2016 NFPA TECHNICAL MEETING

THURSDAY, JUNE 16, 2016

MANDALAY CONVENTION CENTER

BALLROOMS E, F, G, H, I, J, K, L

LAS VEGAS, NEVADA
2016 NFPA TECHNICAL MEETING, held at Mandalay Bay Convention Center, located at 3950 Las Vegas Boulevard South, Las Vegas, Nevada 89119, on Thursday, June 16, 2016, at 8:00 a.m., before Brittany J. Castrejon, Certified Court Reporter, in and for the State of Nevada.

APPEARANCES:

PRESIDING OFFICERS:
Richard Owen, NFPA 25
Randall Bradley, NFPA 58, 75
Bonnie Manley, NFPA 70
James Golinveaux, NFPA 79

STAFF COORDINATOR:
Linda Fuller, Recording Secretary to Standards Council

ALSO PRESENT:
Kerry Bell, Chair of NFPA Standards Council
Dawn Michele Bellis, Secretary of NFPA Standards Council
Sally Everett, NFPA Vice President and General Counsel
William Koffel, Committee Chair
Richard Hoffman, Committee Chair
Ralph Transue, Committee Chair
Michael Johnston, Committee Chair
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Las Vegas, Nevada; Thursday, June 16, 2016

8:00 a.m.

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Whereupon --

CHAIRMAN OWEN: Good morning, ladies and gentlemen and welcome to the 2016 NFPA Technical Meeting.

Your internet password is on the screen behind us here somewhere. There we go. Wi-Fi access. Give you a second to write that down.

Please take a moment to familiarize yourself with the room noting exits in the event of the need to evacuate. Be aware that the nearest exit may be behind you.

When the alarm signal at the Mandalay Bay Convention Center is activated, horns will sound, flashers will be visible throughout the area and a series of emergency voice announcements will be played over the public address system.

In the event of an evacuation situation, do not use the elevators. If you are a person with disabilities who has not already made arrangements with NFPA staff for emergency evacuation, please take a moment to see someone at the registration desk. More details may also be found in "More C&E Information" in...
the mobile app or on page 31 of the conference guide.

The Regulations Governing the Development of NFPA Standards (referred to as the Regulations) govern the NFPA standards development process, including processing of Certified Amending Motions at NFPA Technical Meetings. The complete Regulations are available on the NFPA's website and are published in the NFPA 2016 Standards Directory.

During the Technical Meeting, the use of recording devices, of any type, is prohibited.

As a participant in the process and as an attendee, you should familiarize yourself with the Guide for Conduct of Participants in the NFPA Codes and Standards Development Process as the Guide applies to your conduct at this Meeting.

Additionally of importance to be familiar with are the NFPA Convention Rules. The Convention Rules establish the process for today's session. Both the Convention Rules and the Guide for Conduct documents are included in the 2016 NFPA Standards Directory and are also available on the NFPA's website.

The Certified Amending Motions of today's session were previously reviewed by the Motions Committee and certified for action at this meeting in accordance with the Regulations. The Motions will be
taken in the published order of the Motions Committee Report and as included in the NFPA Technical Meeting (Tech Session) June 16, 2016, agenda unless, at the discretion of the Presiding Officer, a motion to amend the order is entertained and successful. For viewing, please see the NFPA website or NFPA mobile app. The Agenda combines all Certified Amending Motions of the Fall 2015, Annual 2016, and the Annual 2016 NEC® Motions Committee Reports and identifies which motions may be considered at the Technical Meeting. Only Certified Amending Motions and subsequent allowable Follow-Up Motions, as determined by the Presiding Officer, will be entertained at this Meeting. In response to your suggestions, this year's sign-in requirements for makers of motions has been linked to your Conference Registration. When you registered for the Conference, the Recording Secretary of the Standards Council was notified. All authorized persons registering the day of the Conference however, must register/sign-in in accordance with the Convention Rules to indicate his or her presence and intention to pursue their Certified Amending Motion one hour prior to the start of the Tech Session. Statements for the record or statements concerning technical committee actions for which no Certified Amending Motions or allowable Follow-Up Motion
is available are NOT permitted.

For Technical Meetings, a quorum is to be established prior to conducting business and consideration with Certified Amending Motions. Should the quorum be challenged and found to have been lost during proceedings, the session terminates without further action by the membership. Any Certified Amending Motions not acted upon as a result are forwarded directly to the Standards Council without recommendation of this meeting for action in accordance with Section 4.7 of the Regulations. Any motions to amend or return that have passed prior to a loss of quorum are processed and forwarded to the Standards Council in accordance with the Regulations Sections 4.5.3, 4.6, and 4.7.

Any appeal based upon the Technical Meeting actions must be filed with the Standards Council by July 6, 2016. That is 20 days following the adjournment of this meeting. An appeal for any amendment passed at this meeting which fails Technical Committee ballot shall be filed no later than five days after publication of the Technical Committee ballot results in accordance with Section 4.2.6 of the Regulations. Typically, results of amendment ballots are published within 20 days of the Technical Meeting adjournment.
The votes cast at the Technical Meeting, in conjunction with the debate prior to voting, are an integral and important contribution to NFPA's consensus process. Through motions, debate, and voting, you, our NFPA membership, make recommendations to the Standards Council. The majority vote results today are for the sole purpose of providing recommendation to the Standards Council prior to the issuance of standards. The Standards Council's decision on issuance is based upon the entire record before it, including the discussion and resulting votes at the Technical Meeting. The Standards Council will meet on August 3rd through 5th, 2016, to make those decisions.

In accordance with the Regulations, voting at NFPA Technical Meetings is limited to those voting members of the Association who are physically present. Voting members are identified by white badges with a red strip at the top and should be seated in the front areas of the room and only voting members should be seated in these areas. Presiding Officers do not vote on matters before the membership.

Voting will be recorded and entered through the electronic devices issued at today's registration. In the event of a tie vote, the issue fails.

Once the session begins today, the Presiding
Officer will recognize each authorized maker of Motion, or designee, in the published agenda order. At that time, to proceed, the maker must approach a green microphone to present the Motion. Following the presentation the Chair of the responsible Technical Committee will be recognized by the Presiding Officer and will present the position of the Technical Committee. The floor is then open for discussion. Anyone in attendance has the privilege of participating, speaking either in support or opposition of the motion. Please preface all remarks with your name, company or organizational affiliation, and whether you are speaking in favor of or against the presented motion. Again, identify yourself by name, company or organizational affiliation, and position each time you address the membership. Green signs indicate microphones for supporters of the motion; red signs indicate microphones for opponents of the motion. Please go to the appropriate colored microphone in order to be recognized by the Presiding Officer.

In accordance with the Regulations Governing NFPA Sections, a section may present position on a motion at Technical Meeting. The position of a Section does not necessarily reflect the views of all Section members but minimally must have been established by a
majority of members with 25 or more votes cast. The position of a Section is accorded no special status in the NFPA standards development process, and may be weighed and assessed as you, the membership, deem appropriate.

In addition, you should be aware no one participating in this Meeting is authorized to speak or act on behalf of the NFPA. Views expressed during the debate, including those on behalf of NFPA Technical Committees or others operating within the NFPA process, do not necessarily reflect the views of the NFPA.

To officially conduct this meeting, the Presiding Officer will allow each speaker three minutes to speak unless it becomes necessary to shorten this time. With one minute remaining, a bell will sound and a timer will appear on the center screen. This is your cue that you have one minute remaining of your allotted speaking time. Following close of debate, the membership will be asked to vote on the Motion. Once the vote is final on all motions for a document, the Presiding Officer will announce that Follow-up Motions on any successful amending motion will be entertained. A Follow-up Motion requires two seconders to continue on the floor. The maker of any Follow-up Motion shall explain why the motion is in order, before the Presiding
Officer makes a determination as to whether the motion is a proper Follow-up Motion. If determined proper, debate on the floor follows the same order as Certified Amending Motions.

As presentation and debate of each motion continues, five screens will display the text of the motion. Screen one will show the recommended text if the motion passes (or reference members to the electronic agenda should the motion's text be lengthy). If the whole text is too long, you won't see it on the screen. You'll have to refer to your iPads to see it.

Screen two will show the recommended text of the Technical Committee, and if the motion fails. The center screen will show the actual motion and what the IMAG camera captures during debate. Following close of a motion's debate and membership vote, the center screen will display the total number of votes in favor and in opposition to the motion. This year for your convenience and at your request, we have included the motions on your tablets. Each motion can be viewed by touching the Motion Sequence No. on your device. If you would like to review how you voted on a motion, just tap the check mark; to re-hide your vote, just tap the check mark again. In an effort to improve and implement more of your ideas, we have 30 members in the audience today.
participating in a test program. They are testing a voting app that we hope will be available to use on your own personal devices next year.

As a reminder, you are responsible for your voting device. Each device has been linked to your individual member name, and if the device is not returned or broken, you will be held responsible for its replacement. At no time are you to provide your device to someone else to input a vote. Anyone found with multiple devices will be asked to leave the Technical Meeting. Please return your devices to the NFPA staff at the table at the back of the room as you leave the Meeting today.

Together we will make this NFPA Technical Meeting a success. We thank you in advance for your participation and welcome any comments you may share and suggested improvements for any future events.

Before we move on, I would like to now introduce the individuals to my left. First to my immediate left is Linda Fuller, Recording Secretary to Standards Council; in the middle Kerry Bell, Chair of the NFPA Standards Council; and the far left Dawn Michele Bellis, Secretary of the NFPA Standards Council; and finally Sally Everett, NFPA Vice President and General Counsel.
As you may recall, last year we asked for your feedback as to improvements and changes you would like to see. One of your requests was to have a one day Tech Session and that is why we are here today and only today. We do have a lengthy agenda. In order to finish this agenda today, we will be taking only SHORT intermittent breaks during the day. We will NOT be breaking an extended period for lunch. We encourage you to get snacks or lunch at your own convenience, as necessary. A food court is conveniently located at the bottom of the escalators. As you exit the ballroom, turn left and the escalators, leading to the food court, are directly in front of you.

With that being said, I would like to introduce Kerry Bell and Dawn Michele Bellis who will be presenting Committee Service Awards and Special Achievement Awards to very deserving individuals.

Dawn and Kerry!

MR. BELL: Good morning ladies and gentlemen and welcome to the 2016 NFPA Technical Meeting. My name is Kerry Bell, and it's my distinct pleasure to serve as the chair of the Standards Council and to take part in this meeting.

As you know, the NFPA standards development process is a consensus process that encourages anyone to
participate who is interested in improving safety and reducing fire losses. Now, as a part of this process, we have countless volunteers who freely share their time and expertise to develop standards that address safety concerns as well as new technologies.

With that in mind, it's my pleasure to recognize some outstanding NFPA participants who have gone above and beyond to advance NFPA's safety mission.

Please join me in thanking each award recipient for their contributions in developing NFPA standards.

We're going to start off this morning here with the special service -- special achievement awards, I'm sorry.

The special achievement award is presented to recognize the significant contribution of a committee member to a single project that has enhanced the NFPA's standards development process. We have three special achievement awards to present here this morning. And it's my pleasure to present the first award to Paul Heart from the American International Group.

(Audience applause.)

MS. BELLIS: Paul is being recognized today for his active role with the combustible dust project, specifically as chair of the technical committee.
responsible for the new combustible dust standard, NFPA 652 standard on the fundamentals of combustible dust. Paul was instrumental in the development and completion of this document. The standard provides fundamental requirements for all of the current NFPA dust standards. NFPA 652 received extensive public input and comment during first and second draft, requiring significant time and effort to see it through completion. Paul successfully led this effort through multiple first and second draft meetings bringing numerous parties with differing expectations and interests together. Over a three and a half year period, as a result of his leadership, the standard was processed culminating in the successful September 2015 issuance of the standard.

MR. BELL: Congratulations, Paul.

The second special achievement award goes to Jeremy Susa of the Rhode Island Airport Corporation.

MS. BELLIS: Jeremy is being recognized today for his role in the aircraft fuel servicing project. Jeremy has been a member of the technical committee on aircraft fuel servicing since 2010 and served as a secretary since his very first meeting in 2011. For the 2017 edition of NFPA 407, Jeremy voluntarily and single-handily reorganized the contents of NFPA 407, standard for aircraft fuel servicing. To
make the document easier to use, this task involved redistributing the requirements of two technical chapters to create five new technical chapters. These new chapters share a common structure which greatly improves the user's ability to cross-reference requirements. Jeremy's work formed the framework that allowed the fuel committee to rigorously review every requirement and standard for needed clarifications, missing requirements and obsolete or outdated material. Jeremy's extraordinary work resulted in an improved standard from which the committee and stakeholders alike have benefitted.

MR. BELL: Thank you, Jeremy, for your service to NFPA.

We have one final special achievement award recipient who could not be with us today, but we want to recognize his service.

MS. BELLIS: The NFPA technical committee member who was unable to join us today is Steven Lijulie of ILSA Machines Corporation. Steven is being recognized for his role in the textile and garment care processes project. During the most recent revision cycle, Steven spearheaded a total reorganization of NFPA 332, standard for dry cleaning facilities, recognizing the changes in both the solvents and equipment currently...
used in the industry. The previous editions of NFPA 32 had many requirements that had been retained in the document throughout the years. This made the document confusing to both AHJs and document users. Though a daunting task, Steven persisted on restructuring and rewriting the document, developing drafts and actively participating in test groups as well as technical committee meetings.

MR. BELL: On behalf of the Standards Council, we want to thank all of you for your continued dedication to the NFPA standards development process, and this concludes our special achievement awards. We're going to move on to the committee service awards.

The committee service award is given to a committee member for continuous and exemplary service on one or more committees over a substantial period of time and in recognition and appreciation of distinguished service in the development of NFPA codes and standards. I'm pleased to present this award to the following individuals:

Our first recipient of the committee service award is Dr. Lawrence Britton. Dr. Britton, please join me on stage.

(Audience applause.)

MS. BELLIS: Dr. Lawrence Britton, process
and safety consultant in Charleston, West Virginia, served on the technical committees on Static Electricity from 1983 to present, Explosion Protection, 1983 to present, and Classification and Properties of Hazardous Chemical Data from 1987 to the present.

MR. BELL: Thank you, Dr. Britton, for your service.

Our next recipient of the committee service award is William Kanelle.

MS. BELLIS: William Kanelle of PB Americas, Incorporated, in Boston, Massachusetts, serves on the technical committee on Road Tunnel and Highway Fire Protection, 1997 to present. He has served as chair since 2005.

MR. BELL: Now let's welcome our next committee service award winner Jay Jablonski.

(Audience applause.)

MS. BELLIS: Jay Jablonski of Hartford Steam Boiler Inspection and Insurance Company in Hartford, Connecticut, serves on the Flammable and Combustible Liquids Technical Committee on operations from 1996 until the present, fundamentals, 1997 to the present. And he also serves on the technical committee on Liquified Natural Gas, 1997 to the present, serving as chair since 2006.
MR. BELL: Thank you, Jay.

The next committee service award goes to Dr. Joseph Senecal.

(Audience applause.)

MS. BELLIS: Dr. Joseph Senecal of Kidde-Fenwal, Incorporated, in Ashland, Massachusetts, serves on the technical committees on Explosion Protection Systems from 1989 to 2014, Halon Alternative Protection Options, 1991 to 2005. This TC was discharged in 2005 and became part of a Gaseous Fire Extinguishing Systems Committee and Gaseous Fire Extinguishing System from 2005 until the present.

MR. BELL: Thank you, Dr. Senecal, for your years of service to NFPA.

The next recipient of the committee service award is Tom Wysocki. Tom, please come up.

(Audience applause.)

MS. BELLIS: Thomas Wysocki of Guardian Services, Incorporated, in Frankfort, Illinois, serves on the technical committees of Carbon Dioxide Fire Extinguishing Systems from 1979 until 2005. This technical committee was discharged in 2005 and became part of the Gaseous Fire Extinguishing Systems Committee. He also serves on Halogenated Fire Extinguishing Systems from 1979 to 2005, being the chair
from 1991 until 2005. This technical committee was also discharged in 2005 and became part of the Gaseous Fire Extinguishing Systems Committee. He also serves on the Electronic Computer Equipment Committee from 1988 until the present, and being chair from 2000 to 2009. And finally, the Gaseous Fire Extinguishing Systems from 2005 to present. Thomas also received a special achievement award in 2003.

MR. BELL: Thank you, Tom, for your years of service to NFPA.

The next recipient of the NFPA committee service award is William Young. William.

(Audience applause.)

MS. BELLIS: William Young of Superior Energy Systems Limited in Columbus, Ohio, serves on the technical meetings on LP Gases at Utility Gas Plants from 1990 to present, Liquified Petroleum Gases from 1991 to present, Special Effects 1995 to present, and Facilities For Fire Training and Associated Props from 2015 to the present.

MR. BELL: We have four committee service award recipients who were not able to be with us here today, but we want to thank them for their service.

MS. BELLIS: The remaining NFPA technical committee members receiving awards today are retired
deputy chief Richard Swan.

Robert Renkus, Petroleum Equipment Institute in Tulsa, Oklahoma. Robert served on the Flammable Combustible Liquids Technical Committees on operations from 1984 until present and Fundamentals from 1984 until present. He also serves on technical committees on Tank Leakage and Repair Safeguards from 1985 until present, Automotive and Marine Service Stations from 1987 to present, and Vehicular Alternative Fill Systems from 2013 to the present.

Mary Scalco, Dry Cleaning and Laundry Institute of Laurel, Maryland. Mary serves on the technical committee on Textile and Garment Care Processes from 1997 to the present.

Dr. John Tobias, the U.S. Department of the Army, Aberdeen Proving Ground, Maryland. Dr. Tobias serves on the technical committees of Lightning Protection, 1995 to present, being the chair since 2005, and Electrical Safety In The Workplace, 2011 to present. Dr. Tobias also received the special achievement award in 2004 for his work on the Lightning Protection Project.

And if I might step back to Retired Deputy Chief Richard Swan; I went right past him in my notes, his achievements. So let me tell you about him -- a
little bit more about him. He served on IFA Local 2881, CDF firefighters in Alexandria, Virginia. With NFPA, he served on the Fire and Emergency Services Protective Clothing and Equipment Technical Committee on wildland firefighting protective clothing and equipment, 2002 to present. He served as a chair since 2006. He also serves on the Correlating Committee on Fire and Emergency Services, Protective Clothing and Equipment from 2006 to present, and the technical committee on Wildland and Rural Fire Protection from 2014 to the present.

