going to pay the small amount a smoke detector costs to install there is no possibility they are going to install. As the original submitter of this requirement approximately 30+ years ago it has worked fine during the subsequent years and this additional testing is something no vessel manufacturer will specify as they will install the least expensive acoustical insulation possible that meets the standard as written. I cannot see where this individual has anything to do with the marine industry and therefore has no knowledge of vessel construction or operation. He needs to show the benefits with real world statistics of the advantages of this change to the requirements before his recommended change is accepted.

John J. McDevitt  
Not an appropriate requirement for a small boat.

Christopher J. Bloom  
The TC discussed and considered the proposal (and the issues) and by consensus for many different reasons, voted against the proposals.

Eric Johnson  
I believe this is the wrong term. Index is the chart, where as the rating is where it falls within the index.

Brian J. Cornell  
Same reason as used for 302_2

James Coté  
Unnecessary for small boats and would put an undue burden on boat builders

Brian Goodwin  
Further investigation is needed to understand the impacts of this change on safety and if this is an achievable requirement.

ABSTAIN  
1

Robert E. Newsome  
no comment
AMENDMENT BALLOT TEXT

Technical Committee on Motor Craft
NFPA 302, *Fire Protection Standard for Pleasure and Commercial Motor Craft*
Amendment No. 302-5: Accept Public Comment No. 6
June 2019

IF YOU AGREE TO SUPPORT AMENDMENT 302-5 as recommended by the membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

8.2.1 Exposed materials and finishes within 24 in. (61 cm) of heat-generating surfaces of appliances shall have a flame spread index of not more than 75 and a smoke developed index of not more than 450 when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

---

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 302-5 by the membership by vote at Tech Session, the recommended text is shown clean below. If no previous edition text exists, the text is simply deleted.

8.2.1 Exposed materials and finishes within 24 in. (61 cm) of heat-generating surfaces of appliances shall have a flame spread index of not more than 75 when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*. 
against the motion, and recommend the text on Screen Two. The motion has passed.

Let's now proceed with the discussion on Certified Amending Motion 302-5. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and I move to Accept Public Comment No. 6.

DAN O'CONNOR: Thank you. There is a motion on the floor to Accept Public Comment No. 6. Is there a second?

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: Thank you. We do have a second. And please proceed with the discussion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, in support of the motion. This is identical to what you have done in two cases before. This deals with exposed materials, and finishes within 24 inches of heat generation surfaces. Other than that, it's the same thing, just adding the smoke requirements. Thank you.

DAN O'CONNOR: Mr. McDevitt, the Committee's position?

MR. MCDEVITT: The Committee's response is the same. The Standard is for small craft, and we don't
feel the application is appropriate.

      DAN O'CONNOR: Thank you, gentlemen. With that, we'll open up debate on the motion. Again, name, affiliation, and whether you're speaking in support of, or against the motion. Okay. I see no one at the microphone. So is there any - let me ask, is there any further discussion on Motion 302-5, to Accept Public Comment No. 6? Seeing none, we can move to vote, unless, Mr. Chair, any final comment. No?

      JOHN MCDEVITT: No, thank you.

      DAN O'CONNOR: Thank you. Okay. The motion on the floor is to Accept Public Comment No. 6. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

      The voting will close in five seconds.

      The vote is closed. Thank you.

      The results of the vote are: 320 in support of the motion, and recommend the text on Screen One; and 141 against the motion, and recommend the text on Screen Two. The motion has passed.

      We will now proceed with the discussion on Certified Amending Motion 302-6. Microphone number
MEMORANDUM

(AMENDMENT)

TO: Technical Committee on Motor Craft

FROM: Diane Matthews Technical Committee Administrator

DATE: July 15, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to accept the text as balloted.

19 Members Eligible to Vote
1 Ballot Not Returned (Game)

The number of votes needed to recommend approval of the Association Action is 12.

(19 eligible to vote - 1 not returned - 1 abstention = 17 × 0.66 = 11.22)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2020 NFPA Tech Session are now available at: www.nfpa.org/techsession.

The Regs at 1.6.2.(b) state: An appeal relating to an Association Technical Meeting Amendment that has been submitted shall be filed no later than 5 days after the notice of the amendment final ballot results are published in accordance with 4.2.6.

Appeal Closing Date for this Amendment is July 20, 2019.
NFPA 302-6 AMENDMENT BALLOT FINAL RESULTS

Amendment 302-6: Accept An Identifiable Part of Public Comment No. 7. Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.

