

**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA**

<p>AMERICAN SOCIETY FOR TESTING AND MATERIALS d/b/a/ ASTM INTERNATIONAL;</p> <p>NATIONAL FIRE PROTECTION ASSOCIATION, INC.; and</p> <p>AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS,</p> <p style="text-align: center;">Plaintiffs/ Counter-Defendants,</p> <p>v.</p> <p>PUBLIC.RESOURCE.ORG, INC.,</p> <p style="text-align: center;">Defendant/ Counter-Plaintiff.</p>	<p>Case No. 1:13-cv-01215-TSC</p>
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**DECLARATION OF JAMES T. PAULEY**  
**IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT**

I, James T. Pauley, declare as follows:

1. I am the President and Chief Executive Officer of the National Fire Protection Association ("NFPA"). I am generally responsible for the management, direction and administration of NFPA and its activities including its standards development activities. I have held this position since July 1, 2014. The following facts are based upon my own personal knowledge, and if called upon to do so, I could and would testify competently thereto.

**Background**

2. I am a native of Kentucky, and I have a degree in electrical engineering from the University of Kentucky.

3. Prior to my employment with NFPA, I worked in the electrical industry for nearly 30 years, beginning in 1985. I began my career as an engineer for Square D, an electrical equipment manufacturer, and then worked for Schneider Electric, an electrical distribution and management company, after it acquired Square D in 1991. My responsibilities at Schneider Electric included product development and marketing, industry standards, and global standards strategy. In 2001, I became a vice president of industry standards and government relations at Schneider Electric. In 2011, I became senior vice president for external affairs and government relations and a member of the company's U.S. executive management team. I held that position until being named NFPA's president in 2014.

4. NFPA is a nonprofit organization, based in Quincy, Massachusetts, devoted to eliminating death, injury, and property and economic loss due to fire, electrical, and related hazards. NFPA was founded in 1896, and has continuously developed standards since that time. The association delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy. NFPA's membership totals more than 65,000 individuals throughout the world.

5. Standards development is NFPA's principal activity and serves to further NFPA's mission of reducing the risk of loss from fire, electrical, and related hazards. NFPA develops standards based on the best available research and input from a wide variety of stakeholders. These standards provide guidance, instructions, and best practices to prevent the occurrence of disasters, manage their impact, and protect human life and property.

6. NFPA has continuously asserted copyright in its standards and made copies of its standards available for sale to the public since it first began publishing standards. The revenue

NFPA has obtained from the sale of its copyrighted standards has been NFPA's primary means of financial support for many decades.

7. NFPA's flagship standard is NFPA 70, the National Electrical Code ("NEC"). The first edition of the NEC was published in 1897. NFPA currently releases a new edition of the NEC on a three-year cycle. The current edition of the NEC is the 2014 edition, which is over 900 pages long. The prior edition was the 2011 edition.

8. The NEC addresses the installation of electrical conductors, equipment, and raceways; signaling and communications conductors, equipment, and raceways; and optical fiber cables and raceways in commercial, residential, and industrial occupancies. The NEC is the world's leading standard for electrical safety and provides the benchmark for safe electrical design, installation, and inspection to protect people and property from electrical hazards.

9. Additional NFPA standards include NFPA 101, the Life Safety Code. The Life Safety Code is the most widely used standard for building construction, protection, and occupancy features that minimize the effects of fire and related hazards on human life. The Life Safety Code includes provisions for building egress, fire protection features, sprinkler systems, alarms, emergency lighting, smoke barriers, and special hazard protection.

10. Many NFPA standards are incorporated by reference in federal and state laws and regulations. NFPA is aware that its standards are frequently incorporated by reference, but NFPA does not develop any standards solely for that purpose.

11. NFPA develops new standards based on a determination that developing a standard in a particular area would serve NFPA's mission of reducing the risk of loss from fire and related hazards. NFPA does not consider whether the standard will generate revenue when deciding whether to develop the standard.

12. All NFPA standards have a range of applications and uses even if they are not incorporated by reference in government laws or regulations. For example, the nationwide use of the NEC by builders and electrical manufacturers ensures that consumers may travel throughout the United States with the expectation that their electrical appliances can be plugged in and will operate safely and effectively. Additionally, widespread use of the NEC and the Life Safety Code provide benchmark safety guidance that can be relied on by individuals, companies, and insurers, among others.

13. The primary users of NFPA standards are professionals and tradespeople who use these standards in the course of their business, such as electricians, architects, and electrical equipment manufacturers. NFPA makes its standards available, both for free viewing and for sale, through a variety of channels, including through its website, through a mail-order catalog distributed to NFPA members, and through various retail outlets.

#### **NFPA's Process of Developing Voluntary Consensus Standards**

14. Private-sector standards development in the United States is generally coordinated and accredited by the American National Standards Institute ("ANSI"). ANSI is a nonprofit membership organization that facilitates the development of private sector standards and promotes their integrity by accrediting standards development organizations ("SDOs") whose procedures comply with ANSI's Essential Requirements. I am familiar with ANSI requirements, having served as chair of the ANSI Board of Directors from January 2012 through May 2014.

15. To achieve ANSI accreditation, an SDO's standards development committees must contain balanced membership, taking into account the views of a variety of groups including technical experts on the subject matter of the standard, consumer representatives, government representatives, and industry representatives. ANSI accreditation also requires that

the SDO maintain open proceedings; provide public notice of standards development activity; allow opportunity for public comment; give consideration and response to public comments; and provide an opportunity to appeal committee decisions. Standards that are developed in accordance with ANSI requirements are known as voluntary consensus standards.