MR. BELL: Let's give one more applause to all of our award recipients.

(Audience applause.)

MR. BELL: Now I'm going to turn the floor back over to our Presiding Officer Richard Owen to continue the order of business for this year's technical meeting.

CHAIRMAN OWEN: Thank you, Dawn and Kerry.

Give me a moment, please.

My name is Richard Owen. I have the distinct pleasure and privilege of being a member of your Standards Council and as Presiding Officer. I declare that a quorum is present for purposes of conducting business.
Today's session will include Certified Amending Motions related to NFPA 25, 58, 75 and 70. Before beginning the business of the day, let's be certain that you confirm your tablets are operational. The sample motion you see on the screens are ready for your review.

Anybody going to vote against that? The test motion on the floor is for NFPA 2016. It's Motion 2016-1. Screen one displays the recommended text of the motion if it successfully passes. Screen two displays the text if the motion fails. On the center screen is the motion under consideration. This is what you will see for each motion under consideration. This is what you will see for each motion under consideration at the technical meeting. The motions are also available on your voting device for viewing at any time.

The motion on the floor is to accept Public Comment No. 14. Is there any discussion on Motion 2016-1 to accept Public Comment No. 14? Seeing none, we will move to vote on Motion 2016-1. On your voting device, you will see the motion number that is being balloted. Touch the vote button for that identified motion. This will initiate the screen where you will vote. If you wish to vote in favor of the motion, touch yes, the green background. If you wish to vote against
the motion, touch no, the red background. Please note you may change your vote, until my announcement that voting is closed.

Please record your vote.

Voting will close in five seconds.

And the balloting is now closed.

The results of the test vote are -- some sore losers -- 469 yes; 145 no.

The motion passes.

The tablet will automatically return to the home page after recording your vote for each motion. If there's a follow-up motion or a call the question motion today, the voting for those motions will be found at the bottom of the list of motions.

If for any reason you leave the Tech Session and turn in your tablet, upon your return, the staff will rescan your badge and assign you another tablet. Because your voting is linked to your NFPA badge ID, a newly assigned tablet will recall your votes from earlier and record any new votes. Following the conclusion of today's session, all recorded votes will be purged. NFPA will not maintain anyone's voting record.

If you temporarily leave this room with your tablet for any reason, it will disconnect. There's a
dedicated Wi-Fi system in this room only. So it will disconnect and will reconnect in approximately 10 seconds after you return to the room.

Let me reiterate, the tablet is assigned by the NFPA badge ID, and you are responsible for returning the tablet at the end of today's session.

A Help Desk is available at the back of the Tech Session should you have any questions, concerns, or experience difficulties.

Now that you are comfortable with the process and your voting device, let's begin.

The first Report under consideration this morning is that of the Technical Committee on Inspection, Testing, and Maintenance of Water-Based Systems. Here to present the Committee Report is Committee Chair William Koffel, of Koffel Associates, Incorporated. The Committee Report, that is the First and Second Draft reports, are located on the Document Information Page for NFPA 25 on the NFPA website. The Certified Amending Motions are contained in the NFPA Technical Meeting (Tech Session) Agenda, will be displayed behind me on the screen and also available on your voting devise. We will proceed in the order of the motion sequence number presented.

Chairman Koffel.
CHAIRMAN KOFFEL: Thank you, Mr. Chair. Mr. Chair, ladies and gentlemen, the report of the technical committee on Inspection, Testing, and Maintenance of Water-Based Systems is presented for adoption and can be found in the first draft report and the second draft report for the 2016 annual revision cycle. The technical committee has published a first and second draft report consisting of revisions to NFPA 25, the Standard for Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems. These reports were submitted to letter ballot of the responsible technical committee. The report and the ballot results can be found on the next edition tab of the document information page for NFPA 25 at WWW.NFPA.ORG/25NEXT.

The Presiding Officer will now proceed with the certified amending motions.

CHAIRMAN OWEN: Thank you, Mr. Koffel.

CERTIFIED AMENDING MOTION 25-1:

CHAIRMAN OWEN: Let's now proceed with the discussion on the Certified Amending Motions on NFPA 25. Our first one, microphone one, please.

MR. SCIBETTA: Joe Scibetta, BuildingReports. I rise to call for the acceptance of Public Comment No. 4.

CHAIRMAN OWEN: We have a motion on the
floor, and I heard a second. Please proceed with
discussion on the motion.

MR. SCIBETTA: Not every action word or verb
in NFPA 25 requires a definition. That would be
unreasonable, but there are certain action words that do
need a definition, and "exercise" is one of them.

To exercise equipment is a term that is
widely used and understood by sprinkler contractors, not
as widely understood and used in the property management
sector. Thus, the need for the definition to provide a
clarification. There are far less ambiguous and far
more widely used words in 25 that are defined. Words
like remove, replace, rebuild, even clean. We have a
definition now in 25 that defines what it means to clean
something, but not a much more ambiguous, less used word
like exercise.

When I first submitted this, I got some very
valuable feedback from the Committee that there is use
of the word exercise in the annex that refers to
exercising judgment. So the definition needed to be
refined, and I refined it, resubmitted it to the
committee in the wording you see before you today.
Rather than acceptance having taken into consideration
the Committee's feedback, I received another rejection.
The rejection didn't take issue with the wording, but
rather it was stating -- they basically stated that it wasn't necessary. Simply take into consideration the context of the word or how it appears in 25, and if you still don't understand it, then I'm a little thrown off. It just went to 250, 249. Mr. Presiding officer, do I have that much time left or?

CHAIRMAN OWEN: We're a little slow on the trigger.

MR. SCIBETTA: I'm not sure where to go from here.

CHAIRMAN OWEN: You don't have to take the whole three minutes.

MR. SCIBETTA: Okay.

Rather than taking issue with the wording, they simply said it wasn't necessary.

Now a building owner having been told that their balance and transfer switches and what have you have been exercised asks what does that mean? No service contractor would ever say, well, ma'am, sir, you have a dictionary; look it up. But with all respect to the Committee, the response at the second draft is essentially saying that. If you don't understand the word, look it up. And that's not an acceptable response. If the wording is so badly worded, if it's so seriously flawed as to deserve rejection, then why?
What's missing? What would make it better? Let's give the committee something to work with next time. However, I wouldn't be standing here if I didn't feel the wording wasn't ready for 25, and if I wasn't convinced that this additional clarification for the documents intended recipient would be helpful.

Thank you.

CHAIRMAN OWEN: Thank you. Mr. Koffel, would you like to offer the Committee's position?

CHAIRMAN KOFFEL: Yes, thank you.

As noted, if the motion succeeds, the definition for the word exercise would be added to Chapter 3 of NFPA 25. As also noted, the term is used in two different ways in the standard. One is to exercise a device such as a pressure switch. Secondly, to exercise good judgment, and that is typically found in annex notes. As was just stated, the committee identified those concerns, and the public comment was submitted to address those concerns.

During the second draft meeting, the Committee reviewed that and, yes, we did not take acceptance to the proposed language, but the Committee did not feel the word needed to be defined in the standard; that we could rely on a standard dictionary definition which would likely be something along the
lines of "to use" or "apply."

CHAIRMAN OWEN: Thank you, Mr. Koffel.

Well, that will open up debate on the motion. Please provide your name, affiliation and whether you're speaking in support of or against the motion.

Do we have anyone that wishes to speak?

Okay. Seeing no one, no further discussion to accept Public Comment No. 4. Seeing none, we'll move to vote.

Let me restate the motion. The motion on the floor is Accept Public Comment No. 4.

Please touch your vote button. If you wish to vote in favor 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.

Five seconds.

Balloting is now closed.

Thank you.

The results of the vote are very close. 250 in favor; 240 against.

The motion does pass.

(Motion 25-1 to Accept Public Comment No. 4 passed with a vote of 250 in favor; 240
CERTIFIED AMENDING MOTION 25-2:

CHAIRMAN OWEN: Let’s now proceed with the discussion on Certified Amending Motion 25-2.

Microphone one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, and I move Certified Amending Motion 25-2 to accept Public Comments 56 and 57. Thank you.

CHAIRMAN OWEN: Thank you.

Is there a second?

Okay. I hear a second.

Please proceed with discussion on the motion.

MR. HIRSCHLER: I'm going to start by telling you a little fairy story. Way back when Standards Council decided that NFPA needed a manual of style, they created a nice pretty damsel who became the manual of style. Then they looked for an ugly ogre to protect the manual of style. They found someone who liked to have a target on his chest. That was me.

So as a result of that, I'm here to try to protect the manual of style. The manual of style says, and I quote: "References to other documents or sections of a document, notes, lists, footnotes, cautions warnings or figures shall not be permitted in
definitions."

If -- if NFPA would put actually the motion on the screen, you would see what we're talking about. We're talking about that the -- Mr. Presiding Officer, would you mind putting the item on the screen, please? Please.

CHAIRMAN OWEN: Just -- we're working on it, Marcelo. Just one moment please.

There we go. Sorry about that. Continue please.

MR. HIRSCHLER: Okay, well, the actual motions are not there. So the -- what we're talking about is the fact that the -- the definitions say, "Quick Response Extended Coverage Sprinkler. A type of quick response sprinkler that has a thermal element..." with the exceptions as defined in Chapter 8 of NFPA 13. So we're specifically referencing NFPA 13 in every one of these definitions, and what the motion does is move those to a specific section in the document.

The technical committee said this is extracted text, and you can't change the text. I'm not talking about changing the text. I'm recommending deleting the text. You can delete extracted information and move it to other places in the document.

I urge you to support the motion. To
support the concept of the manual of style, the
definitions shall not include references to other
standards.

Again, the real issue is that when you put
this thing, it goes in during general glossary of
terminology and people don't know where it came from.
You need to comply with the manual of style.

Please help me protect this damsel. Thank you.

CHAIRMAN OWEN: Thank you.

As noted previously, some of the larger ones
will not fit on the screen. They are in the text
session agenda. So please review those in that format.

Mr. Koffel, would you like to present the
Committee's position?

CHAIRMAN KOFFEL: Yes.

Both during the first draft and second draft
meetings, the Committee reviewed this public input and
subsequent public comment, and as was noted, the
definitions that are in question are extracted text from
NFPA 13. And while the proponent is not suggesting that
these be deleted, there is a reformatting that would
occur if, in fact, this motion passes. And, in fact,
the proposed text in the motion in Chapter 4 would not
be shown as extracted text from NFPA 13. And the
Committee felt that this should be retained as extracted text.

To the extent that the submitter has a concern with the definitions or if they are not in compliance with the manual of style, public input should be submitted to NFPA 13 to revise these definitions.

CHAIRMAN OWEN: Thank you, Mr. Koffel.

Well, that will open up debate on the motion. Again, please provide your name, affiliation whether you're speaking in support of or against the motion.

Do we have anybody that wishes to speak?

I'm sorry. Microphone one.

MR. HIRSCHLER: Thank you.

Marcelo Hirschler, GBH International, in support of the motion.

Just want to clarify there is no requirement that the terms need to be extracted from the NFPA 13. The issue is whether the information which has been taken from NFPA 13 can be moved to another place in the document to comply with the manual of style. The committee agreed with me that I'm not changing any requirements. I'm just putting them in the correct place, which is where they need to go.

Definitions, according to the NFPA manual of
style, are not enforceable. So the only way that you can actually enforce what you want is by having it in Chapter 4 or some other Chapter in the standard as opposed to having it in Chapter 3. The evidence in Chapter 3 and the definitions, you cannot enforce it.

Again according to NFPA rules, please support this change and comply with the manual of style. Thank you.

CHAIRMAN OWEN: Thank you.

Any further discussion?

Chairman Koffel, any final thoughts?

CHAIRMAN KOFFEL: Nothing.

CHAIRMAN OWEN: All right. Seeing none, we'll move to a vote.

Before we vote let me restate the motion.

The motion on the floor is to Accept Public Comments Nos. 56 and 57.

To vote, touch the vote button, please. If you wish to vote in favor 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.

Five seconds.

Balloting is now closed.
Thank you.

The results of the vote. 245 in favor; 249 against.

The motion fails.

(Motion 25-2 to Accept Public Comment Nos. 56 and 57 failed with a vote of 245 in favor; 249 against.)

CERTIFIED AMENDING MOTION 25-3:

CHAIRMAN OWEN: Let's now proceed with discussion on Certified Amending Motion 25-3.

Microphone three.

MR. PETERKIN: Yeah. James Peterkin, TLC Engineering of Architecture. I make a motion to move Certified Amending Motion 25-3 to reject Second Revision No. 5.

CHAIRMAN OWEN: Thank you.

Is there a second for that motion? I hear a second.

Please proceed with discussion on the motion.

MR. PETERKIN: This new section introduces language that requires the owner of property to coordinate with the entity conducting the inspection, testing, and maintenance to minimize water damage.

While we agree that it is important that the
coordination between owner and contractor occur, the way this is worded, it places the onus on the owner who may or not understand the ramifications of the testing. We feel it should be worded better so that it's a more collaborative effort between the contractor who knows what's going to happen and how it gets tested and where the water damage may occur and not place all the onus on the owner.

Thank you.

CHAIRMAN OWEN: Thank you.

Chairman Koffel, would you like to offer the Committee's position?

CHAIRMAN KOFFEL: Thank you, Mr. Chair.

During the first draft meeting, language was added to Chapter 13 that would address the need to be concerned with the potential for water damage and to minimize that potential.

During the second draft meeting, that language was proposed to also be added to Chapter 4 and as was noted to identify it as an owner's responsibility to coordinate that activity.

Within the committee, we had considerable discussion as to who might best lead this effort. One, being the owner, and the owner being most knowledgeable of what the damage might be within a building, with
potential water damage. The second one being the contractor who has better knowledge as to what the actual water discharge might be and the potential for that damage. As can be seen from the ballot results, a consensus was reached to place this in Chapter 4 as an owner responsibility to coordinate that, although I believe that all committee members recognize that this actually needs to be an activity of discussion between the person conducting the test and the owner.

Thank you.

CHAIRMAN OWEN: Thank you, Mr. Koffel.

With that we'll open up debate on the motion. Again please provide your name, affiliation, whether you're speaking in support of or against the motion.

Microphone three, please.

MR. DESENAY: My name is Dave Desenay. I rise on behalf of the healthcare section, speaking in favor of this motion.

Yesterday at our annual business meeting, we polled our membership, and they voted to support this motion. We understand that it is a collaborative effort, and it's been very successful for several years. However, as the text reads, and it now puts a much stronger emphasis on the owner and less of a
collaborative effort.

As a member of the technical committee as well, there was several hours of discussion around this, and the reality is, is that a collaborative effort is achieved without the language as it exists now.

We urge you to support this motion.

CHAIRMAN OWEN: Thank you.

Do we have any other? Microphone two.

MR. WEBB: Jason Webb with the National Fire Sprinkler Association, rising in opposition of this motion.

The bottom line is that the owner is the only one that has the control and the knowledge of the other systems in the building. What this proposal does is recognizes that fact. The sprinkler contractor is involved in the testing of the fire protection system, but not necessarily the maintenance and the upkeep of the plumbing system that involves the roof drains and things like that.

So that's what this proposal is all about was to bring that fact to light. Thank you.

CHAIRMAN OWEN: Thank you.

Any further discussion on Motion 25-3 to Reject Second Revision No. 5?

Microphone two, please.
MR. BILBO: Cecil Bilbo with the Academy of Fire Technology, speaking against the motion.

Those that have spoken in favor of the motion have already indicated that it is definitely the owner's responsibility to coordinate and collaborate. It's often discussed and indeed taught at the academy to people that inspect and contractors that do that, it's often discussed that this is an owner's document. You explain and work with an owner, but how can -- as -- as was previously also stated, how can a contractor and inspector know to ask or know to coordinate locations in a building where -- that may or may not affect proper drainage? Coordination with the owner is implicit, needed, necessary, and it is an owner's document placing the onus on the owner to make sure that coordination happens.

I support the committee and their vote and would urge a vote against this motion.

CHAIRMAN OWEN: Thank you.

Any further discussion?

Seeing none, Mr. Koffel, any final thoughts?

CHAIRMAN KOFFEL: No, thank you.

CHAIRMAN OWEN: All right. We'll move to a vote. Before we vote let me restate the motion. The motion is to Reject Second Revision No. 5.
To vote touch the vote button. If you wish to vote in favor 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.

Five seconds.

Balloting is closed.

Thank you.

The results of the vote. 120 in favor; 363 against.

The motion fails.

(Motion 25-3 to Reject Second Revision No. 5 failed with a vote of 120 in favor; 363 against.)

CERTIFIED AMENDING MOTION 25-4:

CHAIRMAN OWEN: Let's now proceed with discussion on Certified Amending Motion 25-4.

Microphone five.


CHAIRMAN OWEN: We have a motion. Do we have a second? I hear a second.

Please proceed.

MR. UPSON: As buildings change owners, management, and ITM contractors over time, it's easy to
miss items on a three or five year cycle. This requirement would provide a mechanism to help ensure that these items are identified and addressed by providing maintenance records, which are already required by the standard, to the qualified personnel conducting the annual inspection. Any items needing attention can be identified to the building owner to ensure that all fire protection systems are providing the level of fire safety and building protection intended.

The Committee resolved this issue stating that "failure to inspect did not meet the definition of a deficiency." I disagree based on the definitions provided in NFPA 25, which include in the definition for deficiency, a condition that has the potential to adversely impact the performance of a system. And in non-critical deficiency, something that where correction is needed to meet the requirements of the standard. The standard requires certain ITM activities to be performed on a three to five year interval. The failure to perform these activities has the potential to adversely impact system performance. If they're not performed, the system does not meet the requirements of the standard and should be identified as deficient.

CHAIRMAN OWEN: Thank you.
Mr. Koffel, would you like to offer the Committee's position?

CHAIRMAN KOFFEL: Thank you, Mr. Chair.

Again to summarize the issue, if the motion passes, there would be a statement in NFPA 25 that says if we fail or if the owner fails to produce certain documents of tests that were to be performed at a three or five year interval, that that would then constitute a deficiency in the system.