Eligible to Vote: 19
Not Returned : 1
E. C. Game

<table>
<thead>
<tr>
<th>Vote Selection</th>
<th>Votes</th>
<th>Comments</th>
</tr>
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<tr>
<td>AGREE</td>
<td>15</td>
<td></td>
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<tr>
<td>Alan Ross Hugenot</td>
<td></td>
<td>I agree</td>
</tr>
<tr>
<td>Kim I. MacCartney</td>
<td></td>
<td>This is semantics and does not materially change the requirement.</td>
</tr>
<tr>
<td>Charles Fort</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>John J. McDevitt</td>
<td></td>
<td>I approve the change of the word rating to index</td>
</tr>
<tr>
<td>Michael Taylor</td>
<td></td>
<td>agree</td>
</tr>
<tr>
<td>David L. Bowman</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Kenneth J. Weinbrecht</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Joseph A. Derie</td>
<td></td>
<td>Agree.</td>
</tr>
<tr>
<td>Sarkis Keuleyan</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>David McFarlin</td>
<td></td>
<td>ok</td>
</tr>
<tr>
<td>Larry Akins</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Brian Goodwin</td>
<td></td>
<td>Agree. index is the term used in ASTM E84</td>
</tr>
<tr>
<td>Brian J. Cornell</td>
<td></td>
<td>agree to changing rating to index</td>
</tr>
<tr>
<td>James Coté</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Robert Yates</td>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>DISAGREE</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
Christopher J. Bloom

The TC discussed and considered the proposal (and the issues) and by consensus for many different reasons, voted against the proposals.

Eric Johnson

Commenter was never able to provide justification as to how this would be a minimum safety requirement for unmanned recreational boat engine rooms, and the actual problem we are seeing in the market that it is attempting to fix.

ABSTAIN 1

Robert E. Newsome

no comment
AMENDMENT BALLOT TEXT

Technical Committee on Motor Craft
NFPA 302, *Fire Protection Standard for Pleasure and Commercial Motor Craft*
Amendment No. 302-6: Accept an Identifiable Part of Public Comment No. 7
June 2019

IF YOU AGREE TO SUPPORT AMENDMENT 302-6 as recommended by the membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

10.13.1 All connections normally carrying current shall be made in enclosures with interior surfaces having a flame spread index rating of not more than 25, as tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 302-6 by the membership by vote at Tech Session, the recommended text is shown clean below. If no previous edition text exists, the text is simply deleted.

10.13.1 All connections normally carrying current shall be made in enclosures with interior surfaces having a flame spread rating of not more than 25 as tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*. 
DAN O'CONNOR: Thank you, gentlemen. With that, we'll open up debate on the motion. Again, name, affiliation, and whether you're speaking in support of, or against the motion. Okay. I see no one at the microphone. So is there any - let me ask, is there any further discussion on Motion 302-5, to Accept Public Comment No. 6? Seeing none, we can move to vote, unless, Mr. Chair, any final comment. No?

JOHN MCDEVITT: No, thank you.

DAN O'CONNOR: Thank you. Okay. The motion on the floor is to Accept Public Comment No. 6. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The vote is closed. Thank you.

The results of the vote are: 320 in support of the motion, and recommend the text on Screen One; and 141 against the motion, and recommend the text on Screen Two. The motion has passed.

We will now proceed with the discussion on Certified Amending Motion 302-6. Microphone number
MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and I move to Accept an Identifiable Part of Public Comment No. 7.

DAN O'CONNOR: Thank you. There is a motion on the floor to Accept an Identifiable Part of Public Comment No. 7. Do I hear a second?

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: Okay. Thank you. We do have a second. Let's proceed with a discussion on the motion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, in support of the motion. This is a purely editorial issue. I am the Chairman of the Task Group dealing with ASTM E84. The term for ASTM E84 is flame spread index, not flame spread rating. In fact, that is consistent, what was in previous sections of this Standard. Please support that. Thank you.

DAN O'CONNOR: Mr. McDevitt?

JOHN MCDEVITT: The Committee, at our meeting in April, discussed this change, and at the time, we did not object to the editorial change that is proposed by the submitter in 302-6.

DAN O'CONNOR: Thank you, gentlemen. With that, we will open up debate on the motion. Name,
affiliation, and in support of, or against the motion. Okay. Is there any further discussion on Motion 302-6, to Accept an Identifiable Part of Public Comment No. 7? Mr. McDevitt, anything further?

JOHN MCDEVITT: No, thank you.
DAN O'CONNOR: Okay. Thank you, Sir. Before we vote, let me restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 7. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote now.

The vote will close in five seconds.

The voting is closed. Thank you.

The results of the vote are: 446 in support of the motion, recommending the text on Screen One; and 31 against the motion, recommending the text on Screen Two. The motion has passed.

We'll now proceed with the discussion on Certified Amending Motion 302-7. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for NAFRA, and I move to Accept an Identifiable Part of Public Comment No. 7.
MEMORANDUM

(AMENDMENT)

TO: Technical Committee on Motor Craft

FROM: Diane Matthews Technical Committee Administrator

DATE: July 15, 2019


In accordance with the Regulations Governing the Development of NFPA Standards, the final results show the Amendment HAS NOT achieved the 2/3 majority vote needed to recommend approval of the Association Action by the Technical Committee. As a result, the recommendation to the Standards Council is to not accept the identifiable part of Public Comment No. 7 into the next edition.