16. ANSI periodically audits all its accredited developers to verify that they are following their ANSI approved procedures. NFPA is classified as an Audited Designator by ANSI because it submits to more in-depth ANSI auditing of its standards process. This allows NFPA to designate its standards as “American National Standards” (ANSs) when they complete the NFPA process. All NFPA standards carry the ANS designation and are revised frequently to remain current with state-of-the-art technology developments.

17. I have been familiar with NFPA standards and the NFPA standards development process for many years, including before I became President of NFPA. From 2000 to 2013, I served on NFPA’s Standards Council, and I served as Chair of the Standards Council from 2008 to 2013. The Standards Council oversees NFPA’s standards development activities, administers the rules and regulations, and acts as an appeals body.

18. NFPA’s rigorous and open standards development process requires NFPA to expend substantial resources on standards development. In addition to the time contributed by the thousands of volunteers who participate in NFPA standards development, NFPA pays for salary and benefits for its own administrative, editorial, and expert staff, office space, meeting facilities for the more than 250 Technical Committees who participate in NFPA standards development processes, outreach and education efforts, information technology, and other costs.

19. Each NFPA standard goes through two full rounds of public and committee input, comments, review and drafts before being finalized.

20. NFPA is continuously investing in improvements to its standards development process. For example, NFPA has recently spent significant sums to build a computerized interface that allows for the online development and revision of its standards. NFPA has spent more than \$2.9 million on this system over the past four years.

21. NFPA has also expended resources to increase the participation of underrepresented groups on its Technical Committees, including by creating an Enforcer Funding Program to raise the percentage of government enforcement officials on the Committees by reimbursing these officials for the majority of their travel costs and other costs of Committee membership.

22. NFPA's standards are state of the art. NFPA systematically and regularly revises and updates its standards. The most used NFPA standards, including the NEC, are revised on a three-year cycle in order to keep pace with changes in technology and design, and advances in safety research and understanding.

23. The standards that emerge from this process are sophisticated and complex technical works that provide unique guidance and best practices covering a wide range of topics. These works reflect creative input and decisions from all of the many participants in the standards development process.

24. NFPA's standards development process incorporates significant creative input from three primary groups of participants. These include (i) members of the public who provide input and comment; (ii) the members of the Technical Committees who consider and vote on proposed changes to the standards; and (iii) the NFPA staff who assist and advise the Technical Committees and who draft and finalize the wording of the actual document that, through the balloting and voting process, becomes the standard.

25. NFPA publishes its standards with copyright notices that alert the public, including the people who participated in the standards development process, that the copyright is owned by NFPA.

26. NFPA is not aware of any other person who claims to have any copyright interest in NFPA standards.

27. Members of the public participate in NFPA's standards development process by submitting input, including proposed changes to NFPA standards and comments on proposed changes. It is NFPA policy that all persons who submit public input must assign all rights, including copyright, in their contributions to NFPA. NFPA does not accept public input without a signed copyright assignment, which is printed on the standard forms by which members of the public submit input.

28. In my experience, members of the public who make contributions to the standards development process understand and intend that NFPA will own the copyright in their contributions and in the standards. I have never heard any contributor suggest that NFPA did not own the copyright in NFPA standards or that the contributors have any rights in NFPA standards.

29. Prior to my employment with NFPA, and during the time I was employed in the electrical manufacturing industry, I personally submitted proposals and comments on NFPA standards. For example, I submitted several proposals and comments for the 2011 NEC, with specific suggestions for revisions to the wording of various provisions of the NEC. The Technical Committees accepted some of my proposals and comments, and they were incorporated into the final standards..

30. Like all members of the public who submit input, I submitted these comments and proposals on the standard NFPA forms for such submissions. As part of submitting the forms, I

expressly agreed that I assigned all and full copyrights in my contributions to NFPA. I understood and expressly intended that NFPA would own the copyright both in my contribution and in the final standard. True and correct copies of some of the proposals and comments that I submitted for the 2011 NEC, including my signed assignment of copyright in my contributions to NFPA, are attached hereto as Exhibit A.

31. As I have explained above, many other members of the public also have submitted proposals and comments for NFPA standards, and they, too, have executed copyright assignments relating to their contributions. I have attached hereto as Exhibit B a sampling of true and correct copies of proposals and comments submitted by members of the public for the 2014 NEC, including their signed assignments of copyright in their contributions, are attached hereto as Exhibit B.

32. The members of NFPA Technical Committees also contribute to NFPA's standards development process. The Technical Committees are the principal consensus bodies responsible for the development and revision of NFPA standards.

33. The Technical Committees meet to consider proposals submitted by the public, and they may also suggest their own revisions to the standards. The Committees discuss and reach consensus on which changes should be made. For a large standards such as the NEC, there are multiple Technical Committees. There is a Technical Correlating Committee that oversees the overall NEC development process, and there are several Technical Committees known as Code-Making Panels that are responsible for particular sections of the NEC.

34. It is NFPA policy that anyone who wishes to become a Technical Committee member submits an application on NFPA's Committee Application form, including by signing an assignment of copyright to NFPA. Attached hereto as Exhibit C is a true and correct copy of



the NFPA Technical Committee Application form. The Application contains the following language, which has remained unchanged in substance for many years:

I agree that any material that I author, either individually or with others, in connection with work performed as a member of an NFPA Technical Committee shall be considered to be works made for hire for the NFPA. To the extent that I retain any rights in copyright as to such material, or as to any other material authored by me that I submit for the use of an NFPA Technical Committee in the drafting of an NFPA code, standard or other NFPA document, I hereby grant and assign all and full rights in copyright to the NFPA. I further agree and acknowledge that I acquire no rights in any publication of the NFPA and that copyright and all rights in materials produced by NFPA Technical Committees are owned by the NFPA and that the NFPA may register copyright in its own name.