I recognize that definition of deficiency does say the potential for failure, and obviously we haven't done those tests, yes, there may be a potential for failure. However, the committee also felt that this is not really going to address the issue. The issue is an enforcement issue that the standard requires something to be done at three year or five year intervals. If that is not being done, then the authority having jurisdiction should cite that in their review of the preventative maintenance for that system. The fact the contractor identifies this as a deficiency is not necessarily going to correct the problem. In some states, there is a tagging system. And the tagging system requires one to put a different colored tag on a system based upon its incomplete compliance, it has deficiencies or it has an impairment. This would result
in the deficiency tag being placed on that system. And the Committee did not feel that the failure to provide some documentation constituted a deficiency in that regard.

Thank you.

CHAIRMAN OWEN: Thank you, Mr. Koffel.

With that we'll open up debate on the motion. Please provide again your name, affiliation, whether you're speaking in support of or against the motion.

Anybody wish to speak on this? Okay. There we go. I'm sorry. Microphone three.

MR. VICTOR: Terry Victor, Tyco/SimplexGrinnell, and I speak in favor of the motion. I just want to point out, as Mr. Koffel indicated, the authority having jurisdiction is the one that is to enforce the requirements of NFPA 25. They're the ones that should be enforcing the fact that the five year standpipe flow test or the three year dry pipe drip test is performed. However, as we're seeing this issue spread across the country, the fire officials and the officials that are required to enforce NFPA 25 are becoming less and less able to do so. In a lot of cases, they're actually depending on third-party reporting in order to advise them when buildings are not
in compliance. Third-party reporting is a process where the inspection reports are logged on a website, and those inspection reports -- the deficiencies that are identified in those inspection reports are forwarded to both the fire official and to the building owner. If we're not identifying that these particular tests are not performed, they're not going to show up on these third-party reports. The authority having jurisdiction is not going to know that these were not performed. So they're not going in to see the building owner to check on these reports.

So this is just a mechanism in order to alert the fire officials, as well as the building owner. The building owner may not even know that he has -- he's required to perform these tests.

So by having this on the inspection report and being able to classify it as a deficiency, it gives both the fire official and the building owner some documentation that these tests need to be performed.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone six, please.

MR. LEAVITT: Hi, I'm Russell Leavitt, Telgian Corporation representing the Home Depot, speaking against the motion.
Mr. Victor brings up a good point about the owner possibly not knowing about these issues. That's the responsibility of the entity that's providing. Our consultants, those that work with Home Depot, inform Home Depot of these requirements, the Home Depot and other owners that have the opportunity to comply. It is not the responsibility -- or not the way to do this by providing a deficiency. If that's what it takes to cause an owner to be aware, then we have not done our job as consultants, as service providers in educating our owner.

This also only addresses a part of the issue. NFPA 25 has no annual inspection or test per se. We have a number of requirements that involve daily, weekly, monthly, quarterly, semi-annual and so on. Probably one of the most important tests that's required to be performed is the weekly or monthly pump test.

So where does this end? Do we start reporting deficiencies because there's no evidence that a monthly or weekly test that was performed or monthly inspections of controlled valves.

Ultimately, this is an enforcement issue that belongs with the authority having jurisdiction. It is the responsibility of the owner to comply with the document, and I ultimately believe, contrary to what the
submitter has proposed, I believe it does not meet the
definition of deficiency.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone five, please.

MR. STANLEY: Thank you. My name is George Stanley with Wiginton Fire Protection Engineering,
speaking in favor of the motion.

We do a lot of work in Florida. We're based out of Florida. And the State of Florida has recognized the importance of these tests and inspections. They ask us to list them as -- if we can't prove that the owner has performed these inspections and tests, that we're to list it as a non-critical deficiency. And we do have tagging in our state, so we do red tag the system for it.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone six.

MR. DESENAY: Dave Desenay, speaking on behalf of the healthcare section against this motion.

Yesterday at our annual business meeting, we voted to oppose this motion. This is clearly another example of the contractor identifying a deficiency which is in most cases non-correctable. And it could occur
simply by the owner not having the documentation on hand when they're there. Doesn't necessarily mean that it wasn't completed. Doesn't necessarily mean that the test wasn't done. But when you categorize it as a deficiency, now you have yet one more authority having jurisdiction imposing requirements upon the owner. The concept of owners and contractors working together, as discussed in the previous motion, is a collaborative effort. We can achieve this without identifying things as deficiencies that in most cases would be reported off to another authority having jurisdiction. It's not necessary.

CHAIRMAN OWEN: Microphone five.

MR. HOPKINS: Mark Hopkins with the NFSA in favor of the motion.

Just want to recognize that there are many instances where building owners will change from contractor to contractor one year to the next. And oftentimes the records don't have continuity. It should be recognized that the owner has some obligation to hold these records and to provide that information to the next contractor if the next one is in line to do the work.

CHAIRMAN OWEN: Thank you.

MR. HOPKINS: Again, I think this is
something that's necessary, and everyone should consider voting in favor of the motion.

CHAIRMAN OWEN: All right. Thank you.

Microphone four, please.

MR. ENGRICKEN: Ben Engricken, Senior Morgan Energy, speaking against the motion.

I look at this and see, again like others who said against, somebody is going to come in and say, oh, you didn't do your inspection three years ago. Deficiency come in the next year. You didn't do it now four years ago, deficiency, and it doesn't actually affect whether the pump runs or the sprinklers flow, but it's somewhere else that the ITM contractor is being used possibly by the AHJ to get in there and, you know, red tag something for not having a piece of paper. It doesn't mean it doesn't work. It just means you didn't have the piece of paper. We talk a lot about building owners being the responsible party, and this then seems to look at the other side and say, oh, no, no, the ITM contractor gets to be responsible.

So if we're going to say facility owners are responsible, then let them be responsible, and it's on them to do their one, three, five, whatever year inspections and not put that onus on the contractor. I don't think the contractors want to be then told that
they didn't find that I didn't do a three year test and now they're the ones culpable for that. If it's going to be the owner's responsibility, leave it the owner's responsibility, and let the contractor do the tests that they were hired to do.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone six.

MR. LEAVITT: Russ Leavitt, Telgian Corporation representing the Home Depot.

Mr. Stanley --

CHAIRMAN OWEN: Are you speaking in favor or against?

MR. LEAVITT: Oh, I'm speaking against.

CHAIRMAN OWEN: Thank you.

MR. LEAVITT: Mr. Stanley pointed out exactly how this document should be enforced. State of Florida as the AHJ has recognized something that they believe an issue and they have enacted an enforcement policy. By making the contractor, the de facto enforcer does not follow the intent of the standard.

I urge you to vote against this motion.

Thank you.

CHAIRMAN OWEN: Thank you.

Any further discussion on Motion 25-4 to
Accept Public Comments No. 124 and 125?

Seeing no one, Mr. Chair, any final -- oh, I'm sorry. Got to jump a little higher. Number five, please.

MR. BILBO: Thank you, Mr. Chair.

Cecil Bilbo with the Academy of Fire Sprinkler Technology, speaking in favor of the motion.

Once again we've heard a lot of discussion about coordination and effort. If I were an inspector coming on a job, and I needed to perform a test or a procedure that was required every five years, I walk on to the job, and I don't know if it's done in the last five years because I don't have records for that. The owner is supposed to maintain records for one year after the next required test. And if they don't have the records, I have no choice but to say I need to perform this, and if I can't perform this, that's a deficiency. I have no idea if it's been done. I need to say I've done it. I've put it on the report. Now we can meet this requirement because we have reports that say so. Otherwise, it's a deficiency. I can't say that I did the job; that I've done it according to the standard without this requirement.

I would urge a vote in favor of the motion.

CHAIRMAN OWEN: Thank you.
Again, any further discussion? Number six.

MR. DESENAY: Dave Desenay speaking on behalf of the healthcare section against the motion.

There's nothing that requires the previous documentation to perform the test. The fact that the documentation doesn't exist doesn't prohibit the contractor from doing the test.

So that thought process is flawed.

CHAIRMAN OWEN: Thank you.

And microphone number five.

MR. BACKER: My name is Jack Backer. I'm a fire sprinkler contractor in California.

We've had 25 --

CHAIRMAN OWEN: Excuse me, sir. Are you speaking in favor of the motion?

MR. BACKER: I'm speaking in favor of the motion.

CHAIRMAN OWEN: Thank you.

MR. BACKER: In California we've had maybe 25 enforced since 2007, and the biggest problem we have is getting it enforced. We don't have a tagging system.

We have a pass or fail. If I put a sticker on a riser, and these tests have not been done, nobody picks up.

The way to get attention is to have a deficiency and not pass the system, and low and behold, everything gets
done.

I'm voting for this, and I urge you to vote for it.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone six.

MR. BLESS: Yes. Ralph Bless with Telgian.

I'm speaking against the motion.

The standard requires that the documentation be provided to the jurisdictions. It's their responsibility to enforce. To require the inspectors to become an enforcement agent is incorrect.

Thank you.

CHAIRMAN OWEN: Microphone number four.

MR. KEY: My name is Hal Key, speaking for myself, call the question.

CHAIRMAN OWEN: The question has been called and seconded. We'll now immediately go to a vote.

Touch yes if you wish to call the question and cease debate on this and move on to vote on the motion? Touch no if you wish to keep this going.

Please record your vote now. Remind you that it has to be a two-thirds majority.

VARIOUS UNIDENTIFIED AUDIENCE MEMBERS: It's not working.
UNIDENTIFIED SPEAKER: They need to go to the bottom, to the call.

CHAIRMAN OWEN: Yeah, scroll to the bottom of your tablets. You weren't listening, people, were you? I don't blame you.

Okay. We got five seconds.

Votes closed. Results of the vote. Okay. I think we have a two-thirds majority to call the question. 444 in favor; 66 against.

With that we'll move to vote on the motion on the floor. Let me restate the motion. The motion on the floor is to Accept Public Comment Nos. 124 and 125.

To vote touch the vote button. If you wish to vote in favor 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.

Five seconds.

The vote is closed. Thank you.

Results of the vote are 235 in favor; 285 against.

Motion fails.

(Motion 25-4 to Accept Public Comment Nos. 124 and 125 failed with a vote of 235 in favor; 285 against.)
CERTIFIED AMENDING MOTION 25-5:

CHAIRMAN OWEN: The next motion on NFPA 25 which is 25-5, appeared on our agenda; however, the authorized maker of the motion designated representative has notified NFPA that they no longer wish to pursue this Motion. Therefore, in accordance with 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 on to the next Motion.

CERTIFIED AMENDING MOTION 25-6:

CHAIRMAN OWEN: We'll now proceed with discussion on Certified Amending Motion 25-6.

Microphone three.

MR. PETERKIN: Yes. James Peterkin, TLC Engineering For Architecture. I make a motion to move Certified Amending Motion 25-6 to Accept Committee Comment No. 61.

CHAIRMAN OWEN: There's a motion, and there is a second to accept Committee Comment No. 61.

Mr. Peterkin, please proceed.

MR. PETERKIN: Thank you.

This new section introduces language that states that during the inspection, testing and, maintenance in the event a contractor sees a recalled
sprinkler, they're to notify the owner. It is then the
responsibility of the owner to follow up to find out if,
in fact, they have recalled sprinklers.

We've been discussing this issue for a
number of NFPA cycles. It keeps getting pushed to the
next cycle. This language in this motion was developed
by a committee task group. So there was effort put into
this to try to come to a consensus between the
committee. Let's not kick the can down the street
further. Let's take some action, and I urge you to
support this motion.

Thank you.

CHAIRMAN OWEN: Thank you.

Mr. Koffel, would you like to present the
Committee's position.

CHAIRMAN KOFFEL: Thank you, Mr. Chair.

All right. This was an interesting position
because this is -- since the motion is to accept a
committee comment at the time of the meeting and our
balloting, the Committee actually supports this motion.

During the meeting, this language that's
proposed was accepted as was pointed out based upon a
task group report. However, the official ballot results
after the meeting the motion passed -- or the item
failed, I'm sorry. The item failed by one vote. As
such it was changed to a committee comment. But again, majority of the committee would support this item.

As noted, this has been addressed by the Committee for multiple cycles. In fact, during the second draft meeting, the vote was so close on this item initially that I tasked the committee to try to come up with a resolution, and a task group met during our three-day meeting to propose what is in front of you today, which was a task group report. Again, that passed during the meeting, failed by the official ballot results by one vote.

What further complicates this, however, is I have documentation from one committee member that says they voted incorrectly. Now, their vote was properly recorded as a negative ballot. However, if you read their comment and based upon the communication I had with the committee member, they meant to vote affirmative with comment, in which case this item would have passed ballot. So you can see how close this is within the committee.

The other consideration is that we already have text in the annex A415 that says recalled products should be replaced. Since it's an annex note, should be replaced. We have language in NFPA 1 and language in the International Fire Code that says recalled products
shall be replaced.

So the committee is encouraging you to

submit this -- or accept this language for this edition
of NFPA 25.

CHAIRMAN OWEN: Thank you, Chairman.

With that we'll open up debate on the
motion. Please provide your name and affiliation,
whether you're speaking in support or against the
motion.

Microphone three please.

MR. DESENAY: Yes. Dave Desenay, speaking
on behalf of the healthcare section in favor of this
motion.

Yesterday at our annual business meeting, we
voted to support this motion. We think this is a good
move, which would allow a collaborative effort again to
identify if there are potential recalled sprinklers
within the building. Really all this does is it just
suggests that if the contractor notices potential
recalled sprinklers, that they notify the owner of that.
I also was a member of the task force for the 25
technical committee. I can assure you we debated it
thoroughly. We talked about it for a long period of
time with many different entities within the committee.

With that, we developed what we considered a compromise.
That compromise is exactly what this motion does. We've also heard that the Committee approved it at the meeting, failed by one vote, which we now know that was an accidental vote. It clearly was the intention of the Committee. It clearly was the intention of the task force that this language be in the document. And as an owner, this just says if you find it, let us know, and we'll correct it.

We urge you to support this motion.

CHAIRMAN OWEN: Thank you.

Microphone six, please.

MR. LEAVITT: Russ Leavitt, Telgian Corporation representing the Home Depot speaking against the motion.

As an owner's representative, we've dealt with this issue on a number of occasions. There is a process for dealing with recalled products, not just sprinklers, that has been enacted, for instance, by the consumer affairs of the United States Government. So yes, there is a process that's outside of NFPA 25, and, however, there are some jurisdictions that have included language similar to this such as in the State of Texas, New Jersey and California where the identification of recalled sprinklers is identified if it happens to be noted.
As an owner, the Home Depot when the recall process was put into place, went through, hired experts to go through and evaluate the systems. Probably at least two dozen instances that I'm aware of personally, we've had contractors come into those states where language similar to this at a statewide or jurisdictional level was being used and have had to have an evaluation performed or evidence given that there are no recalled sprinklers. Because when you use a word such as suspected, that leaves open for most contractors, if that's who you're using to perform your inspectors -- inspections. Their inspectors are not qualified to identify recalled sprinklers. And so many of them just go right to the fact that, well, there could be; I have not looked at all the locations. So they immediately go to the suspected -- even if they are in the -- or not in the head box. I think it's unenforceable language when we talk about not maintaining a complete list. I also believe that the standard has already addressed this by requiring a list of all the spare sprinklers required. So a survey must be done of all the sprinklers by qualified individuals in every property to identify all the sprinkler types. This would be done by individuals that are qualified to identify sprinkler types and whether or not recall comes
into play with this.

I urge you to vote against the motion.

Thank you.

CHAIRMAN OWEN: Thank you.

Another speaker at microphone six.

MR. VICTOR: Terry Victor with Tyco/SimplexGrinnell speaking in opposition to the motion.

I want to read you part of my negative ballot when this was passed by one vote at the second draft revision. My ballot said looking for recalled sprinklers in the spare sprinkler cabinet is not an effective way to determine if recalled sprinklers are used in the building. And that's for a couple reasons. Number one, the sprinkler box may not have the same make and model number of those sprinklers that are installed in the building. The requirement for the spare sprinkler box is to have sprinklers of the same characteristics, the same K factor, the same response time, but they're not required to be of the same manufacturer. So to think that the spare sprinklers are going to be the same sprinklers that are installed in the building is a fallacy.

The other issue is that many of those spare sprinklers come up missing throughout the year. So in a
lot of cases, there are sprinklers that are missing when we do the annual inspection. We replace those sprinklers that are missing with sprinklers of the same type, same characteristics, but they're not necessarily the ones that are installed in the building. There are two ways that currently exist in NFPA 25 to identify these sprinklers.

The first way is through the testing of fast response sprinklers. Most of the sprinklers that are part of a recall program are the fast response type. These are the ones that people are interested in trying to identify, trying to find. Those sprinklers were manufactured between 1989 and 2000. So from 27 to 16 years ago. So most of those, if you comply with the 20-year test requirement, can be identified when the sprinklers are removed to do the test that's required every 20 years. The balance of those sprinklers will be found in the next four years.

There's another requirement in Section 54156 that says the spare sprinkler cabinet shall have a list of all the sprinklers installed in the building. If the owner would take that list, send it to each manufacturer and ask them if any of the sprinklers installed in the building are part of a recall program, that would solve the problem. Looking in the spare heads -- cabinet for
recalled sprinklers and trying to identify them through the cabinet is just a wrong way of trying to approach a problem that we as contractors want to solve as well as the building owners do.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone three.

MR. DESENAY: Dave Desenay speaking on behalf of the healthcare section.

In no way do we think this is going to solve the recall --

CHAIRMAN OWEN: In favor or against, please.

MR. DESENAY: Thank you. In favor of the motion.

CHAIRMAN OWEN: Thank you.

MR. DESENAY: In no way do we think this is going to solve the recall problem. Really all this is asking to do is when the contractor opens that cabinet and looks at the spare sprinkler heads, they identify based on their experience and expertise, are those potential recalled sprinklers? And they notify the owner. It's concerning to me that I'm hearing that we have contractors that we're hiring to do a job that are not qualified; that simply cannot use their experience and their knowledge to say, jeez, owner, that might be a
recalled sprinkler, and this is why. We understand
to determine if it's a recalled sprinkler. They're
not searching the entire building. They're not doing
anything other than looking at the ones that are in the
cabinet. How difficult could that be?