19 Members Eligible to Vote
1 Ballot Not Returned (Game)

The number of votes needed to recommend approval of the Association Action is 11.
(19 eligible to vote - 1 not returned - 2 abstentions = 16 × 0.66 = 10.56)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote.

The transcripts from the Annual 2020 NFPA Tech Session are now available at: www.nfpa.org/techsession.

The Regs at 1.6.2.(b) state: An appeal relating to an Association Technical Meeting Amendment that has been submitted shall be filed no later than 5 days after the notice of the amendment final ballot results are published in accordance with 4.2.6.

Appeal Closing Date for this Amendment is July 20, 2019.
NFPA 302-7 AMENDMENT BALLOT FINAL RESULTS

**Amendment 302-7: Accept An Identifiable Part of Public Comment No. 7. Note: A DISAGREE vote would recommend previous edition text. Where no previous edition text exists the text is simply deleted.**

Eligible to Vote: 19  
Not Returned: 1  
E. C. Game

<table>
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<tr>
<th>Vote Selection</th>
<th>Votes</th>
<th>Comments</th>
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<tr>
<td><strong>AGREE</strong></td>
<td>9</td>
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<tr>
<td>Kenneth J. Weinbrecht</td>
<td>agree</td>
<td></td>
</tr>
<tr>
<td>Alan Ross Hugenot</td>
<td>I agree</td>
<td></td>
</tr>
<tr>
<td>Charles Fort</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>Michael Taylor</td>
<td>agree</td>
<td></td>
</tr>
<tr>
<td>David L. Bowman</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>Joseph A. Derie</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>Sarkis Keuleyan</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>David McFarlin</td>
<td>ok</td>
<td></td>
</tr>
<tr>
<td>Larry Akins</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td><strong>DISAGREE</strong></td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Kim I. MacCartney</td>
<td>I cannot see where this individual has anything to do with the marine industry and therefore has no knowledge of vessel construction or operation. He needs to show the benefits with real world statistics of the advantages of this change to the requirements before his recommended change is accepted.</td>
<td></td>
</tr>
<tr>
<td>John J. McDevitt</td>
<td>Not an appropriate requirement for a small boat.</td>
<td></td>
</tr>
</tbody>
</table>
Christopher J. Bloom
The TC discussed and considered the proposal (and the issues) and by consensus for many different reasons, voted against the proposals.

Eric Johnson
Commenter was never able to provide justification as to how this would be a minimum safety requirement for recreational boats, and the actual problem we are seeing in the market that it is attempting to fix.

Brian J. Cornell
Same reason as 302-2. In addition rating should be changed to index in this one - probably missed this.

James Coté
This amendment is not necessary and would place an unreasonable burden on American boat builders. Can the submitter document an existing safety hazard that this amendment will correct or is the submitted amendment just a solution looking for a problem?

Brian Goodwin
Further investigation is needed to understand the impacts of this change on safety and if this is an achievable requirement.

**ABSTAIN**
2

Robert E. Newsome
no comment

Robert Yates
I do not have the electrical knowledge to make an educated vote on this matter
AMENDMENT BALLOT TEXT

Technical Committee on Motor Craft
NFPA 302, Fire Protection Standard for Pleasure and Commercial Motor Craft
Amendment No. 302-7: Accept an Identifiable Part of Public Comment No. 7
June 2019

IF YOU AGREE TO SUPPORT AMENDMENT 302-7 as recommended by the membership by vote at Tech Session, the recommended text reads as follows (changes shown legislatively to the Second Draft):

10.13.1 All connections normally carrying current shall be made in enclosures with interior surfaces having a flame spread rating of not more than 25, and a smoke developed index of not more than 450, as tested in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials.

IF YOU DISAGREE WITH THE RECOMMENDATION FOR AMENDMENT 302-7 by the membership by vote at Tech Session, the recommended text is shown clean below. If no previous edition text exists, the text is simply deleted.

10.13.1 All connections normally carrying current shall be made in enclosures with interior surfaces having a flame spread rating of not more than 25 as tested in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials.
affiliation, and in support of, or against the motion.

Okay. Is there any further discussion on Motion 302-6, to Accept an Identifiable Part of Public Comment No. 7?

Mr. McDevitt, anything further?

JOHN MCDEVITT: No, thank you.

DAN O'CONNOR: Okay. Thank you, Sir. Before we vote, let me restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 7. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote now.

The vote will close in five seconds.

The voting is closed. Thank you.

The results of the vote are: 446 in support of the motion, recommending the text on Screen One; and 31 against the motion, recommending the text on Screen Two. The motion has passed.

We'll now proceed with the discussion on Certified Amending Motion 302-7. Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for NAFRA, and I move to Accept an Identifiable Part of Public Comment No. 7.
DAN O'CONNOR: There is a motion on the floor to Accept an Identifiable Part of Public Comment No. 7. Is there a second?