35. Before being employed by NFPA, I served on a number of NFPA Technical Committees, including, for example, the Code-Making Panel No. 2 for the 2011 and 2014 editions of the NEC. Each time I applied to be a member of a Technical Committee, I submitted a Committee Application form in which I signed the copyright assignment containing the language quoted in paragraph 29 of this Declaration. It has for many years been NFPA's policy and practice that all members of NFPA Technical Committees execute such copyright assignments.

36. In my work on NFPA Technical Committees, I understood, agreed, and expressed the intention that NFPA would own the copyright in the final standards, consistently with the Committee Application form I had submitted.

37. In my experience participating on the Technical Committees, I understood that all members of the Committees shared the understanding and expressed the common intention that NFPA would own the copyright in the final standard. I have frequently heard other Technical Committee members refer to NFPA's copyright ownership of NFPA standards. I have never heard any member of a NFPA Technical Committee suggest that NFPA does not own the

copyright in NFPA standards or that the Technical Committee members retain any rights in their contributions to the standards.

38. NFPA staff also participate in NFPA's standards development process in the course of their employment. NFPA technical staff assist and advise the Technical Committees, and NFPA technical and editorial staff revise and finalize the wording of the actual document that becomes the standard.

39. There is an NFPA staff liaison assigned to every NFPA Technical Committee. Each staff liaison has technical expertise in the appropriate field, and the staff liaisons provide information and advice to the Committee during Committee meetings.

40. The staff liaisons also record the decisions made at the Committee meetings about revisions to NFPA standards. NFPA staff liaisons work together with the Committees to craft appropriate wording in the draft of the standard that accurately captures the intent and purpose of Committee decisions. The technical staff are also responsible for ensuring that revisions to the standard are drafted in a way that maintains technical and editorial consistency across the different sections of the standard.

41. After Technical Committee meetings, the technical staff work with NFPA editorial staff to finalize the language of the draft standard before submitting it for balloting by the Technical Committees. Every revision and modification in the text of an NFPA standard goes through multiple levels of review and revision by NFPA technical and editorial staff.

42. NFPA invests significant resources in the development of each new edition of the NEC. For example, the development process of the 2017 NEC is currently ongoing. The preparation of the first draft report involved consideration of over 4,000 proposals from the public. A total of 485 Technical Committee members on 19 Code-Making Panels, who were

supported by at least 45 NFPA staff members, held concurrent, multi-day committee meetings for a total of 75 meeting days over a two-week period. The first draft was finalized by a four-day meeting of the Technical Correlating Committee, assisted by three NFPA staff members. The preparation of the second draft report, which is ongoing now, has so far involved consideration of over 1,500 public comments, and a large number of Committee meetings over a two-week period, assisted by at least 19 NFPA staff members. There will be two more multi-day Technical Correlating Committee meetings prior to the issuance of the NEC. In addition, there have been numerous conference calls, online seminars, and other interactions among Committee Members and NFPA staff.

43. The final versions of the standard also go through a rigorous quality control process by NFPA staff, to ensure that the final document is as accurate as possible. This painstaking review is costly, but NFPA commits the resources because technical accuracy of NFPA standards is essential for NFPA's mission of promoting public safety.

#### **How NFPA Funds Its Standards Development**

44. NFPA sells its standards at reasonable cost and in a variety of formats. For example, the 2014 edition of the NEC, which is 910 pages long, is offered for purchase as a PDF, an eBook, or in softcover, looseleaf, or spiralbound versions. The price for the NEC ranges from \$95 to \$105, depending on the format in which it is purchased. NFPA's other standards are sold at prices ranging from \$39 to \$100, depending on the length of the standard and other factors. NFPA also makes several digital subscription services available, so interested purchasers can obtain unlimited digital access to a variety of NFPA standards.

45. In addition, NFPA is committed to providing the full text of NFPA standards available for free viewing on its website. For more than a decade, NFPA has provided such

access to its standards, in read-only format, and all NFPA standards can currently be accessed on NFPA's website at [www.nfpa.org/codes-and-standards/free-access](http://www.nfpa.org/codes-and-standards/free-access). This access allows any member of the public to review NFPA standards in full and without cost. NFPA also encourages jurisdictions that incorporate its standards by reference to link their websites to its free, online version of the standards, and provides a widget that easily enables such access.

46. NFPA funds its standards development activities primarily with the revenue obtained from sales of its copyrighted standards. For example, in 2014 NFPA's publications sales accounted for over 70% of NFPA's total operating revenues. The overwhelming majority of that publications revenue comes from the sale of codes and standards.

47. NFPA would not be able to maintain its existing voluntary consensus standards development and revision processes at current levels if there were a significant reduction in the revenue it obtains from the sale of publications.

48. If NFPA were unable to maintain its current level of standards development and revision activities, the standards would not keep up with technological advancements to address fire, electrical and related hazards nor would they reflect the most current knowledge and experience of the experts who participate in the process. This failure would result in a lower level of overall public safety.

49. In NFPA's experience, to preserve the revenue from sales of publications, NFPA must be able to assert copyright in its standards to prevent unauthorized copying of NFPA standards, which threaten to substantially undermine NFPA's sales.

50. NFPA has attempted for years to develop alternative sources of revenue but has been unable to identify any such revenue sources that would come close to replacing the revenue from sales of NFPA standards.

51. If NFPA were to lose copyright protection of its standards and the related revenue, NFPA would have to significantly limit its activities. Such limitations could include ceasing to develop standards that, while important, do not necessarily generate sufficient revenue to cover their costs including, for example, personal protective equipment standards that help keep fire fighter personnel safe.