I support the motion.

CHAIRMAN OWEN: Thank you.

Microphone two, please.

MR. MYERS: Hello, my name is Tom Meyers. I'm president of Myers Risk Services. I've been on the
25 committee since the very beginning, and I'm sure --

CHAIRMAN OWEN: You're speaking in favor or
against the motion, please, sir?

MR. MYERS: I'm speaking against the motion.

CHAIRMAN OWEN: Thank you.

MR. MYERS: Over the last few years, going
back to the beginning on some of the recalls such as the
Omega and the O-Ray, I actually worked in concert with
consumer protection that were involved in bringing about
the recall. And in favor of finding and replacing
sprinkler heads. I'm conflicted because I also endorse
contractors who have been charged to do this. And I
hear statements such as the average inspector has been
trained and is a qualified person who can identify these
heads. It's embarrassing to admit even though I've
worked for a sprinkler manufacturer, been my whole life, 40 some years, in this industry; I've caught myself in a hotel getting up on a ladder or a chair in the room looking at a sprinkler head and trying to decide myself if it was a recall or not. I talked to consumer protection. I've talked to NFPA. I've talked to the various associations. No one up to this point will publish a list of those heads that have been recalled for their own reasons. I reiterate language here, and I think we're on the right track to finding a way to find the appropriate way to bring about better enforcement. Because this really is an enforcement issue, and that's why it's appropriately the job of the AHJ to work with building owners to find this.

Interesting enough, like in the hospital scenario, every one of the sprinkler heads in those buildings is backed up by a set of plans. At the bottom of those plans are a list of the sprinkler heads that were used this that building, who manufactured them, et cetera, et cetera.

Fire protection engineers on a regular basis go through hospitals, work with the joint commission team, et cetera, to prepare a statement of condition of the building, et cetera. And it seems a simple review of those plans would have picked up recalled heads far
easier than somebody who has been trained purely as a mechanic to make sure the system that has been installed is operating properly.

I vote no.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone six, please.

MR. PARRISH: Thomas Parrish, Putnam County Fire Department, and I speak against the motion.

What we're looking at is with this requirement, as far as I'm concerned, is unenforceable language. We have wiggle words in there, you know, suspected. It's a yes-or-no question. Are they or aren't they? That's what our job comes down to. Two simple questions. Is it there; yes or no? Will it work; yes or no? And we try to keep things as simple as possible. And as one of requirements, they want you to evaluate sprinklers to see if they are recalled, and in the very next line says the inspector is not required to maintain a complete up-to-date list of recalled sprinklers. So what are you checking for? I don't think it's enforceable language, and I would support a vote against the motion.

CHAIRMAN OWEN: Thank you.

Microphone one.
MR. HIRSCHLER: Marcelo Hirschler, GBH International. I call the question.

CHAIRMAN OWEN: Motion to call the question.

Do we have a second?

We have a motion and second to call the question. Again, the vote is on the bottom of your tablet. Please vote yes to vote in favor of calling the question and ceasing debate or vote no to continue debate. Please vote now.

Five seconds.

Voting is closed.

The results. 433 in favor of calling the question; 56 against.

The motion passes.

We will now go to the vote. Let me restate the motion. The motion on the floor is to Accept Committee Comment No. 61.

To vote touch the vote button. If you wish to vote in favor 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.

Five seconds left.

Balloting is closed.

The results of the vote are 208 in favor.
241 no votes.

The motion does not pass.

(Motion 25-6 to Accept Committee Comment No. 61 failed with a vote of 208 in favor; 241 against.)

CERTIFIED AMENDING MOTION 25-7:

CHAIRMAN OWEN: We'll now proceed with discussion on Certified Amending Motion 25-7.

Microphone three, please.


CHAIRMAN OWEN: Thank you.

There is a motion on the floor to Reject Second Revision No. 13. Is there a second?

I heard a second.

Please proceed.

MR. VICTOR: This is nothing real critical that needs to be changed in NFPA 25. What we've done is taken the requirements of air compressor inspection testing and maintenance and put it in that -- in different chapters within NFPA 25 and put all the requirements back in Chapter 13, which is a great place for it. Chapter 13 has all of the collective requirements for devices and valves and so forth that
are common through different types of systems. So I have no problem with putting the air compressor requirements in Chapter 13.

However, going back to when the first sprinkler system was installed, Grinnell Fire Protection has been doing inspection, testing, and maintenance on these systems back in the 1800s and up through the evolution of the requirements to perform inspection, testing, and maintenance starting with NFPA 13A, the requirements to check the air compressors for dry systems were always with the sprinkler system requirements.

So all I'm asking to do by including this language in Chapter 5 is to keep a pointer with the sprinkler system requirements that goes back to Chapter 13 just so the inspectors know that this didn't go away. It's -- there's still a requirement, check the air compressors, but go back to NFPA 25, Chapter 13 to find those requirements. So it's not going to add anything to the standard either way as far as the requirement. I'm just asking to put a pointer so people know to go to Chapter 13 for something that's been there for a long time.

Thank you.

CHAIRMAN OWEN: Thank you.
Mr. Koffel, the Committee's position?

CHAIRMAN KOFFEL: Thank you, Mr. Chair.

The Committee during a second draft meeting voted to delete this text from Chapter 5 and move it to Chapter 13 under the Chapter that addresses components that are common to multiple types of systems. We did not feel that a specific reference or cross reference needed to be maintained in Chapter 5. We typically do not do that for other components that are addressed in Chapter 13. There may be a reference in the table at the beginning of the Chapter that tells one to go see Chapter 13, but we don't have it for each individual section such as control valves and so forth.

However, we have added language at the beginning of each Chapter to say for those components that are common to various types of systems, that one needs to go to Chapter 13. So there is a reference to Chapter 13 in Chapter 5. It is not specific to air compressors.

CHAIRMAN OWEN: Thank you, Mr. Koffel.

That will open up debate on the motion.

Please provide your name, affiliation, and whether you're speaking in support of or against the motion.

Microphone five, please.
MR. WEBB: Jason Webb, National Fire Sprinkler Association in support of the motion.

Just real quickly. The reason that NFSA supports this motion is simply because of what Mr. Victor spoke about. This is a pointer on a system where air compressors are the most commonly found. The committee spent a lot of time during the last couple of cycles working on simplification and adding in things to help the standard be more easily applied and so on, and this just follows right along with that.

I urge your support.

CHAIRMAN OWEN: Thank you.

Anyone else?

Seeing none, Mr. Chairman, any final comments?

CHAIRMAN KOFFEL: No, sir.

CHAIRMAN OWEN: All right. We will move to a vote. Before we vote let me restate the motion. The motion on the floor is to Reject Second Revision No. 13.

To vote touch the vote button. If you wish to vote in favor 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.

Five seconds.
Voting is now closed.

The results. 251 in favor; 175 votes no.

The motion passes.

(Motion 25-7 to Reject Second Revision No. 13 passed with a vote of 251 in favor; 175 against.)

CERTIFIED AMENDING MOTION 25-8:

CHAIRMAN OWEN: The next motion in NFPA 25, Motion 25-8, appeared on our agenda; however, the authorized maker of the motion or their designated representative has notified NFPA that they no longer wish to pursue this motion. Therefore, in accordance with NFPA Rules (Convention Rules at Section 2.7) the motion may not be considered by the assembly and is removed from the agenda.

CERTIFIED AMENDING MOTION 25-9:

CHAIRMAN OWEN: We will now move on to the next motion, which is Certified Amending Motion 25-9.

Microphone three, please.

MR. VICTOR: Terry Victor with Tyco/SimplexGrinnell, and I move that Second Revision -- that we reject -- I'm sorry. We Reject Second Revision No. 41.

CHAIRMAN OWEN: The motion on the floor is to Reject Second Revision No. 41. Is there a second?
I hear a second. Please proceed.

MR. VICTOR: While we're on air compressors, what was introduced during the first draft revision was some language that would give some simple inspection and testing requirements for air compressors that are dedicated to fire protection systems. So these are the air compressors that are either on the riser for dry systems, for preaction systems, maybe some of the ones that are sitting on the floor with tanks that are typically found to be, you know, in disrepair. This does not affect the plant air supplies. So this is strictly for new language for air compressors dedicated to fire protection systems.

During the first draft, this language was accepted. During the second draft, a comment came in, and the Committee actually rejected this language with the comment, "This is a requirement that goes beyond the concept of minimum standard, and we are adding one more item to an already extensive list of requirements that is rendering the standard untenable. NFPA currently requires air maintenance devices to be tested annually, which is sufficient and reasonable."

Well, there's two problems with that statement. Number one, we're not adding anything to the document. The document already says that air
compressors must be inspected, tested, and maintained in accordance with manufacturer's recommendations and instructions. So as a contractor, we never find the air compressors that have these manufacturer's instructions with them. So in order to comply with NFPA 25, you would have to go online or call the manufacturer of the air compressor and somehow get the manufacturer's recommendations on what to do.

    All I'm trying to do, and the Committee agreed to do it during the first draft revision, is put this simple language that takes the responsibility away from the inspector of trying to find those manufacturer's recommendations and put them in the document itself.

    And the comment that the air maintenance device is being tested annually has nothing to do with the air compressor. Air maintenance device is a totally separate issue, a totally separate component, and, you know, this simple inspection, testing, and maintenance steps to take when going around on a quarterly basis and looking at the dry system that you're having to do anyway is simple language that the manufacturers would support and that needs to be in NFPA 25.

    We have the same type of issue for every component in 25. Basically air compressors is the one
that we need some language on that can be complied with by the inspectors.

    Thank you.

CHAIRMAN OWEN: Thank you.

Mr. Koffel, would you like to offer the Committee's position?

CHAIRMAN KOFFEL: Yes. Thank you.

As was noted during the second draft report, the Committee chose to delete this language. Again, because we're hearing feedback that this document is complex. It's too extensive. There's too much detail in it. It makes it challenging for owners and others to use the document. We didn't want to further compound that by putting this language into the document. I might also note, however, for some of you who are looking at versions of the report other than what's on your tablet this morning, there was an error in some of the previous reports that said if this motion passes, it retains 2014 edition text. That is not correct. This text was added during the first draft. This text is not in the current edition of NFPA 25. Also, there are some editorial, and they are only editorial, changes that would need to be made to this text. So if anybody sees section numbers that don't appear to be correct, we are aware of that, and those will be editorially revised if
this motion passes.

   However, to the issue, we heard testimony
that said the manufacturer's instructions are not
available, and, therefore, the detail is to be provided
in the standard. As I see the text in the motion, there
are at least three references to manufacturer's
instructions in the text that's in this motion. You
still have to inspect, test, and maintain in accordance
with manufacturer's instructions and in 13.10.4 under
maintenance there are two specific references to
manufacturer's instructions.

   So whoever is providing this service still
needs to have access to those manufacturer's
instructions; therefore, the Committee believes we can
just rely on the manufacturer's instructions.

   Thank you.
   
CHAIRMAN OWEN: Thank you, Mr. Koffel.

   With that we'll open up debate on the
motion. Please provide your name, affiliation, whether
you're speaking in support of or against the motion.

   Microphone three.

MR. FREMONT: Good morning. My name is Ray
Fremont from General Air Products. I'd like to speak in
favor of the motion.

   I'm part of a fourth generation of a family
owned air compressor manufacturer, a company that has
been building fire protection air compressors since the
1960s. We've tailored our equipment to work with
unquestionable reliability under the rigorous conditions
of a fire sprinkler system. We also spend a large
portion of our day providing expert advice, developing
best practice recommendations, and performing
troubleshooting direct to contractors for the hundreds
of thousands of units that we have in the field. I'm
telling you this, not just because I'm proud of our
company and the products we manufacturer, but because I
want to press upon you that while our products are built
to the highest quality standards, the application itself
and the surrounding conditions are inherently
challenging for problem-free operation. Many of the
fire protection air compressor problems that we help
contractors troubleshoot on a daily basis are
preventable and must be addressed by appropriate changes
to code. The proposal before you will establish what we
consider to be a minimum standard for what is required
and in the inspection, testing, and maintenance of the
correct and reliable function of a reliable fire air
compressor.

The proposed changes instruct the inspector
to look at the air compressor on a regular basis, to
check to see that it's secure, nonhazardous and
maintained in working order. By adding this new
language, you are establishing at this minimal level
inspection must occur in addition to any other actions
prescribed by the compressor manufacturer.

From our perspective, the more that the
inspector is required to look at and record the
problematic aspects of an air compressor and fire
sprinkler system, followed up by the corrective action
needed to address any deficiencies found, the longer our
units will last, the less false trips will occur, and
the less time and money will be spent dealing with
emergency replacements.

Whether the building owner realizes in every
instance or not, these proposed changes will save them
from costly equipment failures and shut-downs. I can
tell you firsthand some of the most simple problems are
among the most damaging. We receive many air
compressors returned broken every year from a lack of
oil or basic maintenance, from faulty wiring, both at
installation and after, from excessive vibration, and
most commonly being run to death due to system leaks or
short cycle.

A regular observation of the fire protection
air compressor will have a strong beneficial impact on
these types of failures.

I ask you to vote in favor of this motion.

Thank you.

CHAIRMAN OWEN: Thank you.

Anyone else?

Microphone three.

MR. VICTOR: Terry Victor with Tyco/SimplexGrinnell. I apologize, Bill, but I want to take exception to a comment that you made.

CHAIRMAN OWEN: In support or opposition?

MR. VICTOR: In support of the motion.

CHAIRMAN OWEN: Thank you.

MR. VICTOR: Thank you.

Bill, you indicated that there are references to the manufacturer's instructions still in this language. And I agree that there are, but look where they are. Air compressors not dedicated to water-based fire protection systems shall be maintained by manufacturer's instructions.

So plant air, we're saying, you know, we can't control as contractors performing ITM what happens with plant air. Usually that stuff is maintained, you know, to manufacturer's instructions. We typically don't have problems with plant air, air maintenance devices feeding the dry systems. That's not the issue.
The issue is the air compressors that are dedicated to fire protection systems and Sections 13.10.2 and 13.10.3 are just minimum inspection and test requirements that every manufacturer would have in their maintenance manuals. Just check to make sure the wiring is secure and not hanging off, and the anchors are secure and so forth. And then in Section 13.10.4, the maintenance section, just like every other component in NFPA 25, we refer back to the manufacturer's instructions on what to do if something needs to be fixed or repaired or replaced in a component. So it's not unusual to have to refer to the manufacturer's instructions when you're dealing with how to fix something when a problem is found. But in Sections 13.10.2 and 13.10.3, these are what the inspector would do in their quarterly review of the dry system to make sure -- or their annual trip test to make sure that the air compressor is being properly tested and inspected.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone six, please.


I agree that these have to be --

CHAIRMAN OWEN: Speaking in favor or against
MR. DUNCAN: I'm against the motion.

CHAIRMAN OWEN: Thank you.

MR. DUNCAN: Rather than take three minutes, I'm against the frequency that mentions that this activity be done on a monthly basis. I can't believe unless you really have a compressor mounted on a truck that vibration or loose wires or anything of these things are going to occur so frequently that you have to look at them monthly. It's different from the frequency that we look at most other things related to the dry system. So I -- I think the things you look for are obvious, as previously stated. So maybe they don't need to be here, but certainly the frequency is excessive.

CHAIRMAN OWEN: Thank you.

Microphone three.

MR. VICTOR: Terry Victor, Tyco/SimplexGrinnell, speaking in favor of the motion.

Just to correct what the previous gentleman said. The frequency is in line with the inspection requirements for a dry system. You're required on a monthly basis to go around and check the gauges to make sure the air pressure is being maintained properly, water pressure is being maintained properly.

So this is in -- it's automatically being
done already on this frequency to look at these systems, just ask them to look at the compressor at the same time and make sure things aren't going wrong with the compressor.

That's all. Thank you.

CHAIRMAN OWEN: Any further discussion Motion 25-9?

Mr. Chairman, any final comments?

CHAIRMAN KOFFEL: No, sir.

CHAIRMAN OWEN: Seeing none, seeing no more comments, we'll move to the motion.

Let me restate it please. The motion on the floor is to Reject Second Revision No. 41.

To vote touch the vote button. If you wish to vote in favor 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.

Five seconds.

The vote is now closed.

The results of the vote are 227 yes; 209 no.

The motion passes.

(Motion 25-9 to Reject Second Revision No. 41 passed with a vote of 227 in favor; 209 against.)
CERTIFIED AMENDING MOTION 25-10:

CHAIRMAN OWEN: The next motion on NFPA 25, which is motion 25-10, appeared on our agenda; however, the authorized maker of the motion or their designated representative has notified NFPA that they no longer wish to pursue this motion. Therefore, in accordance with NFPA Rules (Convention Rules at Section 2.7) the motion may not be considered by the assembly and is removed from the agenda.

CERTIFIED AMENDING MOTION 25-11:

CHAIRMAN OWEN: We will now move on to the next motion, which is Motion 25-11.

Microphone five.

MR. WEBB: Jason Webb, National Fire Sprinkler Association. I move to Accept Public Comment No. 162.

CHAIRMAN OWEN: There's a motion on the floor to Accept Public Comment No. 162. Is there a second?

I heard a second. Thank you. Please proceed.

MR. WEBB: So this proposal does a couple of things. The first is to simply provide some guidance, an annex guidance, to AHJs that are charged with enforcing this standard. We get told all the time in
training classes that the AHJs that are dealing with this are struggling with the positive steps that the Committee has made with the addition of the definitions of critical deficiency, non-critical deficiency, and impairment and then the addition of Annex Z which is now Annex 8337 that helps provide some guidance on how to classify the issues that are found.

Well, now the next natural step is what to do with those once they're pointed out on an inspection report. It provides for consistency. It provides guidance from the Committee's prospective on how long our compliance time is for these issues.

The second issue is that this proposal also cleans up some language in this annex that's inconsistent with the intent of the classification of the deficiencies and impairments.

I urge you to support this motion.

CHAIRMAN OWEN: Thank you, Mr. Webb.

Mr. Koffel, the Committee's position, please?

CHAIRMAN KOFFEL: Thank you.