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: Thank you. We do have a second. Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for NAFRA, in support of the motion. This is the same that you've already voted on three times. It's just to add the smoke develop index. Thank you.

DAN O'CONNOR: Thank you, Sir. Mr. McDevitt, any on Committee's position?

JOHN McDEVITT: Our response is the same - that the 302 Standard covers small craft, and not so much applicable to the smoke conditions.

DAN O'CONNOR: Once again, thank you, gentlemen. With that, we - again, we will open debate. Anybody wishes to debate on this, your name, affiliation, whether you're speaking in support, or against the motion? No further - is there no further discussion on Motion 302-7, to Accept --

UNIDENTIFIED SPEAKER: (unintelligible)

DAN O'CONNOR: Is there somebody - oh.

UNIDENTIFIED SPEAKER: Yeah, number six.
DAN O'CONNOR: Microphone number six.

WILLIAM FISKE: Thank you, Mr. Chairman. I'm sorry - I don't walk quite fast enough for you. I'm William Fisk. I'm representing myself, but I am a member of the National Electrical Code Committee - again, not speaking for the Electrical Section. But this is --

DAN O'CONNOR: I could - Sir, could you - are you in support of, or against the motion?

WILLIAM FISKE: I'm sorry. I am speaking against.

DAN O'CONNOR: Thank you.

WILLIAM FISKE: What we're looking at in this section is basically an electrical enclosure. And the smoke developed ratings for indexes, for electrical enclosures are thoroughly irrelevant, although the flame spread rating is very important. Thank you.

DAN O'CONNOR: Okay. Is there any further discussion on Motion 302-7, to Accept an Identifiable Part of Public Comment No. 7? Microphone four.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for NAFRA, and - in support. What we're talking about is that we - we have products in there, inside the vessels, that have to meet flame spread. They also should meet smoke, just like we've talked
about other things. Please support the motion. Thank you.

DAN O'CONNOR: Mr. McDevitt, anything further?

JOHN MCDEVITT: No, Sir.

DAN O'CONNOR: Thank you. Okay. Before we vote, let me restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 7. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote now.

The vote will close in five seconds.

The voting is closed. Thank you.

The results of the vote are: 274 in support of the motion, and recommend the text on Screen One; 183 against the motion, and recommend the text on Screen Two. The motion has passed.

Is there any further discussion on NFPA 302?

Microphone number four?

MARCELO HIRSCHEL: No - not on 302.

DAN O'CONNOR: Oh, okay.

MARCELO HIRSCHEL: Sorry.

DAN O'CONNOR: Don't confuse me. Okay. Seeing none, we will move on to the next document. Thank you,
the screen as they are under debate.

Mr. Marino, will you present the Chair Report.

ANTONINO MARINO: Mr. Chair, ladies and gentlemen - the Report of the Technical Committee on Road Tunnel and Highway Fire Protection is presented as found in the First Draft Report, and Second Draft Report for the 2019 annual revision cycle.

The Technical Committee has published the First and Second Draft Report consisting of revisions to NFPA 502, Standard for Road Tunnels, Bridges, and Other Limited Access Highways. The revisions were submitted to letter ballot of the responsible Technical Committee. The reports and ballot results can be found on the Next Edition of the Document Information Page for NFPA 502, at www.nfpa.org/502next.

Mr. Chair, I move for Standard Council issuance, the Committee's Report on NFPA 502. –

KENNETH BUSH: Thank you, Mr. Marino. Let's now proceed with the discussion on Certified Amending Motion 502-1. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for the Vinyl Institute. And I move to Accept Public Comment No. 1.

KENNETH BUSH: Thank you. There is a motion on
The floor to Accept Public Comment No. 1. Is there a second?

UNIDENTIFIED SPEAKER: Second.

KENNETH BUSH: Yes, we do have a second.

Please proceed with the discussion on the motion.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for the Vinyl Institute, and in support of the motion.

Again, it's unfortunate not the entire thing is on there. But let me clarify. You - if you look at your Agenda, you will notice what this says is a material is noncombustible if it complies with any of the three things that we discussed in, in other committees, which is if, if, if it doesn't burn, if it meets E136, if it meets E2650 with the criteria of, of E136. And the Committee added this one, which is from, from Europe.

And the reason that I'm opposed to this is because the ISO 1192 standard does not have thermocouples by the material itself, because it has no thermocouples by the material itself, can't measure that increase in temperature. Consequently, materials that pass the requirements in here are a - will fail the material - the requirements that we use in the United States for E136. So what this will do is
allow, as noncombustible, a number of additional materials than the ones we, we normally accept in the United States.

I happened to be the Task Group Chairman in ASTM for the ASTM E136 Test Method. We took the apparatus of ISO 1182, and added the thermocouples in here. And that's how we developed our, our test method here. Adding the thermocouples means that you can, you can determine how the material itself behaves, and that will be a pass/fail criterion. And the - that is a much more severe pass/fail criterion than the pass/fail criterion in the European Union, the EN-13501.