**Harm to NFPA From Public.Resource.Org’s Unauthorized Appropriation and Use of NFPA’s Copyrighted Codes and Trademarks**

52. The activity of Public.Resource.Org, in posting unauthorized copies of NFPA standards on the internet, threatens NFPA’s ability to generate revenue from these standards and its ability to continue to fund the development of new and updated standards.

53. In addition, Public.Resource.Org’s posting of unauthorized copies that have not gone through NFPA’s quality control process threatens the reputation for careful and quality publications that NFPA has built up for over a century and undermines the goodwill associated with NFPA’s name.

54. I understand that Public.Resource.Org converted NFPA standards to html format and posted the html versions on the internet. The conversion process inevitably resulted in errors. For example, I am aware that the html version of the 2011 version of the NEC that was posted to Public.Resource.Org’s website contains many errors. These include many obvious typographical errors, but they also include errors that distort the meaning of the standard. Some of those errors are:

- a. Article 310.10(F) of the 2011 NEC addresses conductors used in direct-burial applications, and states: “Cables rated above 2000 volts shall be shielded.” This requirement that high-voltage cables in direct-burial applications be shielded is important to prevent damage to the cables and a resulting risk of electrical shock.

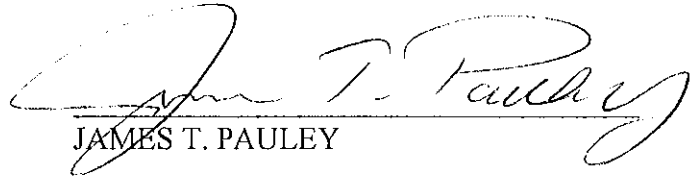
This language, however, is completely omitted from the html version that was posted on Public.Resource.Org's website.

- b. Article 424.59 of the 2011 NEC states that “heaters installed within 1.2m (4 ft) of the outlet of an air-moving device ... may require turning vanes, pressure plates, or other devices on the inlet side of the duct heater to ensure an even distribution of air over the face of the heater.” In Public.Resource.Org's html version however, the “m”—representing meters—is incorrectly rendered as “in”—which represents inches. In other words, the Public.Resource.Org version says that the requirement is only triggered if a heater is less than 1.2 *inches* from an air-moving device, rather than the correct and much greater distance of 1.2 meters.
- c. Article 430.35(B) of the 2011 NEC states that “motor overload protection shall not be shunted or cut out during the starting period if the motor is automatically started.” Inadequate motor overload protection can result in overheating and damage. In Public.Resource.Org's html version, however, this provision incorrectly says that motor overload protection shall not be shunted or cut out during the “stalling period.”
- d. A similar error occurs in Article 502.134(b)(5), which identifies requirements for “starting and control equipment for electric-discharge lamps.” In Public.Resource.Org's html version, this article erroneously refers to “stalling and control equipment.”
- e. Article 517.2 of the 2011 NEC defines “X-Ray Installations, Portable” as “X-ray equipment designed to be hand-carried.” In Public.Resource.Org's html version,

however, this definition erroneously refers to “X-ray equipment designed to be hand-earned.”

- f. There are many typographical errors in the cross-references in Public.Resource.Org’s html version. In order to understand a provision of the NEC that contains a cross-reference, the user must be able to identify and refer to the Article identified in that cross-reference. However, Public.Resource.Org’s html version contains many erroneous cross-references, including in Articles 110.14(B)(1), 310.10(E), 410.140, 430.75, 504.70, 645.10(B), 670.3(B), and 680.25(B).

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct and that this declaration was executed this 18 day of November 2015 at Quincy, Massachusetts.

  
JAMES T. PAULEY

# EXHIBIT A



# FORM FOR PROPOSALS FOR 2011 NATIONAL ELECTRICAL CODE®

## INSTRUCTIONS — PLEASE READ CAREFULLY

Type or print legibly in black ink. Use a separate copy for each proposal. Limit each proposal to a SINGLE section. All proposals must be received by NFPA by 5 p.m., EST, Friday, November 7, 2008, to be considered for the 2011 National Electrical Code. Proposals received after 5:00 p.m., EST, Friday, November 7, 2008, will be returned to the submitter. If supplementary material (photographs, diagrams, reports, etc.) is included, you may be required to submit sufficient copies for all members and alternates of the technical committee.

For technical assistance, please call NFPA at 1-800-344-3555.

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Log #: 3747-1

Date Rec'd: \_\_\_\_\_

NOV 08 2008

Please indicate in which format you wish to receive your ROP/ROC  electronic  paper  download  
(Note: If choosing the download option, you must view the ROP/ROC from our website; no copy will be sent to you.)

Date November 7, 2008 Name Jim Pauley Tel. No. 859-245-7923

Company Square D Company/Schneider Electric Email jim.pauley@us.schneider-electric.com

Street Address 1601 Mercer Road City Lexington State KY Zip 40511

Please indicate organization represented (if any) None

1. Section/Paragraph 110.31(A)

2. Proposal Recommends (check one):  new text  revised text  deleted text

3. Proposal (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

Revise 110.31(A) as shown below:

(A) ~~Fire Resistance of Electrical Vaults. Where an electrical vault is required or specified for conductors and equipment operating at over 600 volts, nominal, the following shall apply.~~