This item too has been before the committee for various cycles, and in fact, it was before this membership three years ago. But at the time the recommendation was to put these time frames in the body
of the standard. This particular comment would put the
similar time frames into the standard, but it would be
as an annex note. Despite that change, the Committee
still feels that this is not an item to be addressed by
NFPA 25, but rather this is an item that should be
addressed possibly in the fire code or worked out on a
case-by-case basis with the authority having
jurisdiction. Not all critical deficiencies might be
the same, requiring the same time frame for correction.
I may have a condition in the sprinkler system that
might be defined as a critical deficiency, but the
building has some more significant deficiencies outside
of the scope of the sprinkler system that require more
prompt attention.

So it's the Committee's belief that this is
an item to be addressed by the authority having
jurisdiction and the owner, and that we should not be
dictating or even suggesting what those time frames
would be.

CHAIRMAN OWEN: Thank you, Mr. Chairman.

With that we'll open up debate on the
motion. Please provide your name, affiliation, and
whether you're speaking in support or against the
motion.

Microphone six.
MR. PETERKIN: Yeah, Jim Peterkin with TLC Engineering for Architecture representing the healthcare section, speaking in opposition to the motion.

Yesterday at the annual healthcare section business meeting, the membership voted to oppose this motion. This language that the committee chair has said is similar to language that was proposed last cycle. It doesn't belong in this code. If anything, it belongs in the fire code. I happen to sit on the fire code, NFPA one, and this language was even proposed during the first draft, and this committee, which is made up of quite a few authority having jurisdiction of fire officials even didn't want it in the fire code. They feel it's something that they should have the flexibility to do on a case-by-case basis or through local ordinance.

So I urge the membership to oppose this motion.

CHAIRMAN OWEN: Thank you.

We have another speaker at microphone six.

MR. BELLAMY: Tracey Bellamy with Telgian Corporation representing the Home Depot, speaking in opposition of the motion.

We face this issue every day with our customer with Home Depot. We find deficiencies. We
have to look to get those repaired. We're required to repair those. But to make this a 30-day limit or a 90-day limit would be a one size fits all answer, which is simply not fair. Some things need to be fixed more quickly. Some things may allow more time or require more time simply. And this took 30 days on something, we give the owner the idea that it's okay to wait 30 days, okay to wait 90 days on everything. And that's simply not right. This is an enforcement issue. Each one should be looked at separately and individually based on the facts of that particular situation.

So I urge the membership to vote against this.

CHAIRMAN OWEN: Thank you.

Microphone five, please.

MR. STANLEY: George Stanley, Wiginton Fire Protection Engineering, speaking in favor of the motion.

The state of Florida, about six years ago, adopted these same guidelines, and that may support some of those that are against this motion. But I had the luxury of speaking before the Florida Fire Marshals Association on this very subject and asked them point-blank would they like to see these guidelines in the annex in NFPA 25? And it was pretty much a unanimous vote that they supported that.
So there's many states that do not have it in their administrative code; that these fire chiefs, fire marshals would love to have this language in there, these guidelines, because they're not contractors; they don't know the severity of some of these deficiencies and would love to have those requirements in there.

So speaking, again, in favor of the motion.

CHAIRMAN OWEN: Thank you.

Just one clarification on this, and then I'll get to the next speaker. On the green screen, the recommended text Motion 25-11 passes, that should read A 4.1.5 revisions "are recommended for inclusion." It should not be "are not." It should be "are recommended." Apologies on that. Hopefully it's clear to every one.

Microphone number one, please.

MR. BLACK: Thank you.

Art Black, Carmel Fire Protection, speaking in favor of the motion.

I think this -- as -- speaking as an AHJ, I think it's really important to give some guidance for AHJ's to know the difference between a critical deficiency, non-critical deficiency and give some guidance in terms of length of time for correction, and that will also provide some continuity and some
consistency from jurisdiction to jurisdiction.

CHAIRMAN OWEN: Thank you.

Microphone six.

MR. CAPUTO: Thank you.

Bob Caputo with Telgian Corporation,
speaking against the motion.

I would reiterate my comments from three years ago indicating the need to separate wear and tear thought process of an NFPA 25 and not making the private inspector the municipal enforcer. If the fire marshal section is in favor of creating a vehicle through NFPA 25 for enforcement, then I believe that section should come forward as a body and make a recommendation to do so.

I'm concerned even with the annex language filtering its way into the text with the camel's nose getting under the tent, so to speak, and working its way into the text at a later date. We simply cannot have our inspectors, and I employ about 90 of them nationwide, we need to acknowledge the fact that enforcement is not unilateral across this country or by the users of NFPA 25. This is still an owner's document. It's still intended to be inspection, testing and maintenance with a wear and tear thought process.

This speaks to enforcement. I speak against
it. I encourage you to vote that way.

Thank you.

CHAIRMAN OWEN: Thank you.

We have another speaker at microphone six.

MR. GREGORY: Yes. Kip Gregory, speaking against the motion, a consultant with Health Facilities Consulting.

I was the authority having jurisdiction for over 25 years in Florida for all healthcare facilities. Healthcare facilities are controlled by CMS, federal government, many of them have time frames, scope and severities that are dictated by the federal government. The authorities have the jurisdiction, are the ones who should be making these decisions on a case-by-case basis of time elements in conjunction with any maintenance or repair issues.

I'm speaking against the motion.

Thank you.

CHAIRMAN OWEN: Thank you.

Microphone five, please.

MR. MYERS: Tom Myers, president of Myers Risk Services. I'm speaking for the motion.

This whole motion was putting material in the annex that would give guidelines to not only AHJs if they so desired, but also to contractors themselves that
would allow continuity within an industry of following a certain format and recognizing different things that we want to cross with some definitive way of defining its criticality. I vote for it.

CHAIRMAN OWEN: Thank you.

Microphone three.

MR. VICTOR: Terry Victor, SimplexGrinnell, speaking for the motion.

I just want to point out there is a second part to this motion that the body here needs to consider. And that is the text that's being stricken in the annex that's part of this motion. Now it may be in the next edition of NFPA 25 we will start looking at different occupancies and having different requirements, different severity for findings based on occupancy, but we're not there yet. NFPA 25 right now is strictly if something is wrong and it doesn't affect the operation of the system, it's a non-critical deficiency. If it -- if the system isn't going to work in the event of a fire, it's an impairment. So if no water is going to come out of the sprinkler and extinguish the fire, it's an impairment.

I want to emphasize some of the language that's being stricken as part of this. It says, "however, special consideration must be given to the
hazard in determination of the classification. A deficiency that is critical for one hazard might be an impairment in another." That's not what NFPA 25 says. This is bad guidance in the annex. It further says "assembly occupancies, healthcare facilities, prisons, high-rise buildings, other occupancies where the life safety exposure is significant or facilities that cannot be evacuated in a timely manner, require special considerations. As an example, a nonfunctioning waterflow alarm might be considered a critical deficiency in a storage warehouse but an impairment in a hospital."

Again, this -- NFPA 25 is not at that point yet where we're making distinctions between findings and whether it's critical deficiency or non-critical deficiency based on occupancy. We may get there some day, but I would be very careful -- and our inspectors aren't capable of making this determination. I will admit that. We can't evaluate a facility and determine if it has a bad blow switch whether I should call it an impairment or a non-critical deficiency or even a critical deficiency.

So the other half of this motion is to delete this subjective language if this is going to -- causing a lot of problems, and so I ask to you vote in
favor of the motion.

Thank you.

CHAIRMAN OWEN: Thank you.

Any further discussion on motion 25-11?

Number six, please.

MR. LEAVITT: Russell Leavitt, Telgian Corporation representing the Home Depot, speaking against the motion.

That subjectivity is needed and has always been considered and is included with the text of Section A-337 or Table A 337. To say that our inspectors cannot classify, that's what they do every day. But taking into consideration the hazard is part of that process, and so that language being stricken is not good, okay, for the -- for the users of this standard.

I speak against the motion.

Thank you.

CHAIRMAN OWEN: Thank you.

Any further discussion?

Seeing none, Mr. Chairman, any final comments?

CHAIRMAN KOFFEL: Yes. I would like to make a few comments.

The current annex text actually does make some distinction, admittedly subjective, between the --
from the time to correct a critical versus non-critical
deficiency. You see that language being deleted by this
motion. It just does not assign a particular timeframe,
and again, we've heard a lot of discussion this morning
as to whether certain conditions in one occupancy
represents the same risk as a similar condition in
another occupancy.

If this motion passes, you will not have the
opportunity, at least from the guidance provided, to
make that distinction. It will say that all critical
deficiencies should be corrected within 30 days
regardless of the occupancy or the other risks involved.

I encourage you to support the committee.

CHAIRMAN OWEN: Thank you, Mr. Chairman.

Before we vote let me restate the motion.
The motion on the floor is to Accept Public Comment No.

To vote touch the vote button. If you wish
to vote in favor 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.

Voting will close in five seconds.
The balloting is now closed. Thank you.
The results of the vote are 154 yes; 274 no.
The motion fails.
(Motion 25-11 to Accept Public Comment No. 162 failed with a vote of 154 in favor; 274 against.)
CHAIRMAN OWEN: Is there any further discussion on NFPA 25?
Seeing none, we'll move on to the next document.
Thank you, Mr. Koffel.
CHAIRMAN KOFFEL: Thank you.
CHAIRMAN OWEN: I'd like to make an announcement.
(Audience applause.)
CHAIRMAN OWEN: I'd like to make an announcement. We'll only be taking short intermittent breaks today and will not be breaking for lunch due to the heavy agenda. We encourage you to leave at any time to go get snacks or lunch. There's a food court that's open at the bottom of the escalators. Please take a left as you exit the ballroom, and the escalators will be in front of you.
Having said that, we are going to take a ten-minute break right now. It is 10:01, so we will resume at 10:11. Please meet back in here.
(A break was taken from 10:02 a.m. through 10:11 a.m.)
10:16 a.m.)

CHAIRMAN BRADLEY: Good morning. My name is Randall Bradley, and I'm a member of the Standards Council. I'll be your Presiding Officer for the next two documents.

The next Report under consideration this morning is that of the Technical Committee on Liquefied Petroleum Gases. Here to present the Committee Report is Committee Chair Richard Hoffman of Hoffman and --

CHAIRMAN HOFFMAN: Feige.

CHAIRMAN BRADLEY: Thank you. The Committee Report, that is the First and Second Draft Reports, are located on the Document Information Page for NFPA 58 on the NFPA website. The Certified Amending Motions are contained in the NFPA Technical Committee (Tech Session) Agenda and will be displayed behind me on the screen. We will proceed in the order of the motion sequence number presented.

Mr. Hoffman.

CHAIRMAN HOFFMAN: Good morning. Mr. Chair, ladies and gentlemen, the report of the Technical Committee on Liquefied Petroleum Gases is presented for adoption and can be found in the First Draft Report and in the Second Draft Report of the 2016 annual revision cycle. The Technical Committee has published a First
and Second Draft Report consisting of revisions to NFPA 58 titled Liquefied Petroleum Gas Code. These reports were submitted to letter ballot of the responsible technical committee. The reports and ballots results can be found on the next edition tab of the document information page for NFPA 58 at WWW.NFPA.ORG/58NEXT.

And the Presiding Officer will now proceed with the certified amending motions.

CHAIRMAN BRADLEY: Thank you, Mr. Hoffman.

CERTIFIED AMENDING MOTION 58-1:

CHAIRMAN BRADLEY: Let's now proceed with the discussion on the Certified Amending Motion on NFPA 58.

Microphone one, please.

MR. FREDENBURG: I'm Richard Fredenburg with the North Carolina Department of Agriculture, and I wish to Reject an Identifiable Part of Second Revision No. 14.

CHAIRMAN BRADLEY: We have a motion, and we have a second.

Mr. Fredenburg, go ahead.

MR. FREDENBURG: The new wording in NFPA 58, Section 4.72 is an unenforceable requirement. What are we to consider having a minimum capacity of dry chemical? My first thought when I read that, is it best
to contain no chemical. That's certainly a minimum.

The qualifying statement shown and struck out as
evidence -- or I'm sorry -- as specified elsewhere in
code makes all of the difference. It provides a
reasonable qualifier showing me that the required
minimum is specified for each unique application of the
requirement. The dependency created by, as specified
elsewhere in this code, is essential. Also I believe
it's what the Committee voted. There are several
committee members that remember the statement that was
voted on and approved as having this qualifier. It must
be restored in the code for the requirement to be
enforceable. There are those who argue that other
places specify the minimum content required for specific
installations. That is fine where that is the only
place that the person reads the rules. If Section 472
is the first place, then the person may stop satisfied
that they have found the requirement.

CHAIRMAN BRADLEY: Thank you.

Mr. Hoffman, would you like to offer the
Committee's position?

CHAIRMAN HOFFMAN: The Committee's position
is that the language that's underlined in item 472 as
specified elsewhere in this code, it was editorially
removed as superfluous and not needed for this
requirement. So our position is the "as needed specified elsewhere in this code" is not needed, and that's the Committee's statement.

CHAIRMAN BRADLEY: Thank you, Mr. Hoffman. With that we'll open debate on the motion. Please provide your name and affiliation and whether you're speaking in support or against the motion.

Microphone number three.

MR. SWIECICKI: Bruce Swiecicki, National Propane Gas Association, speaking in support of the motion.

Although the editorial group at NFPA felt it best to remove that text, we feel that it provides good clarification and directs the user to other sections in the code which will, in fact, give this specific quantity that's required for the fire extinguisher.

Thank you.

CHAIRMAN BRADLEY: Is there anyone else that would like to speak in favor or against the motion?

Okay. Seeing none, Chair, do you have any final comments?

CHAIRMAN HOFFMAN: None.

CHAIRMAN BRADLEY: Thank you.

CHAIRMAN HOFFMAN: Thank you.
CHAIRMAN OWEN: Before we vote let me restate the motion. The motion on the floor is to Reject an Identifiable Part of Second Revision No. 14.

To vote touch the vote button. If you wish to vote in favor 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.

You have five seconds.

The ballot is closed. Thank you.

The results of the vote are: 214 yes for the motion that's recommended on screen one, and 121 no against the motion and recommended text on screen two.

The yes votes win. The motion carries.

(Motion 58-1 to Reject an Identifiable Part of Second Revision No. 14 passed with a vote of 214 in favor; 121 against.)

CERTIFIED AMENDING MOTION 58-2:

CHAIRMAN BRADLEY: Let's now proceed with the discussion on Certifying Amended Motion 58-2.

Microphone one, please.


CHAIRMAN BRADLEY: Thank you.
There's a motion on the floor to accept. Is there a second?

We have a motion and a second.

Please proceed with the discussion on the motion.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA.

All this does is say what test shall be used to determine fire resistance rating. The whole bunch of tests that exists in the world to determine fire resistance rating, however, the test we use in the United States is ASTM E119. In fact, NFPA 58 already has this text that I'm recommending here in Section 6.6.3.3(c). So this is not new. It just makes it clear what the test is because otherwise people might go through some other tests that might not be appropriate or might be overkill or whatever, and the authority having jurisdiction would not know which test to approve. Just for information, there are four of this certified amending motions that refer to different sections of the -- this code. Because in four sections of the code, the Committee chose not to include what tests shall be used to determine fire resistance rating. Fire resistance rating is something very common. We do it all the time. Every time we talk about a fire rated,
wall fire rated building element, fire rated, etc., what we mean is it has been tested in accordance with a fire resistant rating test, and the one that we normally use unless there's something else is ASTM E119, and we should say that.

Thank you.

CHAIRMAN BRADLEY: Thank you.

Mr. Hoffman, would you like to offer the Committee's position?

CHAIRMAN HOFFMAN: The Committee's position is that we rejected this public comment, and our opinion was that the ASTM E119 was already listed in the documents referenced in NFPA 58. That's one. And two, we are getting a performance word document or that the two hour rating is performance based, and it's not specific to tell you that you must test it to E119. There are other specs that can used, and the performance words we feel it was adequate to this response.

CHAIRMAN BRADLEY: Thank you, Mr. Hoffman.

With that we will open up debate on the admonition. Please provide your name and affiliation and whether you are speaking in favor or against the motion.

MR. BISH: Point of clarification, please.

CHAIRMAN BRADLEY: Number four. Go ahead,
MR. BISH: Oh, I'm sorry. George Bish with MasTec, asking for a point of clarification.

In the iPads it says Accept Public Comment No. 16. On screen you had Public Comment 15.

Which public comment are we working on?

UNIDENTIFIED SPEAKER: It's 15.

CHAIRMAN BRADLEY: It is 15. There's a typo on the iPad.

There is a typo on your iPad. It is 15.

Okay. Number -- speaker number four, for or against?

MR. YOUNG: Against.

CHAIRMAN OWEN: Go ahead.

MR. YOUNG: Okay. My name is William Young, Superior Energy in Cleveland, Ohio, and a member of the 58 committee.

When I look at this, I'm concerned that this would also imply that if somebody uses a material like this, then it implies you have to test that application of material. It doesn't say that it shall have a product that has been tested to ASTM E119; rather, it implies that if I put this product on some steel, I now have to pay to have a test done at that location to have it certified.

So that's the reason I'm against this
motion.

CHAIRMAN BRADLEY: Thank you.

Number five.

MR. DeCRANE: Yes. Thank you.

Sean DeCrane with the City of Cleveland Division of Fire, fellow college from Cleveland representing the International Association of Firefighters, and I'm going speak in favor of the motion.

I'm not going to speak in favor of Marcelo Don Quixote Hirschler and his crusade to save the damsels, but we believe referencing the correct test provides clarification. Unfortunately, we would think that people understand that a fire resistance rating would require a test to the ASTM E119 the or the UL 263, but too often we're seeing out in the field people taking different test applications and trying to compare it to a fire resistance rating. I think we should be consistent, and put this language in the standard.

Thank you.

CHAIRMAN BRADLEY: Microphone number one.

MR. KEY: My name is Hal Key. I'm speaking for myself. Just because a referenced document is referenced in the --

CHAIRMAN BRADLEY: Excuse me. Are you in
favor or against?

MR. KEY: Oh, excuse me. I'm in favor of the motion.

Just because an item is listed in the reference section of a standard, doesn't mean it applies to the entire standard. It has to be referenced within that standard for it to apply. And this particular reference that Marcelo has brought to our attention does make that connection.

Thank you.

CHAIRMAN BRADLEY: Is there any -- number one, microphone number one.