So I urge you to not approve this, and allow noncombustible materials to be consistent with what is in all of the - our other NFPA Codes and Standards. Thank you.

KENNETH BUSH: Mr. Marino, would you like to offer the Committee's position?

ANTONINO MARINO: Yes. The Committee reviewed and evaluated the amended motion. The position of the Committee is that the amended motion does not provide adequate substantiation, or compelling evidence of the differences of the two testing criteria methods.

The statement of problem in the public comment
clearly identified the thermocouples, but no information was provided in terms of case studies, or documented reports, indicating the differences of the results of those tests, indicating that one was sub-par to the other, or the percentage of the results, and how they're impacted.

Furthermore, the purpose of Item No. 4, which provided the additional testing method which is used in Europe, was brought in. It is because the NFPA 502 has been adopted by many countries outside of the United States. In particular, NFPA 502, 42% of the voting Committee members within the Committee are outside of the United States.

KENNETH BUSH: Thank you, gentlemen. With that, we will open up debate on the motion. Please provide your name, affiliation, and whether you are speaking in support of, or against the motion.

Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for the Vinyl Institute, and in support of the motion.

I can't provide actual numbers because as you well know, all test results are shown, and are proprietary test. Labs will not provide that information. But as, again as I said, I am the Task
Group Chairman for the ASTM E136 and ASTM E2652.

What we did in ASTM was write to ISO, request permission to copyright their equipment, the ISO 1192, make it into ISO - ASTM E2652, and add the thermocouples, because that was the, the criterion that we all understood. It was completely understood by everyone in the ASTM Fire Standards Committee that without those, the tests, the, the results are different, and materials that pass this criterion here on the screen will not pass the criteria of E136. There is no visa-versa. Everything that passes, passes this will - sorry - everything that, that passes E136 will pass these criteria, but a lot of materials that pass this will not pass the E136 criteria.

What, what - this is particularly important when we're dealing with some materials, such as some insulations, depending on the amount of binder in the insulation, it can become noncombustible to ISO 1182, and yet combustible to ASTM E136. Thank you.

KENNETH BUSH: Thank you. Is there any further discussion on Motion 502-1 to Accept Public Comment No. 1? Mr. Chair, any final comments on behalf of the Committee?

ANTONINO MARINO: No, Sir.
KENNETH BUSH: Seeing none, we will move to a vote. Before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 1. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

Voting will be closed in five seconds.

The voting is closed.

The results of the vote are: 152 in support of the motion; 199 against the motion. The motion has failed.

Let's now proceed with the discussion on Certified Amending Motion 502-2. Microphone four, please.

MARCELO HIRSCHLER: Marcelo Hirschler - sorry. Marcelo Hirschler, GBH International, speaking for Vinyl Institute, and move to Reject an Identifiable Part of Second Revision No. 6.

KENNETH BUSH: Thank you. There is a motion on the floor to Reject an Identifiable Part of Second Revision No. 6.

UNIDENTIFIED SPEAKER: Second.

KENNETH BUSH: We do have a second. Please
proceed with a discussion on the motion. Microphone
four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH
International, for the Vinyl Institute, and in support
of the motion.

This must - is very simple. It - the -
eliminates ambiguity. What this has is adding the
term, 'or other approved, recognized standards'.
Approved by whom? Approved typically here in the
United States, means approved by the building
official, or the authority having jurisdiction. How
does the building official, or authority having
jurisdiction know whether the other test that someone
conjured is equivalent to UL 2196? UL 2196 has been,
for many years, the appropriate tests use for, for
that application. It's - it remains the appropriate
test. There is no other standard. No one has been
able to standardize anything different. And the -
adding other approved, recognized standard is - opens
the, the floor to something that someone may put in
without understanding exactly what it is that is being
tested. We, we have no guarantee of equivalence.

Thank you.

KENNETH BUSH: Thank you. Mr. Marino, would
you like to offer the Committee's position?
ANTONINO MARINO: Yes. NFPA 502, it's a Standard, Road Tunnels, Bridges, and Other Limited Access Highways, which has been adopted globally by many countries outside of the United States, as indicated previously on the previous amending motion. Twelve out of the 29 voting members within the Committee are outside of the United States. This provides a method for which other municipalities, countries are able to adopt a testing method that's acceptable within, and recognized within their municipality.

KENNETH BUSH: Thank you. With that, we will open up debate on the motion. Please provide you name, affiliation, and whether you are speaking in support of, or against the motion. Microphone six.

JAMES CONRAD: Yes. James Conrad, with Marmon I & T, and I speak against the motion on the floor. I am a voting member, a principal member of 502, and I was actually the submitter of this wording.

The reason we added that is, like the Chair said, is it is an international standard. UL 2196, although it is a very good standard, it still has its shortcomings; and additionally, it's not accepted around the world. And a lot of different test facilities do not do that test. They have their own
versions.