- (1) ~~Walls and Roof.~~ The walls and roof, floors, and doorways of vaults containing conductors and equipment over 600 volts, nominal, shall be constructed of materials that have adequate structural strength for the conditions, with a minimum fire rating of 3 hours. For the purpose of this section, studs and wallboards shall not be considered acceptable.
- (2) ~~Floors.~~ The floors of vaults in contact with the earth shall be of concrete that is not less than 4 in. (102 mm) thick, but where the vault is constructed with a vacant space or other stories below it, the floor shall have adequate structural strength for the load imposed on it and a minimum fire resistance of 3 hours. For the purpose of this section, studs and wallboards shall not be considered acceptable.
- (3) ~~Doors.~~ Each doorway leading into a vault from the building interior shall be provided with a tight-fitting door that has a minimum fire rating of 3 hours. The authority having jurisdiction shall be permitted to require such a door for an exterior wall opening where conditions warrant.
- (4) ~~Locks.~~ Doors shall be equipped with locks, and doors shall be kept locked, access being allowed only to qualified persons. Personnel doors shall swing out and be equipped with panic bars, pressure plates, or other devices that are normally latched but open under simple pressure.
- (5) ~~Transformers.~~ Where a transformer is installed in a vault as required by Article 450, the vault shall be constructed in accordance with the requirements of Part III of Article 450.

Exception to 1, 2 and 3: Where the vault is protected with automatic sprinkler, water spray, carbon dioxide, or halon, construction of 1-hour rating shall be permitted.

FPN No. 1: For additional information, see ANSI/ASTM E119-1995, Method for Fire Tests of Building Construction and Materials, NFPA 251-2006, Standard Methods of Tests of Fire Resistance of Building Construction and Materials and NFPA 80-2007, Standard for Fire Doors and Other Opening Protectives.

FPN No. 2: A typical 3-hour construction is 150 mm (6 in.) thick reinforced concrete.

3747-2

**4. Statement of Problem and Substantiation for Proposal:** (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

Currently, the provisions in 110.31(A) are both incomplete and somewhat out of place. The language doesn't really have any driving language as to when the requirements might apply.

The following addresses the specific changes:

- 1) The title is changed to just "electrical vaults" since it is proposed that the section cover more than just the fire resistance rating.
- 2) Driving language has been added in the main paragraph to indicate that the section applies when a vault is required or specified. Since the NEC doesn't have specific requirements to use a vault (except for Article 450), this appears to be the only way to actually have some application of the language.
- 3) The section is split into a number of subsections. Item (1) applies to walls and roofs and contains the requirement currently in 110.31(A). Item (2) is added to apply to floors and contains the current provisions in 110.31(A) for floors. Note that the sentence regarding studs and wall board is moved into item (1) since it would not apply to the floor. The reference to "doors" has been taken out of these sections and moved to a new item (3).
- 4) Item (3) has been added to apply to doors and is taken from 450.43(A).
- 5) Item (4) has been added to specify the locking requirements for the doors on the vault. These requirements were taken from 450.43(C).
- 6) Item (5) has been added to make it clear that any vault that is required due to the requirements of Article 450 must be constructed to Article 450 Part III. Although the language in 450 is similar to this proposal, there are requirements for door sills and ventilation that would not be applicable in an equipment/conductor vault. As such, it makes more sense to simply defer to Article 450 where the vault includes a transformer that is required by Article 450 to be in a vault.
- 7) An exception to the construction requirements is added to allow for 1 hr construction when the vault is protected by a fire suppression system. This exception is taken from 450.42 and 43. If I can reduce a transformer vault to 1 hr by adding fire suppression, having similar permission for a general electrical vault would be acceptable since the transformer fires are likely more severe than what would occur in an equipment room without a transformer.
- 8) Two new FPNs are added that parallel the existing FPNs in 450.42 and 450.53. Proposed FPN No. 1 is a combined FPN derived from 450.42 FPN 1 and 450.53 FPN. Proposed FPN No. 2 is taken from 450.42 FPN No. 2.

Overall this proposal will improve the usability, completeness and applicability of 110.31(A).

**5. Copyright Assignment**

- (a)  I am the author of the text or other material (such as illustrations, graphs) proposed in this Proposal.
- (b)  Some or all of the text or other material proposed in this Proposal was not authored by me. Its source is as follows (please identify which material and provide complete information on its source):

*I agree that any material that I author, either individually or with others, in connection with work performed by an NFPA Technical Committee shall be considered to be works made for hire for the NFPA. To the extent that I retain any rights in copyright as to such material, or as to any other material authored by me that I submit for the use of an NFPA Technical Committee in the drafting of an NFPA code, standard, or other NFPA document, I hereby grant and assign all and full rights in copyright to the NFPA. I further agree and acknowledge that I acquire no rights in any publication of the NFPA and that copyright and all rights in materials produced by NFPA Technical Committees are owned by the NFPA and that the NFPA may register copyright in its own name.*

Signature (Required)



PLEASE USE SEPARATE FORM FOR EACH PROPOSAL • email: [proposals\\_comments@nfpa.org](mailto:proposals_comments@nfpa.org) • NFPA Fax: (617) 770-3500

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(Note: If choosing the download option, you must view the ROP/ROC from our website; no copy will be sent to you.)

Date November 7, 2008 Name Jim Pauley Tel. No. 859-245-7923

Company Square D Company/Schneider Electric Email jim.pauley@us.schneider-electric.com

Street Address 1601 Mercer Road City Lexington State KY Zip 40511

Please indicate organization represented (if any) None

1. Section/Paragraph 225 Part II and 225.30

2. Proposal Recommends (check one):  new text  revised text  deleted text

3. Proposal (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

Revise the title of Part II to Article 225 to read as follows:

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

In addition, revise the text of 225.30 to read as shown:

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

4. **Statement of Problem and Substantiation for Proposal:** (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

The overall intent of Part II of Article 225 needs to be clarified. The present wording is leading to a significant amount of time being spent arguing over whether or not a building is supplied from another building or from a structure or from something else. It would appear that the ultimate intent of these provisions in Article 225 is to require that we have appropriate disconnecting means at any building or structure that is supplied by a branch circuit or feeder. If that is the case, why not simply revise the language to make that clear.