MR. HIRSCHLER: Thank you.

Marcelo Hirschler, GBH International, speaking for NFPA.

I just want to clarify something. What this section says and similar kind of language would come in future motions that seal support shall be protective of the material. That's the material for the protection. The material for the protection has to have the fire resistance rating, and the added language says what is the test. And that's the test that we always use. I don't want to repeat what other people said.

Thank you. In favor of the motion.

CHAIRMAN BRADLEY: Is there any further
discussion on Motion 58-2 to Accept Public Comment No. 15?

Chair?

CHAIRMAN HOFFMAN: My comment is that we -- the Committee voted to reject this motion, and I support that position.

CHAIRMAN BRADLEY: Thank you, chair.

Before we vote let me restate the motion.

The motion on the floor is to Accept Public Comment No. 15.

To vote touch the vote button. If you wish to vote in favor of the motion and recommend the text on screen one, vote yes or touch yes. If you wish to vote against the motion and recommend the text on screen two, touch no.

Please record your vote.

You have five seconds.

The voting is now closed.

The results of the vote are 208 for and 180 against.

The motion carries.

(Motion 58-2 to Accept Public Comment No. 15 passed with a vote of 208 in favor; 180 against.)

CERTIFIED AMENDING MOTION 58-3:
CHAIRMAN BRADLEY: Let's now proceed with the discussion on certifying amended motion 58-3.

Microphone number one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA, and I move to Accept Public Comment No. 16, Sequence Motion 58-3.

CHAIRMAN BRADLEY: We have a motion on the floor, and there is a second.

Mr. Hirschler.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA.

I'm not going to repeat all the comments.

This is the exact identical issue that we just voted on.

Thank you.

CHAIRMAN BRADLEY: Mr. Hoffman, would you like to offer the Committee's position?

CHAIRMAN HOFFMAN: The Committee's position is that we felt it should be rejected because E119 is already in the referenced documents. This is a performance word document, and we feel that a designer and engineer will know exactly how to get it to our rating, and that the testing should be the -- the product used should be qualified by the supplier of that product. That's our comment on that. That's why we voted to reject it.
CHAIRMAN BRADLEY: Thank you Mr. Hoffman.

With that we will open the debate on the motion. Please provide your name and affiliation, whether you are speaking in support or against the motion.

Microphone number five, please.

MR. DeCRANE: Yeah, Sean DeCrane with the Cleveland Fire Department and International Association of Firefighters, and I wish I had confidence in that last statement, but too often we see people out there promoting products that have passed an EA4 test, and they're trying to compare it to the performance of an E119.

So I urge you to accept this language. Thank you.

CHAIRMAN BRADLEY: Is there any further discussion on Motion 58-3 to Accept Public Comment No. 16?

Seeing none, any further comment from the chair?

CHAIRMAN HOFFMAN: The Committee again voted to reject this motion.

CHAIRMAN BRADLEY: Thank you, Mr. Chair.

Before we vote let me restate the motion.

The motion on the floor is to Accept Public Comment No.
To vote touch your vote button. If you wish to vote in favor 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, please vote no.

Please record your vote.

The balloting will be closed in five seconds.

The balloting is now closed. Thank you.

The results of the votes are yes, 253; no, 154 -- 144.

The motion passed.

(Motion 58-3 to Accept Public Comment No. 16 passed with a vote of 253 in favor; 144 against.)

CERTIFIED AMENDING MOTION 58-4:

CHAIRMAN BRADLEY: Let's now proceed with the discussion on Certifying Amending Motion 58-4.

Microphone number one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA, and I move to Accept Public Comment No. 17, Motion Sequence 58-4.

CHAIRMAN BRADLEY: Thank you.

There's been a motion on the floor. Do we
have a second?

   We have a motion and a second.
   Go ahead and proceed.
   MR. HIRSCHLER, GBH International, speaking for NFPA.

   This, again, for the third, and there will be a fourth coming up in a few comments, this is the exact same language, exact same issue we -- you voted to support twice. Please support this again. I won't repeat the testimony.

   Thank you.

   CHAIRMAN BRADLEY: Mr. Hoffman, would you like to offer the Committee's position?

   CHAIRMAN HOFFMAN: I've tried twice.

   Our opinion is that this is not needed. We have performance words in the document, and that's sufficient.

   CHAIRMAN BRADLEY: Thank you, Mr. Hoffman.

   With that said we'll open up the debate on the motion. Please provide your name and affiliation, whether you're speaking for or against the motion.

   If there is no further discussion on Motion 58-4 to Accept Public Comment No. 17, Chair, do you have any final comments?

   CHAIRMAN HOFFMAN: I have none.
CHAIRMAN OWEN: Okay. Seeing none, we'll move to a vote.

Before we vote we will restate the motion.
The motion on the floor is to Accept Public Comment No. 17.

To vote touch the vote button. If you wish to vote in favor 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, vote no.

Please record your vote.

You have five seconds to vote.

The vote is now closed. Thank you.
The results are yes, 252; no, 142.
The motion passed.

(Motion 58-4 to Accept Public Comment No. 17 passed with a vote of 252 in favor; 142 against.)

CERTIFIED AMENDING MOTION 58-5:

CHAIRMAN BRADLEY: Let's now proceed with discussion on Certifying Amending Motion 58-5.

Microphone number three, please.

MR. SWIECICKI: Thank you.

Bruce Swiecicki with the National Propane Gas Association. I move to Reject Second Revision No. 8.
CHAIRMAN BRADLEY: We have a motion, and we have a second.

Go ahead.

MR. SWIECICKI: Okay. Thank you.

Bruce Swiecicki, National Propane Gas Association, speaking in favor of the motion.

This is an oversight that the Committee made, and I think you'll hear that also from the chairman. Essentially what it's talking about here is two forms of plastic piping, polyethylene and polyamide. Historically polyethylene pipe has been used in vapor systems only. When it encounters liquid hydrocarbons, it begins to degrade and soften. That is a property that polyamide doesn't have. In fact, it's been very useful for conveying liquid propane in the past.

So for whatever reason, the Committee felt it was necessary to impose the same restrictions on polyamide, and what that will do essentially is create a conflict. Because the previous section, 6.11.1.1(b) indicates that the pressure limitation shall be based on the design pressure for polyamide piping, and polyamide piping can be used with liquid propane and hydrocarbon as well.

So thank you.

CHAIRMAN BRADLEY: Thank you.
Mr. Hoffman, would you like to offer the Committee's position?

CHAIRMAN HOFFMAN: The Committee's position is that, yeah, the analysis there was an error. The polyamide pipe is valid for above 30 PSI, and it's technically this is correct.

CHAIRMAN BRADLEY: Thank you.

With that we will open debate on the motion. Please provide your name and affiliation and whether you are speaking in support or against the motion.

Number three would you like to...

Okay. Is there any further discussion on Motion 58-5 to Reject Revision No. 8?

Seeing none, we'll move on to a vote. Before we vote let me restate the motion. The motion on the floor is to Reject Second Revision No. 8.

To vote touch the vote button. If you wish to vote in favor 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 balloting will be closed in five seconds.

The balloting is now closed.
UNIDENTIFIED AUDIENCE MEMBER: The voting seems to, particularly for me, seems to have waited to the absolute last second. I think I did get my vote in, but the whole screen was white, and it wouldn't let me until the very, very last second. I'm not sure if anybody else is having the same issue, but I thought I should point it out.

CHAIRMAN BRADLEY: So it sounds like we may be having an issue with your iPads recording the votes in a timely manner and allowing you only to wait until the very last second to record your vote.

Can I see a show of hands? Are other people having that same issue?

(Audience show of hands.)

CHAIRMAN BRADLEY: So a remediation or fix for this will be giving you a little more time to vote, and then we'll ask for a show of hands to see if that actually fixed our problem.

Thank you very much for bringing that to our attention.

UNIDENTIFIED AUDIENCE MEMBER: Thank you, Chair.

(Motion 58-5 to Reject Second Revision No. 8 passed with a vote of 312 in favor; 68 against.)
CERTIFIED AMENDING MOTION 58-6:

CHAIRMAN BRADLEY: Let's now proceed with the discussion on Certifying Amending Motion 58-6.

Microphone number one.

MR. FREDENBURG: Richard Fredenburg, North Carolina Department of Agriculture.

I wish to make a motion to Accept Public Comment No. 63.

CHAIRMAN BRADLEY: There is a motion on the floor to Accept Public Comment No. 63.

Is there a second?

We have a motion and a second.

Please proceed with discussion on the motion.

MR. FREDENBURG: A section of the LP gas code restricts obligations to relief valves on certain tanks. Cargo tanks was removed by a first revision with the Committee statement that Chapter 6 covers only containers and stationary installations, part of the scope's statement. The chairman instructed the committee to find a new place to put this prohibition.

A public comment proposed to add a new section in the transportation Chapter with the prohibition for cargo tanks and add another new section to prohibit obstructing relief valves of certain containers located
on trucks when parked.

This section was chosen specifically because it deals with parking of cargo tank vehicles outdoors. The new wording deals only with the parking requirements of these vehicles and says nothing about any impertinences on cargo tanks, which is under U.S. DOT jurisdiction.

Instead of adding these new sections, the Committee decided to put cargo tanks back where they took it out with the Committee statement of the removal of cargo tanks from 6723 was a mistake made in the first draft meeting. This is in response to FR118.

There was no change to the scope of Chapter 6. Also, there was no disposition of the intended text for the tanks loaded on trucks. It was simply dropped with no committee action or statement.

By putting cargo tanks back in Chapter 6 with no change of the scope, there is a serious enforcement concern. The Committee failed to explain what error was made or why putting the phrase back really was in the scope. The second part of the public comment was simply ignored.

The Committee failed to follow the direction given to it by the regulations governing the development of NFPA standards where committee statements supporting
committee actions shall preferably be technical in nature and shall be sufficiently detailed so as to convey the Committee's rationale for its action. The statement that we made a mistake does not stand up to that direction.

CHAIRMAN BRADLEY: Mr. Hoffman, would you like to respond with the Committee's view?

CHAIRMAN HOFFMAN: The Committee had extensive meetings on this subject. And I'm presenting the Committee's action was to reject this motion. We had telephone conferences, and we had extensive talks over two committee meetings. And that's -- this is our -- the action that the Committee took. That's all I can say.

CHAIRMAN BRADLEY: Thank you.

With that we will open up the debate on the motion. Please provide your name and affiliation, whether you are speaking in support or against the motion.

Microphone number six.

MR. SWIECICKI: Thank you.

Bruce Swiecicki, National Propane Gas Association, speaking against the motion.

I understand what the proponent was trying to accomplish when unfortunately the wording he chose
extends the applicability of this comment and this provision way beyond what was intended.

In Chapter 6 the wording was to install the relief valve in such a manner that it would be unobstructed flow to the open air. What the proponent is proposing extends that and takes it to another level and actually requires the vehicle to be parked so that the gas release from pressure relief devices is intended to be on open air.

So it's gone way beyond what the original intent of the provision was. And in essence, it would preclude the parking of vehicles on deliveries that happen to be parked under trees. It would preclude the parking of vehicles indoors for service, which is permitted by the code. It would preclude the parking of cargo tank vehicles under canopies at LP-Gas plants. It supersedes what the hazardous materials transportation requirements are by the Federal Motor Carrier's Safety Administration.

So I urge you to vote against this proposal.

CHAIRMAN BRADLEY: Thank you.

Microphone number one.

MR. WILSON: My name is Tom Wilson. International Fire Marshals Association. I'm on the 58th committee.
CHAIRMAN BRADLEY: Excuse me, sir. Are you for or against the motion?

MR. WILSON: I am for.

CHAIRMAN BRADLEY: Thank you.

MR. WILSON: We're looking at as a firefighter the attack on a tank, if there's a discharge and -- to cool the tank down. So we want to make sure it's parked, so it is open; that we can get in there with a fire apparatus and cool the tank down if needed.

Thank you.

CHAIRMAN BRADLEY: Thank you.

Microphone number three.

MR. PACE: My name is Matt Pace. I'm speaking in support for this. I am with the San Jose Fire Department. I'm speaking today representing the International Association of Firefighters.

This is an issue where the fire service has experienced incidents where vehicles that have had a -- experiencing a fire had the pressure relief or temperature relief valve release, and some instances the direction of the release was impinging upon neighboring vehicles, structures. It presents a hazard for firefighters not to understand the clear direction to maintain safety. We support some clarity with vehicles and their direction of release for pressure and
temperature relief valves for compressed gases.

Thank you.

CHAIRMAN BRADLEY: Thank you.

Microphone number six.

MR. SWIECICKI: Yeah. Just to -- Bruce Swiecicki, National Propane Gas Association. Just rebutting some of the comments that --

CHAIRMAN BRADLEY: And, again, you are speaking against it; is that correct?

MR. SWIECICKI: Yes, I am speaking against the motion.

The issue should not be pertained to whether the vehicle is parked and where it's parked. It should be where the relief valve is installed on the container and the orientation of the relief valve and the flow of gas when it is relieved. So I think that can be accomplished without having to address the parking of the vehicle because it creates all sorts of conflicts with other areas of the code.

Thank you.

CHAIRMAN BRADLEY: And microphone number one were you waiting for additional comments?

MR. FREDENBURG: Yes.

CHAIRMAN OWEN: Okay. Microphone number one.
MR. FREDENBURG: Richard Fredenburg, North Carolina Department of Agriculture, speaking in favor of the motion.

What Mr. Swiecicki brings up is exactly what we're trying to address. Chapter 6 is very clear that it does not apply to other than stationary installations, but the wording in Chapter 6, as it stands now and as it would be restored should this motion fail, would essentially take over the DOT jurisdiction of how a relief valve is installed on a cargo tank. Clearly not something within the scope of NFPA 58. It addresses only the parking, not how it's installed on the container.

And I further want to stress that the Committee's statement did not meet the standards of the regulations of discovery and development or governing development of NFPA standards by not providing a technical and sufficiently detailed reason as to why they made a mistake.

CHAIRMAN BRADLEY: Thank you.

Is there any further discussion on Motion 58-6 to Accept Public Comment No. 63?

CHAIRMAN HOFFMAN: Our comment is to reject this motion because it was properly vetted, and this represents the Committee's opinion.
CHAIRMAN BRADLEY: Thank you.

Before we vote let me restate the motion.

The motion on the floor is to Accept Public Comment No. 63.

To vote touch the vote button. If you wish to vote in favor 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, and again we'll give you a little more time to vote.

Five seconds to vote.

The balloting is now closed.

Thank you. The results of the vote are 219 in favor and 169 against.

The motion has passed. Thank you.

(Motion 58-6 to Accept Public Comment No. 63 passed with a vote of 219 in favor; 169 against.)

CHAIRMAN BRADLEY: I'd like to state the vote for Motion No. 58-5. It was 312 for and 68 against. It did pass. I was remiss at not announcing that. There was a question. And so on a follow up, it was 312 for and 68 against. I do think you saw that on your screen.

CERTIFIED AMENDING MOTION 58-7:
CHAIRMAN BRADLEY: Let's now proceed with the discussion on certifying amending motion No. 58-7.

Microphone number one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA, and I move to Accept Public Comment No. 18, Motion Sequence 58-7.

CHAIRMAN BRADLEY: We have a motion and a second.

Go ahead and proceed, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA.

This is the fourth and last time where we are voting the exact same thing, adding the language regarding fire resistance rating, what tests should be applied. This is not a performance issue. This a purely using the correct test. Thank you.

You voted affirmative on the other three. Please be consistent with your vote.

Thank you very much.

CHAIRMAN BRADLEY: Mr. Hoffman, would you like to offer the Committee's position?

CHAIRMAN HOFFMAN: The Committee's position is that we rejected this motion because we have performance words in our document. We have that ASTM E119 in our spec already, and it doesn't -- it's not
tied to the way Mr. Hirschler would like it, but we feel it's an adequate way, and it's worked well for all these years. And that's my -- that's the --

CHAIRMAN BRADLEY: With that we'll open up debate on the motion. Please provide your name and affiliation and whether you are speaking in support or against the motion.

Is there any further discussion on motion --

CHAIRMAN HOFFMAN: On the right.

CHAIRMAN BRADLEY: Oh, I'm sorry. I'm sorry.

Microphone number three.

MR. DUNCAN: Ken Duncan, Performance Design Technologies.

I would like to make a comment that both the Committee and perhaps the Standards Council should consider putting in a definition of a fire resistance rating in Chapter 3 rather than have to redefine it six times in the standard.

CHAIRMAN BRADLEY: Is there any further discussion on this motion, No. 58-7 to Accept Public Comment No. 18?

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.
To vote touch the vote button. If you wish
to vote in favor 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.

(Audience commotion.)

CHAIRMAN BRADLEY: Hold on.

Obviously we're having a little bit of
technical difficulties with our system here. If you
could just bear with us for a few minutes. We're
working on it. Please remain in your seats. We will
take this vote in one form or another.

(Pause in proceedings.)

CHAIRMAN BRADLEY: Okay. Okay. The system
is trying to restore. So we're going to give it a
couple more minutes. If the system doesn't restore, we
will go to a hand vote. We will restate the motion so
everybody is aware of what the motion is. So if you
could just stay with us for a couple more minutes.

(Pause in proceedings.)

CHAIRMAN BRADLEY: Okay. Is there anybody
whose screen has not come back up?

(Audience show of hands.)

CHAIRMAN BRADLEY: Okay. What we're going
to do is go to a hand vote to start. So again, I'm going to restate the motion, and then we will ask you for a hand vote.

The motion on the floor is to Accept Public Comment No. 18.

To vote please raise your hand if you wish to vote in favor of the motion.

Raise your hand now if you wish to vote in favor of the motion.

Thank you. You can lower your hands.

If you wish to vote against the motion, please raise your hand now. If you wish to vote against the motion.

Okay. The motion carries. The motion does pass. And we don't have a count. That's for the record.

(Motion 58-7 to Accept Public Comment No. 18 passed by an audience hand vote.)

CERTIFIED AMENDING MOTION 58-8:

CHAIRMAN BRADLEY: Let's proceed with the discussion on certifying amended motion 58-8.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA. I move to Accept Public Comment No. 19, Motion Sequence 58-8.

CHAIRMAN BRADLEY: Thank you.
We have motion and second.