And we additionally added - really, what we're looking for in this Standard, and additional wording in the Annex, is to provide guidance for the users at AHJs what to look for, such as - you know, how to test it vertically, horizontally, used in a totally enclosed furnace; and, and also a list of all the components.

Circuit integrity is very important. It can be achieved through different labs all over the world. I've been doing this testing for over 25 years. And yes, UL is, is one of the higher standards. We still need to allow other approved methods meeting the guidelines in 502, in the additional suggestions in the Annexes. Thank you. And I support you - I would ask you to reject this motion.

KENNETH BUSH: Thank you. Microphone four.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, for the Vinyl Institute, and in support of the motion.

You just heard Jim Conrad say other methods are not quite as, as robust, where he - sorry, he didn't use the 'robust' - he said UL 2196, the best method. And he said there is some guidance in the Annex as to how you can develop other standards.
The NFPA 502 does have other standards referenced - international standards. For example, there's a standard for the fire resistance inside the tunnel, that's a Dutch standard, that's perfectly fine. We - you just approved adding ISO 1182, which is an ISO standard primarily used in Europe and in IMO.

So if another standard exists, wherever it, it exists, bring it in. But this doesn't bring another standard. It just says 'other approved' - whatever that means. And as you just heard, it is probably not as good as UL 2196, as explained by the supporter. Please, delete this vague language which will produce nothing more than reduced safety. Thank you.

KENNETH BUSH: Thank you. Is there any further discussion on Motion 502-2, to Reject an Identifiable Part of Second Revision Number Six? Microphone six, please.

DAVE SHAPIRO: Dave Shapiro, representing myself, speaking in favor of the motion. My concern is this - when, when you have an AHJ and somebody comes to him and says, 'I have an equivalent safe method,' the AHJ generally has a mechanism for accepting it. When you have something in the Standard that says, 'other approved methods' - that's - can
look like an invitation for people to go to the AHJ and say 'Look, I have, I have other good things. Listen to me.' The, the – this is obviously acceptable that, that, that people should come up with a bunch of other possibilities. I don't know if this will happen, but I would think that there is an existing mechanism already that makes this unnecessary. That's all I have to say. Thank you.

KENNETH BUSH: Thank you. Is there any further discussion on Motion 502-2 to Reject an Identifiable part of Second Revision No. 6? Mr. Chair, any final comments from the Committee?

ANTONINO MARINO: No, Sir.

KENNETH BUSH: Seeing no further comments, we will move to a vote. Before we vote, let me restate the motion. The motion on the floor is to Reject an Identifiable Part of Second Revision No. 6. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen Two, touch 'No'. Please record your vote.

The voting will close in five seconds.

The voting is closed. Thank you.

The results of the vote are: 163 in favor of
the motion; 219 opposed to the motion. The motion has failed.

Is there any further discussion on NFPA 502? Seeing none, we will move on to the next document.

Thank you, Mr. Marino.

(applause)

KENNETH BUSH: The next Committee, or next report under consideration is that of the Technical Committee on Fire Hose. Here to present the Committee Report is Technical Committee Chair, Andrew Ellison of EFI Global, Incorporated, South Hamilton, Massachusetts.

The Committee Report, that is the First and Second Draft Reports, is located on the Document Information Page for NFPA 1961 on the NFPA website. All Certified Amending Motions are contained in the NFPA Technical Meeting (Tech Session) Agenda, and will be displayed behind me on the screen as they are under debate. Mr. Ellison, will you present the Chair Report.

ANDREW ELLISON: Mr. Chair, ladies and gentlemen, the Report of the Technical Committee on Fire Hose is presented as found in the First Draft Report, and the Second Draft Report for the 2019 annual revision cycle.
Handling of Combustible Particulate Solids. The revisions were submitted to letter ballot of the responsible Technical Committee. Their reports and ballot results can be found on the Next Edition tab of the Document Information Page for NFPA 654 at www.NFPA.org/654next. Mr. Chair, I move for the Standards Council issuance, the Committee's Report on NFPA 654.

DAN O'CONNOR: Thank you, Mr. Runyon. Let's now proceed with the discussion on the Certified Amending Motion on NFPA 654-1, microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and I move to Accept an Identifiable Part of Public Comment No. 10, and Accept Public Comment Nos. 11 and 9.

DAN O'CONNOR: Thank you. There is a motion on the floor to Accept an Identifiable Part of Public Comment No. 10, and Accept Public Comment Nos. 11 and 9. Is there a second.

UNIDENTIFIED SPEAKER: Second.

DAN O'CONNOR: I hear a second, and please proceed with the discussion on the motion.

MARCELO HIRSCHLER: Thank you. Marcelo Hirschler, GBH International, for NAFRA, and in support of the motion. Let - this is completely different from
what we were talking about before. This is proposed for various reasons. One, for compliance with the Manual of Style. Manual of Style says there should be no requirements in definitions. Consistent with accepted NFPA terminology of what we do for noncombustible material, and consistent with what happens in many, if not most, major NFPA documents, including NFPA 1, 101, 5000, 98, 130, and so on, and so on.