For example, take a building that has the service disconnect located away from the building by some distance (i.e. determined by the AHJ to not be at the building itself). The conductors from the service disconnect to the building are an outside feeder. We would expect that the provisions of Part II apply to that feeder when it gets to the building.

The problem is with the present wording that says "each additional building or structure". If the service disconnect is a pad mounted single switchboard section, the only way you can argue that Part II of 225 applies is to argue that the switchboard is a "structure". I believe that it only adds confusion to say that a piece of electrical equipment is a structure.

The proposed revision to both the Part II title and to 225.30 would simply the text to simply say that if you have a building supplied by a feeder or branch circuit, you have to comply with Part II. Note that the proposed title for Part II

8753-2

is identical to the title used by CMP 5 for 250.32. The use of the same terminology in both parts of the code would greatly benefit users in applying the proper rules.

The suggested revision to 225.30 that changes "...of the service disconnecting..." to ...of a service disconnecting... is to simply recognize that there may be more than one service disconnecting means on the premises.

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11/6/2008

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Date November 7, 2008 Name Jim Pauley Tel. No. 859-245-7923

Company Square D Company/Schneider Electric Email jim.pauley@us.schneider-electric.com

Street Address 1601 Mercer Road City Lexington State KY Zip 40511

Please indicate organization represented (if any) None

1. Section/Paragraph 310.4

2. Proposal Recommends (check one):  new text  revised text  deleted text

3. Proposal (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

Revise item (B) as shown and add a new item (F):

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

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

4. Statement of Problem and Substantiation for Proposal: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

During a recent review of a set of plans, it became evident that we do not address the issue of paralleled equipment bonding jumpers in 310.4. Take the example of a transformer (separately derived system) that is supplying a large switchboard with multiple paralleled conduits. The conductor that joins the metallic parts of the transformer and the switchboard is actually an equipment bonding jumper and not an equipment grounding conductor. 250.102(C) has the sizing requirements for the equipment bonding jumper in this case and makes it clear that the EBJ has to be installed in the parallel conduits and is sized based on the conductors in the conduit.

However, since this is a parallel conductor the user is naturally drawn to 310.4 for any other requirements. Since there are none, it raises the question as to whether we expect the bonding jumper to be the same size, material, length, etc. 310.4 already states this for equipment grounding conductors and it would appear that an extension to equipment bonding jumpers makes good technical sense.

To cover the EBJ, 310.4(B) is revised to add in equipment bonding jumper. A new item (F) is added to 310.4 to simply refer the user to the sizing requirements outlined in 250.102. Having these provisions will also make it clear that the 1/0 minimum size limitation on paralleled conductors does not apply to the EBJ.

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Date November 7, 2008 Name Jim Pauley Tel. No. 859-245-7923

Company Square D Company/Schneider Electric Email jim.pauley@us.schneider-electric.com

Street Address 1601 Mercer Road City Lexington State KY Zip 40514

Please indicate organization represented (if any) None

1. Section/Paragraph 517.13(B)

2. Proposal Recommends (check one):  new text  revised text  deleted text

3. Proposal (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

Revise 517.13(B) to read as follows

### (B) Insulated Equipment Grounding Conductor.

**(1) General.** The following shall be directly connected to an insulated copper equipment grounding conductor that is installed in metal raceways or as a part of listed cables having a metallic armor or sheath assembly with the branch-circuit conductors supplying these receptacles or fixed equipment.

(1) The grounding terminals of all receptacles.

(2) Metal boxes and enclosures containing receptacles.

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

Exception No. 1 to (1): The equipment grounding terminal of a receptacle shall be permitted to be connected to an insulated equipment bonding jumper that extends from a metal box or enclosure that is connected to an insulated equipment grounding conductor.

Exception No. 2 to (2): Metal boxes and enclosures containing an isolated ground receptacle(s) as permitted by 250.146(D)

Exception No. 3 to (3): Metal faceplates shall be permitted to be connected to the equipment grounding conductor by means of a metal mounting screw(s) securing the faceplate to a grounded outlet box or grounded wiring device.

Exception No. 4 to (3): Luminaires more than 2.3 m (7 1/2 ft) above the floor and switches located outside of the patient care vicinity shall be permitted to be connected to an equipment grounding return path complying with 517.13(A).

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

5752

**4. Statement of Problem and Substantiation for Proposal:** (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

The objective of this proposal is to rearrange the text in 517.13(B) for usability and to clear up some confusion about whether or not the metal box is required to be directly connected to the insulated equipment grounding conductor.

The revisions rearrange the paragraph to create a direct first sentence to state what must be connected to the copper equipment grounding conductor. The existing items in the paragraph are now numbered and a new item (2) is added to specifically state that the insulated equipment grounding conductor must be connected to the metal box that contains the receptacle. This arrangement is the only way to get true "redundant" paths. Today, many of these installations are being made by taking the insulated equipment grounding conductor to the receptacle without connection to the box.

Two new exceptions are added that will recognize some additional situations. Exception No. 1 would allow a bonding jumper to be installed from the box to the receptacle. This would result in the insulated equipment grounding conductor being terminated to the box and then a bonding jumper to go from the box to the receptacle.

Exception No. 2 is to recognize that there are situations where isolated ground receptacles may be installed and this exception would allow you to omit the connection to the box and take the conductor directly to the receptacle.