Go ahead microphone number one.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA. I'm sorry. I thought this was the last one. This is -- there's one more.

Sorry. Same thing.

CHAIRMAN BRADLEY: Thank you.

Mr. Hoffman, would you like to offer the Committee's position?

CHAIRMAN HOFFMAN: The Committee position on this action, on this CAM, is that we rejected this motion for the purpose that we have performance words in our code, and we felt the need for E119 specification at every location wasn't needed. We also felt that E119 being listed in the front document, the referenced document specification section, was adequate. And we also realize that there's other ways to test this. So we said let the designer have the choice of picking out what he wanted to do, and that's why we rejected this motion. And we rejected the other ones, the previous ones for the same grounds.

Thank you.

CHAIRMAN BRADLEY: Thank you.

With that we will open up debate on the motion. Please provide your name and affiliation and
whether you're speaking in support or against the motion.

Seeing none, is there any further discussion on Motion 58-8 to Accept Public Comment?

CHAIRMAN HOFFMAN: The Committee's comment is to reject this motion.

CHAIRMAN BRADLEY: Thank you.

So seeing none as far as any additional -- thank you, Chair.

Before we vote let me restate the motion. The motion on the floor is to Accept Public Comment No. 19.

Okay. Before we take this vote, we're going to try something. Please turn off all your personal hot spots or Wi-Fis. We believe that's our problem; that that's causing the interference. So on your cell phones and on your personal tablets, if you have your hot spot or -- yeah, what's happening -- what's happening is it's jamming the bandwidth we have available to us within the facility here.

Okay. With a show of hands, are there -- are there still devices that are not working? Can I see a show of hands of devices that are not working?

(Audience show of hands.)

CHAIRMAN BRADLEY: Okay. We're going go to
a hand vote again. Lots of hand votes. But before we
have the hand vote, let me restate the motion. The
motion on the floor is to Accept Public Comment No. 19.

To vote in favor of the motion, which is the
text on screen one, please raise your hand now.

Thank you.

To vote against the motion, which is the
text on screen two, please raise your hand now.

Okay. The motion passes. Thank you.

(Motion 58-8 to Accept Public Comment No. 19
passed by an audience hand vote.)

CHAIRMAN BRADLEY: Okay. That concludes the
motions on NFPA 58. Are there any other discussions for
NFPA 58? Okay.

Seeing none the next report. -- oh, thank
you, Chair Hoffman.

(Audience applause.)

CHAIRMAN BRADLEY: The next Report under
consideration here this morning is that of the Technical
Committee on Electronic Computer Systems. Here to
present the Committee Report is Committee Chair Ralph
Transue of Jensen Hughes. The Committee Report, that is
the First and Second Draft Reports, are located on the
Document Information Page for NFPA 75 and on the NFPA
website. The Certified Amending Motions are contained
in the NFPA Technical Meeting (Tech Session) Agenda, will be displayed behind me on the screen and available on your voting device maybe. We will proceed in the order of the motion sequence number presented. Mr. Transue has been Chair since 2009, and due to the tenure policy, has recently stepped down as Chair. I'd like to express our thanks to Mr. Transue for his leadership of this Committee.

CHAIRMAN TRANSUE: Thank you, Mr. Chair.

CHAIRMAN BRADLEY: Go ahead.

CHAIRMAN TRANSUE: Mr. Chair and ladies and gentlemen, the Report of the Technical Committee on Electronic Computer Systems is presented for adoption and can be found in the First Draft Report and in the Second Draft Report for the 2016 annual revision cycle. The Technical Committee has published the First and Second Draft Report consisting of revisions to NFPA 75, Standard for the Fire Protection of Information Technology Equipment. These reports 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 page for NFPA 75 at WWW.NFPA.ORG/75NEXT. The Presiding Officer will not proceed with the certified amending motions.

CHAIRMAN BRADLEY: Thank you.
CERTIFIED AMENDING MOTION 75-1:

CHAIRMAN BRADLEY: Let's now proceed with the discussion on the certified amending motions on NFPA 75.

The next motion on NFPA 75 appeared on your agenda; however, the authorized maker of the motion or their designated representative has notified NFPA that they no longer wish to pursue the motion. Therefore, in accordance with NFPA Rules, the motion may not be considered by the assembly and is removed from the agenda. We will now move on to the next motion.

CERTIFIED AMENDING MOTION 75-2:

CHAIRMAN BRADLEY: Let's now proceed with discussing -- with discussion on Certified Amending Motion 75-2. The text on the screen behind me has the correct legislative text. Please take note and consider the text presented on the screen. So we've made some changes, some slight changes to that text. So the text on the screen is the correct text.

Microphone number three.

MR. WYSOCKI: Hello. I'm Thomas Wysocki, employed by Guardian Services, Incorporated, a member and past chairman of NFPA 75, and I move Certified Amending Motion 75-2, which effectively will return the text of 9.1.1.3 to the existing text.
CHAIRMAN BRADLEY: So we have a motion, and we have a second.

Go ahead and proceed.

MR. WYSOCKI: Mr. Chairman and fellow fire protection professionals, back in the 1960s, the U.S. Navy established a practice of providing automatic fire suppression under raised floors of their data center. For the equipment above the raised floors, they permitted manual intervention in case of a fire.

Back in 2001 the NFPA 75 Technical Committee formalized this long-standing practice by making it a requirement in NFPA 75.

Acceptance of this motion will retain the successful and long-standing NFPA requirement to provide automatic sprinklers or gaseous systems in subfloors containing combustibles.

Rejection of the motion would eliminate the requirement if the combustibles in the subfloor are, and I quote from the technical committee substantiation, combustible materials typically found in the spaces.

In other words, automatic suppression, sprinklers or gaseous systems would no longer be required for subfloors containing the typical combustible materials found in the spaces.

Fires have and will continue to occur in
typical data center subfloors. Automatic suppression systems have reliably extinguished such fires eliminating the need for manual intervention in a space which is not conducive to manual firefighting. Raised floors are constructed of individual tiles two-foot by two-foot inserted in a metal frame work resting on substantiations on the structural floor. These tiles often are made of concrete and steel nowadays. Each tile weighs between 30 and 70 pounds. It requires a special tool to remove the tiles to access the subfloor. Depth of subfloors vary from a few inches to over four feet.

Imagine entering a smoke-filled room, having to find the special tool to access the subfloor and search for a concealed fire. Reduced visibility, open tiles creating risk of falling into the subfloor, and an unknown fire location presented unreasonable and unnecessary hazard.

Electric power, of course, should have been shut off, but that's not assured. The wisdom of the U.S. Navy many years ago, which was adopted into the NFPA 75 standard, is clear. Please continue that wisdom by voting in favor of this motion.

Thank you.

CHAIRMAN BRADLEY: Thank you, Mr. Wysocki.
I see we have several people that want to speak on this. Oh, I'm sorry, Chair.

Mr. Transue, would you like to provide the Committee's position?

CHAIRMAN TRANSUE: Yes. I'd like to give the background on how we got to where we are.

CHAIRMAN BRADLEY: Thank you.

CHAIRMAN TRANSUE: ITE rooms and areas have changed dramatically from the traditional computer rooms upon which prior editions of NFPA 75 were based.

For the past two standards development cycles, the technical committee has been addressing the need to make the standard more responsive to the many configurations of today's ITE facilities. The improvement of Section 9.1.1.3 is only one of many section improvements by the Committee. It has been challenged. The only one to be so challenged because it seems to be an attack on automatic suppression. It is not that. The Committee action is responsive to major changes in ITE facility design and construction.

Unlike traditional computer rooms, today's modern data centers do not have raised floors with massive amounts of cable underneath the floor. Instead the cables are on racks above the equipment. Most installations no longer require a raised floor. In some
advanced cases, liquid cooled equipment may be mounted
on a raised floor to provide the chilled liquid access
to the equipment from below.

Similarly, as permitted in Article 645 of
the NEC, power may be provided from under a raised
floor, but the massive amounts of data cables that were
once the norm, below a raised floor, are no longer
there. The progress that the Committee has made can be
summarized by edition of the standard.

The 2009 edition required automatic
suppression below a raised floor, as the standard had
required for many years.

In 2013 the Committee made its first attempt
to respond to the changing ITE facility environment with
two conditions. One, where a critical needs exists and
two where combustibles are present. But those two
conditions are difficult to identify and even more
difficult to enforce. Criticality is a business
decision. Combustible material -- combustible material
is a vague term for most users of the standard, data
center managers, owners, building managers and IT
professionals.

The 2013 edition requirement is very
difficult to enforce. So the committee has made the
2016 requirement more restrictive and more enforceable
by being more specific. The requirement allows
specifically listed products that are easier to
identify, easier to enforce.

I urge support of the Committee action as
the Committee continues its progress of making the
standard responsive to the wide variety of ITE
facilities that now exist.

I urge you to defeat the motion on the
floor.

CHAIRMAN BRADLEY: Thank you, Mr. Transue.

With that we will open up the debate on the
motion. Please provide your name and affiliation and
whether you are speaking in support or against the
motion.

We'll start back with microphone number
four.

MR. HILBERT: Thank you.

Mark Hilbert, speaking on behalf of the
electrical section. And at the codes and standards
session this Tuesday, the members voted to oppose this
motion.

So I speak against it. Thank you.

CHAIRMAN BRADLEY: We will move to
microphone number one.

MR. KAISER: Lee Kaiser with or protection
systems, and I'm in favor of the motion. I'm also a firefighter with the La Grange Fire Department in La Grange, Kentucky, and from that prospective is which I speak if favor of the motion.

In data centers with subfloors, when the fire service enters into that space, it's my concern that the firefighters are not normally addressing fires below their feet. They're used to opening up ceilings to extinguish fires but not below the floor, and the data center environments that we see today and the way the subfloors are built, it's difficult for a firefighter to access that subfloor without the correct tool, the floor puller. Asking the data center manager where the floor puller is, it will take several minutes for it to find it; let alone the fire department trying to find it in a smokey environment.

So I support the motion so that firefighters have an opportunity to just have another layer of safety, as it's been the standard for a long time.

CHAIRMAN BRADLEY: Thank you.

We will go back to microphone number five. Please state whether you're in favor or opposed to the motion.

MR. ECKHOLM: Bill Eckholm, representing the Fire Suppression System Association, and we're asking
for your support of the motion.

Good morning. My name is Bill Eckholm. I helped found the Fire Suppression Systems Association over 34 years ago. The Fire Suppression Systems Association is comprised of most of the major manufacturers of fire suppression equipment as well as the distributors who install and service these clean agent systems. On behalf the Fire Suppression Systems Association, I endorse the motion presently on the floor and ask you to vote yes on this motion.

In a few moments, you will hear Dr. Joseph Senecal relate data from a current Fire Suppression Systems Association survey that shows fires do occur under raised floors of data centers and that automatic suppression systems have an excellent record of extinguishing these fires without manual intervention.

The Fire Suppression Systems Association contends that a fire under a raised floor of a data center presents unusual and unnecessary risks to first responders. Such fires are best handled by the automatic extinguishing systems such as sprinklers or gaseous agents, as has been required by the NFPA for the past 15 years.

Please vote to retain this requirement by voting yes on the motion presently before you.
Thank you.

CHAIRMAN BRADLEY: Thank you.

We will go to microphone number two. Please state your name, your affiliation and whether you're for or against the motion.

MR. DISISTY: Thank you.

Robert Kasiski, Factory Mutual Insurance Company, speaking against the motion.

FM Global is against the motion in agreement with the revised requirement proposed by the NFPA 75 technical committee for Section 9114. Our ten year loss history is in agreement with the action taken by the technical committee that for the specific conditions of limited combustibles, combustibles with limited propagation, isolated emissions forces, where section is not necessitated below the raised floor. This limited hazard can be addressed with smoke detection and manual fire protection for intervention. This revised requirement does not preclude the use of smoke detection and fire protection from propagating materials are present under a raised floor as stated in Section 9.1.1.3.

We urge you to vote against the motion and support the technical committee action.

Thank you.
CHAIRMAN BRADLEY: Thank you.

We will go back to microphone number six.

Please state your name, your affiliation, and whether you're for or opposed to the motion.

MR. PETERKIN: Yes. Thank you.

Jim Peterkin, TLC Engineering for Architecture, speaking against the motion.

The healthcare section had their annual business meeting yesterday and voted as a section to oppose this motion.

I think just to clarify, we're not saying that the suppression should be eliminated. It's just that it should be evaluated, and where it's necessary, let's provide it. And this language that the Committee put together addresses that properly.

Thank you, and please oppose the motion.

CHAIRMAN BRADLEY: Thank you.

We will go back to microphone number four.

Please state your name, your affiliation, and whether you're for or opposed to the motion.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for The Vinyl Institute and against the motion.

Note the products contained in the list of products that are excluded. Listed plenum
communications raceways, that's plenum raceways; cables listed for plenum use; installations in accordance with Section 300.22(c), which the plenum section of the NAC; cables installed in metallic raceways. These products will not cause a problem. These products will not necessitate the use of sprinklers under floors.

Note that NFPA 13 excepts sprinkler -- sorry, excepts plenum areas from sprinklers. This is similar to a plenum area. Please oppose the motion.

Thank you.

CHAIRMAN BRADLEY: Thank you.

Microphone number five. Your name, affiliation and whether you're for or opposed to the motion, please.

MR. SENECAL: Thank you, Mr. Chairman. I am speaking if favor of the motion. My name is Joseph Senecal. I'm an employee of Kidde-Fenwal, Inc. I'm also a member of the Technical Committee of the Fire Suppression Systems Association.

Fires do occur in commuters rooms. Fires do occur in spaces under raised floors in computer rooms. In support of these assertions, I offer the following: In May of this year, the Fire Suppression Systems Association sent a survey to its 92 installer company members. The key survey questions and the combined
results of responses to those questions from 17 installer companies were as follows: How many clean agent, meaning gaseous agent systems, has your company installed since 1994? The combined answers were 23,044 gaseous agent systems. Of these gaseous agent installations, how many experienced a fire that they extinguished? And the answer was there were 199 fires extinguished by gaseous agent systems. How many of these fires occurred in computer rooms? Of the 199 fires that occurred and were extinguished, 117 were in data centers. Of the 117 fires and data centers, how many had fire involvement in the underfloor space? And the answer was 31 combined from 17 companies.

The 17 responding clean agent systems or gaseous agent systems installer companies that responded to the survey represent only 18 percent of the 92 FSSA installer member companies, all of whom are involved in gaseous agent systems. It's quite likely therefore that since 1994 the actual number of data center fire incidents and incidents involving fires and underfloor spaces is substantially higher than the numbers recorded in the survey.

To conclude, there is compelling evidence that fires do occur in data centers and in the underfloor spaces of data centers. I ask you to
consider this information with care and that you vote in favor of the motion.

Thank you.

CHAIRMAN BRADLEY: Thank you, sir.

We'll go to microphone number four now.

Please state your name, your affiliation, and whether or not you're for or against the motion.

MR. WILLARD: Randy Willard, Central Intelligence Agency, speaking against this motion.

The motion imposes requirements that would greatly exceed what should be the minimum necessary fire protection criteria, which is what this standard should reflect. I can offer a scenario. An underfloor that has no cable, has no power, is used only for cooling. It has chilled water piping with paper faced fiberglass insulation. Under this motion, that underfloor would require suppression. I find that excessive. I find that unreasonable. I believe the current text of the standard with the listed limitations provides a reasonable balance and provides the appropriate level of fire protection for a given hazard.

I speak again, against this motion.

Thank you.

CHAIRMAN BRADLEY: Thank you.

And we'll go back to microphone number five.
Please state your name, affiliation, and whether or not you're opposed or for the motion.

MR. HOPKINS: My name is Mark Hopkins. I'm with the National Fire Sprinkler Association, and I'm in favor of the motion.

I think that it's important to recognize that the Engineering and Standards Committee for the NFSA has discussed this and is in support of this motion. And I think another really valid reason to consider to support this motion is that there's a trend towards the cloud-type data centers where there is an initial shell build-out and then equipment is fit into the rooms over time.

So what's being put in subfloor spaces at the initial construction standpoint may not be consistent throughout the life of the building.

So given that, there may be situations where the products may change, may be overlooked, and suppression is ignored.

So again, I urge you to vote in favor of the motion.

CHAIRMAN BRADLEY: Thank you.

Back to microphone number four.

MR. KLUGEE: Good morning. Richard Klugee, representing the Alliance For Telecommunications
Industry Solutions. I'm a member of Technical Committee 75 as well as 76, 110, 111, and 72. Speaking against the motion.

The --

Over the last few days, there's been quite a bit of sense -- you know, propaganda, I guess, regarding the proposed changes in the motion. If you look carefully at the Committee's draft wording, there's no -- there's no limitations on suppression when there's combustibles under the floor. If you read both the CAM and the Committee Draft, you'll see that the Committee Draft is actually a dramatic improvement in the wording with regard to what you'd want to put into a standard. The Committee Draft requires suppression when there are combustibles under the floor. What it goes further to do is provide some clear examples of typical plenum rated, you know, relatively noncombustibles which may be present.

In addition, it removes the subjective and unenforceable wording such as critical need to protect data. The critical need of the data is for the owner or the operator to evaluate. It should not be left to the AHJ. And does not play a role in determining the hazard of the installation and the degree of suppression under the floor. I am not against suppression under the floor.
when there are combustibles present, but I am against poorly worded and unenforceable code language. The Committee Draft is an improvement over the current wording as the certified amending motion is trying to revert to.

I urge on behalf of ATIS for you to reject the motion.

Thank you.

CHAIRMAN BRADLEY: Thank you.

We'll go to microphone number one. Please state your name, affiliation, and your motion position on the motion.

MR. SCIBETTA: Thank you, sir.

Joe Scibetta, BuildingReports, speaking in favor of the motion on the floor.

Although I'm not speaking on behalf of these organizations, I am a member of the Fire Suppression Systems Association, member of the Automatic Fire Alarm Codes and Standards Committee and a principal member on the NFPA 72 Testing and Maintenance Committee. And as such, I have some concerns about the Committee's wording here, and this hasn't been mentioned yet, so I -- and again, if I'm off base, I welcome correction on this. But there seems to be some code constrictions here.