This also recognizes that in the US - and unfortunately, you don't have the entire definition there, but just - in the US we use materials that pass ASTM E136 as noncombustible materials. The, the text today says that material in the former, which is used (unintelligible) dissipated will not ignite support, combustion, and yet, materials that have passed ASTM E136 can ignite. The criteria is just that the flame should be a short duration. So materials - that is too restrictive, is not in compliance with what we use for noncombustible materials.

In fact, the pass/fail criteria of ASTM E136, which are in Items 2 and 3 of the - of my proposed wording, allows burning and flame, and still declares material noncombustible.

What the CAM does is move the definition away from Chapter Three, provide a link to Chapter Four, the
requirements, (unintelligible) options are placed. Note that in 654, in 7.1.4.1, a noncombustible dust is rendered noncombustible by, by dilution with a noncombustible dust. So you have something that's combustible, and with dilution it becomes noncombustible, which means there must be a criterion for deciding when there's not enough noncombustible component for the mixture to be noncombustible.

The needs is based on the test method, and the proposed language as is in the Committee does not provide it. The Annex of 654 does provide the language - says, ASTM E136 is the text - the test that you need to do that. So it is inconsistent, because the definition says you shall not have ignition, and yet the Annex associated with that definition says do it in accordance with E136, which allows you to, to have some flaming.

So this is inconsistent, and it's inconsistent with the majority of the NFPA documents, such as 1, 101, 5000, etc. The rationale used to reject the comments is the criteria proposed apply to building materials. Yes, the Annex uses that definition with the same criteria. So again, it's inconsistent. Please support. Thank you.

DAN O'CONNOR: Mr. Runyon, would you like to
MARK RUNYON: Thank you. The Committee rejected this public input during the First Draft, and the public comment during the Second Draft, as they felt the current definition provided sufficient clarity of the intent that would be considered a noncombustible substance. The Committee wants to keep the simplicity of the definition for the user, to help them make the determination of combustible/noncombustible. Adding to — the additional testing to the ASTM Standards was seen as unnecessary. The existing definition does not include any requirements, and accurately conveys the definition that applies to the use of noncombustible materials in the Standard. Existing Annex material further clarifies the intent of this decision.

DAN O'CONNOR: Thank you, gentlemen. With that, we will open up debate on the motion. Again, I ask you for your name, affiliation, and whether you are speaking in support of, or against the motion. Microphone number six, please.

JOHN CHOLAN (phonetic): Good morning. My name is John Cholan, and I rise to speak against the motion. I'm not supporting any particular client in my actions today.

The Technical Committee has used the term
noncombustible primarily in relation to the construction materials used for process equipment, including ductwork, bins, bunkers, silos, air material separators, cyclones, those kinds of equipment. These kinds of equipment don't have the same kind of fire characteristics and fire concerns that you have for construction materials for occupied spaces.

The Technical Committee defined the term noncombustible in that particular context to help the user make the distinction between materials that were suitable for ductwork, bins, and bunkers, as opposed to those that were unsuitable – those that would lose their physical integrity, or contribute to the fire load.

Consequently, the Committee defined the term, put the definition where it belongs, and then addresses a relevant test method as one method that might be used to establish the distinction between combustible and noncombustible, and that was put in the Annex for the definition, as it should be, consistent with the Manual of Style.

Consequently, I urge the membership to support the actions of the Technical Committee, and reject this proposal. Thank you.

DAN O'CONNOR: Mr. Cholan, could you just clarify what is your company affiliation?
JOHN CHOLAN: My company affiliation is J.M. Cholan Consultants. I'm an independent consultant, and I'm not supporting the objectives of any particular client.

DAN O'CONNOR: Thank you, Sir. Okay. Microphone number six.

TIM MYERS: I'm Tim Myers from Exponent Incorporated. I'm also speaking against the motion. I agree, we - with - Mr. - what, with, with most of what Mr. Cholan stated. I think one thing the, the mover of the motion explained, that confused things, is that in this Standard, as Mr. Cholan referred, we use noncombustible to talk about materials of construction of process equipment. And then we also have an issue of whether the dust is combustible or noncombustible, which we don't use the standards that have been added to the Standard; we use the standards that are shown there - ASTM E1226, and E2019. So you, you shouldn't be confusing using this term of noncombustible with noncombustible dust. Thank you.

DAN O'CONNOR: Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NAFRA, and in support of the motion. I note that both the opponents said that this doesn't apply to noncombustible dust. I, I'm not sure
that I agree with that, but that's not the point. They both said that they use the term 'noncombustible material' for materials of construction, which is exactly what ASTM E136 has done, and is used for, and that's what they put in their Annex, as well. The Annex says you shall use - well, no, it doesn't say you shall use. You - materials that pass ASTM E136 are consistent - are considered noncombustible.