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Date 11-28-11 Name James Conrad Tel. No. 860-653-8382  
Company RSCC Email james.conrad@r-scc.com  
Street Address 20 Bradley Park Road City East Granby State CT Zip 06026

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Please indicate organization represented (if any) N/A

1. Section/Paragraph 725.179 (F)

2. Proposal Recommends (check one):  new text  revised text  deleted text

3. Proposal (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

Revise 725.179 (F) to read as follows and add new Informational Note

### (F) Circuit Integrity (CI) Cable or Electrical Circuit Protective System.

Cables used for survivability of critical circuits shall be listed as circuit integrity (CI) cable. Cables specified in 725.154(A), (B), (D)(1), and (E), and used for circuit integrity, shall have the additional classification using the suffix "CI". Cables that are part of a listed electrical circuit protective system shall be considered to meet the requirements of survivability.

(1) Circuit Integrity (CI) cables specified in 725.179(A), (B), (D)(1), and (E) and used for survivability of critical circuits shall have the additional classification using the suffix "CI". These cables shall not be installed in a raceway unless part of an Electrical Circuit Protective System.

(2) Electrical Circuit Protective System meeting the requirements for survivability of critical circuits. Cables that are part of an Electrical Circuit Protective System shall be identified with the system number printed on the outer surface.

Informational Note No. 2: UL guide information for electrical circuit protective systems (FHT) contains information on proper installation requirements to maintain the fire rating.

4. Statement of Problem and Substantiation for Proposal: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

Substantiation: This proposal separates the two methods of establishing cable survivability. Cable are either tested as a CI cable or tested as part of an electrical circuit protective system. The UL Guide Information "FHT- Electrical Circuit Protective Systems" (see attachment) states "CI cable is tested on steel rings to simulate installation in free air. If CI cable is intended to be installed in a raceway it is so tested. CI cable that has been tested in a raceway will be specified in the system." The new text clarifies the two cable options and marking requirements.

2031-2

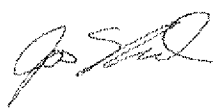
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Date 11/1/2011 Name Ed Briesch Tel. No. 847 664-3174  
Company Underwriters Laboratories Email edward.m.briesch@ul.com  
Street Address 333 Pfingsten Rd City Northbrook State IL Zip 60062

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(4) **Equipment Temperature.** The marking shall specify the temperature class or operating temperature at a 40°C ambient temperature, or at the higher ambient temperature if the equipment is rated and marked for an ambient temperature of greater than 40°C. For equipment installed in a Class II, Division 1 location, the temperature class or operating temperature shall be based on operation of the equipment when blanketed with dust. The temperature class, if provided, shall be indicated using the temperature class (T Codes) shown in Table 500.8(C). Equipment for Class I and Class II shall be marked with the maximum safe operating temperature, as determined by simultaneous exposure to the combinations of Class I and Class II conditions.

4. **Statement of Problem and Substantiation for Proposal:** (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

The current text is not clear as to if this temperature is based on operation of the equipment in free air or when the equipment is blanketed with dust. In a Class II, Division 1 location, it would be expected that a dust blanket could exist under normal operating conditions. Equipment temperatures under a dust blanket will be considerably higher than in free air due to the insulating effect of the dust blanket and may very well exceed the ignition temperature of the dust when in free air they would not. The ANSI standards for the equipment, ANSI/UL1203 for example, require the temperature be determined with a dust blanket.

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Date Nov. 8, 2010 Name Eric Kench, P.E.

Tel. No. 347-673-6773

Company Kench Engineering Consultant

Email kenchengengineeringconsultants@hotmail.com

Street Address 2350 East 28 Street

City Brooklyn

State NY Zip 11229

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1. Section/Paragraph NEC 501.15(E)(1)

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(1) Terminations. Cables entering enclosures that are required to be explosionproof shall be sealed at the point of entrance. The sealing fitting shall comply with 501.15(B)(1) be explosionproof.

4. Statement of Problem and Substantiation for Proposal: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

NEC 501.15(B)(1) pertains to conduit seals and not cable seals. Referencing this NEC section would do nothing but create confusion for the person reading it. There are cable connectors that are made for classified areas i.e. Appleton TMC/TMCX connectors.

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Eric Kench, P.E.

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Date 9/19/2012 Name Gregory C Nieminski Tel. No. 401-885-0281  
Company Gregory C. Nieminski, LLC Email silvergregn@verizon.net  
Street Address 185 Silverwood Drive City East Greenwich State RI Zip 02818

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Please indicate organization represented (if any) Chairman, EPRI Electric Transportation Infrastructure Working Council's NEC Task Force

1. Section/Paragraph 625.2 [section number based on new numbering]

2. Comment on Proposal No. (from ROP): 12-52

3. Comment recommends (check one):  new text  revised text  deleted text

4. Comment (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).

Cable Management System. An apparatus designed to control and organize unused lengths of cable or cord at electric vehicle charging sites.

5. Statement of Problem and Substantiation for Comment: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Comment, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

The term "cable management system" has been used in the new Article 62.5.17(C) but is not defined. The term is presently used and defined in Article 626. It is proposed that the same definition be added to 625.2 or, alternatively, that the term be defined commonly in Article 100.

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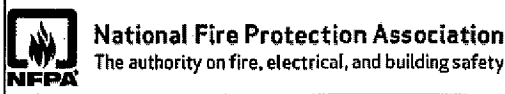
*Gregory C Nieminski*

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### MY COMMITTEE APPLICATION DETAILS

#### SPI-AAA - STANDPIPES

NFPA uses the information in this application to determine your qualifications and to assure that NFPA technical committee appointments are made in a way that ensures that committees will contain a fair balance of interests. Please provide us with as much information as you feel will assist us in the selection process.