So the, the way they put in the Annex - sorry, not they - the way the Committee puts in the Annex, how you determine if a material is noncombustible, is inconsistent with the definition, because you pass E136, and you can ignite support combustion burn. So this is - the proposed text that I have, which is from - same in, as I said, in a whole bunch of other NFPA documents, includes this as one option. This is one of the options to declare something noncombustible. The other options, which are used, as both Mr. Cholan and Mr. Myers said, for building materials - the, the other options are test to ASTM E136, with the pass/fail criteria of ASTM E136.

Making this change would make this document consistent with most other documents in the NFPA system, and would prevent this inconsistency, this confusion between what's in the body in Sections - in Chapter Three, and what is in the corresponding Annex, which
1 don't tally with one another. Thank you.
2            DAN O'CONNOR: Okay. We'll move back to
3 microphone number six, please.
4            TIM MYERS: This is Tim Myers from Exponent,
5 speaking against the motion. I think one thing that
6 needs to be clarified - when we're talking about
7 materials of construction and process equipment, it's
8 typically steel. There's not a need to do a test to
9 determine if it's noncombustible. It's obvious. And
10 that's part of the reason why we don't have a specific
11 test required in the definition. Thank you.
12            DAN O'CONNOR: And again, at microphone six.
13            JOHN CHOLAN: Yes, this is John Cholan of JM
14 Cholan Consultants, Incorporated, and I can't agree with
15 my colleague, Tim Myers, more.
16            DAN O'CONNOR: For or against the motion, Mr.
17 Cholan.
18            JOHN CHOLAN: I'm speaking against the motion.
19            DAN O'CONNOR: Thank you.
20            JOHN CHOLAN: Also, if you look at the text as
21 submitted, it's unclear as to whether the three items
22 listed under the proposed text for the new section in
23 Chapter Four, are an 'or' or an 'and' - so that
24 consequently, a user could be in a position where he has
25 to comply with all three of those criteria. And here,
we're talking about a piece of 12-gauge steel. And why
add the cost to installations for getting tested on
materials of construction that are well known not to
burn, which is exactly what Mr. Myers brought up.

Furthermore, because NFPA 654 is used in a wide
array of countries, many of which are not the United
States, many times you've got to use a different test
method. Consequently, the Technical Committee
referenced the ASTM Standard in the Annex, because the
Annex is advisory, non-mandatory text. By putting the
reference to ASTM in the body of the Standard, it
becomes mandatory, and therefore deprives the owner the
- of the option of utilizing another test method that is
recognized in the jurisdiction where the facility is
actually being constructed.

So I urge the membership to vote against this
motion. Thank you.

DAN O'CONNOR: Microphone number four, please.

MARCELO HIRSCHLER: Marcelo Hirschler, GBH
International, for NAFRA, and in support of the motion.
Let me just - because it's not on the screen, I'm - I
want to read what it says in the proposed text. 'A
material that complies with any of the following shall
be considered noncombustible.' And the first one of
those is the same wording that is there today - 'any of
the following' - which means that you can do one, two, or three; one, two, or three. You clearly, when it says 'any of the following' you don't have to do all three. And the first one, which is the most restrictive - which is fine; that is one of the options. Thank you.

DAN O'CONNOR: Thank you, Sir. Is there any further discussion on Motion 654-1, to Accept an Identifiable Part of Public Comment No. 10, and Accept Public Comment Nos. 11 and 9.

UNIDENTIFIED SPEAKER: (unintelligible).

DAN O'CONNOR: Mr. Chair, do you have any further --

MARK RUNYON: No. We - the Committee has been well represented, and well spoken. Thank you.

DAN O'CONNOR: Thank you, Mr. Chair. Okay. Before we vote, let me restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 10, and Accept Public Comment Nos. 11 and 9. To vote, touch the 'vote' button. If you wish to vote in support of the motion, and recommend the text on Screen One, touch 'Yes'. If you wish to vote against the motion, and recommend the text on Screen No. Two, touch 'No'. Please record your vote now.

The voting will close in five seconds.

The voting is closed. Thank you.
The results of the vote are: 105 in support of the motion, and recommend the text on Screen One; 356 against the motion, and recommend the text on Screen Two. The motion has failed.

Is there any further discussion on NFPA 654? Seeing none, we will move on to the next document, and I thank you, Mr. Runyon.

(applause)

DAN O'CONNOR: Okay. I would like to make an announcement. We will only be taking 15 minute breaks throughout the session today. We will not be breaking for lunch. We encourage you to leave to get snacks or lunch at our convenience. There is a food court that is open at the bottom of the escalators, and a food cart immediately outside this ballroom.

Before we could begin debate on the next Standard, though, I would like to introduce Kenneth Bush, member of the Standards Council, who will be the Presiding Officer for motions before the membership on the next five Standards.

KENNETH BUSH: Thank you, Dan. It's my privilege to announce that the next order of business will be a 10 minute break.

UNIDENTIFIED SPEAKERS: Yeah.

KENNETH BUSH: So please return in 10 minutes.