#### APPLICANT PERSONAL INFO

Name:  First  Non  Middle  Last  member  Suffix

Title:

Employer/Company:

Address:

City:  State/Province:  Zip:

Country:

Phone:  Ext:

Mobile:

Fax:

Email:

- I currently serve on an NFPA committee.
- I have previously applied to this or another NFPA committee.

Please indicate position for which you are applying. See [Information Sheet for Technical Committee Applicants](#) for descriptions of membership types.

\*Principal Member  \*Required  
Category:

If applying as an alternate, indicate name of current principal or principal applicant.

(If you are applying as an "Organization Representative" fill out section 3 below.)

#### 1. QUALIFICATIONS OF APPLICANT (SEE SECTION 7 TO ATTACH YOUR RESUME)

(limit of 1000 characters per question response)

\*a. Provide evidence of your general knowledge and competence in the scope (work) of the committee:

\*Required

b. What is your specific relationship to one or more elements of the scope of work of the committee?

#### 2. PUBLIC SECTOR OFFICIALS ONLY

(Please answer the following questions, if you are not attaching a resume)(limit of 1000 characters per question response)

a. What qualifications do you possess that allows you to represent your industry?



b. How do you utilize codes and standards developed by NFPA or other Standard Development Organizations?

c. Describe additional work experience that may be of value to a technical committee:

d. What is your educational background?

e. Have you published any articles or publications related to your industry or related to Codes and Standards?

### 3. ORGANIZATION REPRESENTATIVES

(limit of 1000 characters per question response)

To be filled out only for those applying to be "Organization Representatives" under Section 3.2.2.1(a) of the Regulations Governing the Development of NFPA Standards. See below and attached information sheet. This category applies only to authorized representatives of an organization such as a trade association or professional society (usually other than your employer) that has a demonstrated ability to represent a broad spectrum of groups or individuals. If you do not meet this definition, select Personal/Individual Member (or other member category) and skip Section 3.

a. Indicate below the name of the entity you would be representing and include written authorization from that entity for you to serve as their representative

b. Does the organization you would represent have a mechanism for instructing votes? If so, can the time constraints imposed by the Regulations Governing the Development of NFPA Standards be met?

### 4. FUNDING SOURCE(S) FOR PARTICIPATION

(limit of 1000 characters per question response)

\*a. What person(s) or organization(s) would fund your participation as a committee member, either in whole or in part? (You should list your employer if your participation is funded by your employer or if your participation is part of your employment responsibilities or otherwise related to your employment.):

\*Required

\*b. Background and description of your employer and/or other person(s) or organization(s) funding participation.\*Required

[Empty text box for background and description of employer/funding]

\*c. Will you be able to actively participate in the work of the committee including responding to correspondence and ballots and attending all committee meetings?.\*Required

[Empty text box for active participation]

5. ADDITIONAL COMMENTS

(limit of 1000 characters per question response)

[Empty text box for additional comments]

6. HOW DID YOU HEAR ABOUT THIS MEMBERSHIP OPPORTUNITY?

Select... [dropdown menu]

7. ATTACHMENTS (RESUME & RELATED DOCUMENTS)

Browse for Documents [button]

COMPLETE A SEPARATE APPLICATION FORM FOR EACH COMMITTEE ON WHICH YOU DESIRE TO SERVER. IN ORDER TO ASSURE THE PROMPT PROCESSING OF YOUR REQUEST, PLEASE BE SURE TO COMPLETE APP QUESTIONS, ATTACH A CURRENT RESUME (OR ANSWER APPLICABLE QUESTIONS), AND SIGN THIS APPLICATION.

AGREEMENT AND CERTIFICATION:

If appointed as a member of an NFPA Technical Committee, I hereby agree as follows:

I agree to read and abide by all applicable NFPA rules and guidelines including, without limitation, the Regulations Governing the Development of NFPA Standards and the Guide for Participants in the NFPA Standards Development Process. In addition, I hereby agree to notify the Secretary, Standards Council, of a change in status, including change of employment, organization represented, or funding source.

I agree that any material that I author, either individually or with others, in connection with work performed as a member of an NFPA Technical Committee shall be considered to be works made for hire for the NFPA. To the extent that I retain any rights in copyright as to such material, or as to any other material authored by me that I submit for the use of an NFPA Technical Committee in the drafting of an NFPA code, standard or other NFPA document, I hereby grant and assign all and full rights in copyright to the NFPA. I further agree and acknowledge that I acquire no rights in any publication of the NFPA and that copyright and all rights in materials produced by NFPA Technical Committees are owned by the NFPA and that the NFPA may register copyright in its own name.

I certify that all of the information on this application is true and accurate.

\*Signature:

By checking this box I affirm that I am, and I hereby agree and certify as set forth in the above AGREEMENT AND CERTIFICATION. 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.

\*Please Check the box.



Codes and standards

- Complete list
- Purchase
- Free access
- National Fire Code Subscription Service (NFCSS)

Information & services

- About NFPA
- Advertising
- Careers
- Contact
- Digital products
- E-newsletters
- Help
- International Membership

On the Web

- NFPA Catalog
- Blogs
- Conference & Expo
- Electric Vehicle Safety Training
- Fire Adapted Communities
- Fire Prevention Week
- Fire Sprinkler Initiative

- Firewise (wildland fires)
- NEC® Buyers' Guide
- nec connect
- NFPA Journal®
- NFPA Journal Buyers' Guide
- NFPA Journal® Latinoamericano
- Sparky the Fire Dog®

So