NFPA 75 correctly points to NFPA 72 for
installation, testing, and maintenance of alarm and signalling systems. Detectors are apart of that. They're apart of fire suppression systems. NFPA 72 makes it very clear in Chapter 17 that detectors shall not be required for accessible underfloor spaces if all of the following conditions exist, and one of those conditions is: Space contains no equipment such as steam pipes, electrical wiring, shafting or conveyors. To reword that just to clarify, detectors are required in accessible underfloor spaces if electrical wiring is present. And I notice the Committee has listed -- as included in their list, equipment power cords up to 15 feet each.

Another confusion I have is Section 9.2.2 in NFPA 75, just a little bit further down in the document from the section we're considering here. Automatic detection systems shall be installed to provide early warning of fire in the following locations: Below the raised floor of the ITE area containing cables.

So I'm confused. Again, if I'm off-base, someone correct me, but there's seems to be some contradictions here with NFPA 72 and indeed with NFPA 75 itself.

Thank you.

CHAIRMAN BRADLEY: Thank you.
Back to six, microphone number six. Your name, affiliation, and your position on the motion.

MR. HUEY: Marty Huey, representing myself.

Call the question.

CHAIRMAN BRADLEY: We have a call for the question, and we have a second. I notice that there's a number of people that are remaining at the microphones waiting to speak, but we'll proceed with the vote on the call of the question. We do have a second.

In order to vote on this motion, please scroll down. Is it working? It is not. Okay. Just checking. Seeing if everybody is paying attention.

So we've confirmed with Mandalay Bay that the connection, the Wi-Fi connection, in the hotel is actually down or in the convention center. We'll continue with hand counts until the Mandalay Bay Wi-Fi system comes back up. We appreciate your patience.

Okay. We're being told it just came back. I'm going to do it one more time. A show of hands if it has not came back.

Okay. That's too many. So what we're going to do is right now the motion on the floor is to call the question. We do have a second.

So those of you who are in favor of calling the question, please signify by raising your hand.
Thank you. You can lower your hands.

Those of you who are opposed to calling the question, please signify by raising your hands.

Okay. That will bring us to a vote. We're going to close the debate on 75-2. The motion carried.

Let me restate the motion. The motion on the floor is to Reject Second Revision No. 20 including any portion of First Revision 13 thereby reverting to previous edition text.

Okay. So to vote we're going to do it by hand. If you wish to vote in favor of the motion and recommend the text on screen one, please raise your hand now.

UNIDENTIFIED AUDIENCE MEMBER: Mr. Chair, I'm sorry. I got a point of a problem. The voting --

CHAIRMAN BRADLEY: Could you please go to a microphone? Thank you.

UNIDENTIFIED AUDIENCE MEMBER: The text displayed on the voting tablet does not agree with the screen.

CHAIRMAN BRADLEY: Yes.

UNIDENTIFIED AUDIENCE MEMBER: There are additional words that are struck out, which would make the code text nonsense.

CHAIRMAN BRADLEY: So at the beginning of
evaluating this current motion, we did state that the text on the screen is the correct text.

So what you're voting for is the text that is on the screen, not the text that is on your tablet.

I am going to restate the motion one more time. And again, we've already -- and what I'm going to ask you to do because there was such a delay between voting for in favor or against, I'm going to ask -- we're going to go through this one more time just so we can verify it before we vote.

Let me restate the motion. The motion on the floor is to Reject Second Revision No. 20 including any portion of First Revision No. 13 thereby reverting to previous edition text. Okay.

To vote if you wish to vote in favor of the motion and recommend the text on screen one, please signify by raising your hand now. Please keep your hands raised just for a moment so we could take a good look. Thank you.

If you wish to vote against the motion and recommend the text on screen two, please signify by raising your hand now.

The motion failed. Thank you.

(Motion 75-2 to Reject Second Revision No. 20 including any portion of First Revision 13
thereby reverting to previous edition text
failed by audience hand vote.)

CHAIRMAN BRADLEY: Is there any further
discussion on NFPA 75? Seeing none, we will move not
next document. Thank you very much.

CHAIRMAN TRANSUE: Thank you.

(Audience applause.)

CHAIRMAN BRADLEY: I would like to make an
announcement. We will only be taking short intermittent
breaks today and will not be breaking for lunch due to
the heavy agenda. We encourage you to leave at any time
to get snacks or lunch. There is a food court that is
open at the bottom of the escalators. Please take a
left as you exit the ballroom and the escalators will be
in front of you.

Before we begin the next document, I would
like to introduce Bonnie Manley, Member of the Standards
Council, who will be the Presiding Officer for the next
document.

And what we're going to do right now is we
are going to take a ten-minute break right now. Please
try to limit the break to ten minutes. We still have a
heavy agenda in front of us. Thank you very much.

(A break was taken from 11:42 a.m. through
11:58 a.m.)
CHAIRWOMAN MANLEY: Ladies and gentlemen, please take your seats.

All right. While everyone is getting seated, I did want to make an announcement. We do believe -- we do have it on good authority from Mandalay Bay that the internet is up and working. Right now NFPA staff is working through the audience to confirm that indeed each and every tablet, voting tablet, is up and running. We will not rely on those voting tablets until we have 100 percent confidence that they were working and recording the vote. That means we are certainly prepared to go hand votes as we begin working through the 70, NFPA 70 agenda.

So at this point I think we'll go ahead and begin with the last report of the consideration. And that's the Technical Correlating Committee on the National Electrical Code. Here to present the reports is Correlating Committee Chair Michael Johnston of the National Electrical Contractors Association. The Report, that is the First and Second Draft Reports, are located on the Document Information Page for NFPA 70 on the NFPA website. The Certified Amending Motions (Tech Session) Agenda will be displayed behind me on the screen and are available hopefully on your voting device at some point this afternoon. We have several National...
Electrical Code Chairs that will be stepping down due to tenure policy. They are: Paul Casparro, Panel 3; Ronald Toomer, Panel 4; and Robert Jones, Panel 14. I'd like to express our sincere thanks to all of these Chairs for their leadership on the NEC panels. Thank you.

(Audience applause.)

CHAIRWOMAN MANLEY: We will now proceed in the order of the motion sequence number presented.

Mr. Johnston.

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Members of the Standards Council, Madam Chair, Ladies and Gentlemen, it is my distinct honor and pleasure to serve as the chair of the NFPA 70 document, the National Electrical Code. We will proceed.

Madam Chair, ladies and gentlemen, the Report of the Correlating Committee and Panel for the National Electrical Code is presented for adoption and can be found in the First and Second Draft Report for the 2016 annual revision cycle. The correlating committee and NEC panels have published a report consisting of partial revision of NFPA 70, the National Electrical Code. These reports were submitted to letter ballot of the responsible NEC code panels. The report and ballot results can be found on the next edition tab...
of the document info page for NFPA 70 at
WWW.NFPA.ORG/70NEXT.

The Presiding Officer will now proceed with
the certified amending motions.

Madam Chair.

CHAIRWOMAN MANLEY: Thank you, Mr. Johnston.

CERTIFIED AMENDING MOTION 70-1:

CHAIRWOMAN MANLEY: Let's now proceed with
the discussion on the certified amending motions on NFPA
70.

MR. WELLS: Madam Chair?

CHAIRWOMAN MANLEY: There you go. Are you
at three? Microphone three, please.

MR. WELLS: My name is Jack Wells, and I
represent the AFCI Consortium. I move to accept
Certified Amending Motion 70-1.

CHAIRWOMAN MANLEY: Thank you.

There's a motion on the floor to Accept an
Identifiable Part of Committee Comment No. 19002.

Is there a second? We do have a second.

Please proceed with the discussion on the
motion, Mr. Wells.

MR. WELLS: Thank you, Madam Chair.

This amending motion is only seeking to
delete a requirement for a nonexistent supplementary
listing for system combination in 210.12 (A)(4)(D).

This is a requirement to adhere to a supplementary listing that does not exist and cannot be created.

You're going to note here a lot about the technical aspects of this amending motion. What I want to stress is that this is strictly a commercial interest. The circuit breaker manufacturers don't want to have an alternative to their product. So they're trying to block listed AFCI receptacles by maintaining the requirement for this additional nonexistent listing of the system combination.

Candidly its removal also reflects the AFCI receptacle manufacturer's desire to compete in this market. We believe in listing. Listings are good. Individual components of this are already listed, but to require the system to be additional listed is a problem because no system listing standard exists, has ever existed, and this is simply not good code.

In spite of the their best efforts, UL was not able to gain agreement on a standard defining this system. Getting the circuit breaker manufacturers to agree to such a system would threaten them near monopoly of AFCI installations.

The opposition to this amending motion is to protect their market share, pure and simple.
I remind you that Panel 2 has heard of the data, read all the reports, and all of the arguments. Panel 2 voted for the subject of this amending motion during their first draft meeting and maintained that position throughout their second draft meeting.

CMP 2 considered an unrelated minor editorial issue with the information note that needed correcting. A third ballot was developed to consider this editorial issue. Why this third ballot did not contain just the editorial changes? Who knows. But the entirety of 210.12(A) was re-balloted, both the mandatory and the informative. This without any discussion, merely an electronic ballot.

Your vote in favor of this CAM can bring competition to the market place, will allow contractors and homeowners to choose from two types of AFCI providing reasonable alternatives and base their selection on ease of installation, ease of operation and costs in a truly competitive market.

Your vote on this CAM will return this issue to CMP 2 where it is our hope that they will reconsider the action -- that they will consider the action of this body. I urge you to maintain Panel 2's first draft --

CHAIRWOMAN MANLEY: Thank you. Your time is up, sir. Thank you.
MR. WELL: Thank you.

CHAIRWOMAN MANLEY: Mr. Johnston, would you like to provide the Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Just a short explanation of how this happens with the NEC. Because the NEC is made up of several subcommittees identified as code-making panels, each with an appropriate chair, I will be calling upon and deferring to the appropriate chair of the applicable code-making panel or the designated rep if the chair is not present.

Subsequently, if there are any issues that are going to be addressed by the correlating committee, I will be calling on the designated spokesperson on behalf of the NEC correlating committee.

With that -- to that end, I would like to defer to the chair of code-making panel 2 for a position and response, Mr. Mark Hilbert.

MR. HILBERT: Thank you, Mr. Chairman.

To speak in opposition to the motion which is essentially to support the Panel's final vote on FR 329. The removal of this text was part of multiple changes conducted in a single revision, and the Panel did have consensus at the first draft ballot.

However, as a result of the changes made to
an informational note at the second draft and the failure of that second revision, a supplemental ballot was conducted. At that time the Panel did not have consensus on the second ballot.

Thank you, Mr. Chair.

CHAIRWOMAN MANLEY: All right. Thank you, gentlemen.

With that we will open up the debate on the motion. Please provide your name, your affiliation and whether you are speaking in support of or against the motion.

Let's go ahead and start with microphone one, please.

MR. CAMPOLO: Thank you.

My name is Steve Campolo of Leviton representing the AFCI receptacle consortium. I'm a member of code-making --

CHAIRWOMAN MANLEY: Speaking in support; right?

MR. CAMPOLO: Yes.

CHAIRWOMAN MANLEY: Thank you.

MR. CAMPOLO: A member of code making panel 2 and code making panel 18, and I am speaking in favor of the motion.

You'll hear the circuit breaker
manufacturers try to confuse the issue, but the bottom line is that panel 2 would not have taken out the requirement for the nonexistent supplementary listing if the receptacle AFCI wasn't a safe alternative for the breaker. You may also hear the circuit breaker manufacturers tried to further confuse the issue, but please remember that during the meetings, panel 2 voted twice, once to take out the nonexistent supplementary listing and again to reject comments to put the listing back in. The panel wouldn't do something twice that they considered unsafe. Bottom line consensus was reached by panel 2. They voted during both meetings to delete the requirement for a nonexisting supplementary listing for a system of a listed AFCI receptacle plus listed circuit breakers. Because after three plus years, there was both no standard in which to obtain this listing and obviously no supplemented listings to meet the rule and none in sight. The issue was deliberated at length and the panel considered all factors. Remember that in the statement the UL nonmetallic fact-finding report clearly states that arcs in the homerun do not ignite nearby combustibles and are too short lived to start a fire. The panel not only considered this an important finding, but cited it in their statement. The issue was deliberated at length,
and the panel considered all factors. If this code requirement for the additional nonexistent system combination is so essential to safety, why then did the circuit breaker manufacturer support receptacle AFCIs for replacements and branch circuit extensions but not for the larger market for new construction? It's all about keeping the code requirement unachievable to suppress AFCI receptacles with this unfortunate, unjustified barrier. It is absurd and insulting to think that panel 2 members would allow an option that is less safe. And if the entire Panel's statement is read, it is clear that the panel determined this. And I quote from their statement. The trade-off and protection for the sake of making alternative protection devices available in the marketplace is acceptable. The Panel considered other sides' arguments and rejected them. This is just like the great debates between fuses, circuit breakers, metal pipe, and plastic pipe. Both products have the characteristic, yet the code is acceptable -- allows safe and acceptable alternatives. This is a commercial issue, not a safety issue where circuit breaker manufacturers are trying to protect their turf, pure and simple. Do not allow this abuse of the regulations to limit AFCIs and new constructions. I urge you to vote yes.
CHAIRWOMAN MANLEY: Thank you.

Microphone six, please.

MR. MANCHE: My name is Alan Manche. I come from Schneider Electric Square D, and I rise in opposition to this motion.

I want folks to understand that as a breaker manufacturer, we're being asked for our breaker to perform a function it was not designed, tested, or listed to perform, all right. This is a safety issue, not a commercial issue, and I urge you to vote against this.

CHAIRWOMAN MANLEY: Thank you.

Microphone three, please.

MR. DOLLARD: Thank you, Madam Chair.

My name is Jim Dollard from IBEW Local 98 in Philadelphia, and I rise in support of the motion on the floor.

And there's a number of reasons that I've taken the mic today. The first you heard from the original speaker, the fist speaker, the maker of this motion in that the language that you see that is struck through doesn't exist. So when a user of the National Electrical Code looks at their options and gets to D, they say maybe that's the option I want to use, only to find out that it doesn't exist. It doesn't exist.
Another key point made by another speaker is that the Committee voted on this in the first draft, and they deleted that text. In the second draft, the Committee deleted that text. There was confusion, in my opinion, at the meeting, and they didn't separate out an item that was ancillary. It was editorial. And what happened was that failed ballot we threw the baby out with the bath water.

This issue has gone on for years. And it will continue to go on unless this body takes an action to get it back to the committee. That's what will happen here. This will go back to the committee and allow the committee to continue their work here.

I'm not going to get into the circuit breaker receptacle piece. It's about saving lives. We have to keep pushing the envelope forward to save lives.

I urge everyone here to support the motion on the floor.

Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Thank you.

Microphone six, please.

MR. RIPPEY: Thank you.

Ken Rippey with (inaudible) Industry. I speak against this motion.

If you consider where we are today, illicit
system combination device does not exist; that's true, 
but if you really think about what's happening here, the 
circuit breaker and AFCI are not equivalent in their 
protective functions, and the primary concern we have is 
they don't provide the same level of safety. That is 
our fundamental concern about this -- this situation. 

If you think about also what happened at the 
code panel, code panel has already rejected this once, 
and I don't see a reason why we have to reconsider this. 
There's been no new technical information provided that 
would change my mind on what we would do here. 

So I urge the committee to seriously 
consider this situation and think about the safety of 
what we're doing because it is not the same level of 
safety as we have today. 

Again, please consider a no vote for this 
position.

CHAIRWOMAN MANLEY: Thank you.

Microphone five, please.

MS. CRONIN: Thank you, Madam Chair.

Amy Cronin from Strategic Code Solutions, 
representing the AFCI consortium.

What I want to talk about today is what I --

CHAIRWOMAN MANLEY: Are you speaking for or 
against, Amy?
MS. CRONIN: And the regulations. And the special interest group, the circuit breaker manufacturers, they -- have sought to basically gain the system. We're here in Vegas. Let's talk about gaming the system. Here in this room we want to make sure that that gaming stops. Essentially this CAM seeks to resolve the loophole that is in the regulations.

So if you look at the CAM, it mirrors what the panel sought to do in the meetings. They delete the nonexistent listing. They added this listing in 2014 when they thought that if you build it, they will come. Well, it never came. That listing never came for the combination type AFCI. Now I remind you listings are really good. These individual components are still listed. It's just the system that would not be listed because the requirement cannot be met.

So how does this affect you? You're now going to be limited with options for what you can use for an AFCI. This limits competition. It's unfair, and it's not good for users, enforcers, contractors, home builders, assisted living facilities. It's limiting your choices unless you accept this CAM. Now the editorial changes that you heard Jimmy Dollard from the IBEW talk about, it was truly editorial. It was updating references and deleting withdrawn standard.
And may I add, it was an informational note. For those of who aren't intimately familiar with the NEC, that's like an annex note. It's just informational and cannot contain any requirements.

So nobody in that room realized that an editorial change could undue the panel's work. And that's what I'm calling the abuse. Were the regs followed? Yes. Was it a gaming of the system? Absolutely.

If you look at the negative ballot comments, it's confirming what I said. Nobody had a problem with the editorial changes, and they said in their negative comments. They said they wanted to get back to the technical issue. This impacts all of us. This is a real precedent. If we don't vote for this CAM, we're saying it's okay to make an editorial change, force it to fail so you get a third bite at the apple.

I urge you to represent the work of panel 2 during the meetings and maintain the integrity of our beautiful regulations. Vote yes on this CAM.

Thank you.

CHAIRWOMAN MANLEY: Thank you. Just for the record, can you state whether you were for or against? I know you did at the end, but...

MS. CRONIN: Thank you very much. Yes, I am
for the motion.

CHAIRWOMAN MANLEY: All right, microphone
four, please.

MR. LIPPERT: My name is Kevin Lippert. I'm
with the Eaton Corporation, and I speak against the
motion.

CHAIRWOMAN MANLEY: Thank you.

MR. LIPPERT: So you've heard a lot of
discussion. The basic issue is safety. It is a fact
that an AFCI receptacle does not provide the same
protection as a combination AFCI circuit breaker. It
can't because of where it's located in the circuit.
That is a fact. And you've heard discussions about the
consortium of some wiring device manufacturers. I speak
on behalf of Eaton. Eaton manufactures AFCI
receptacles. They are a good product. They provide a
protection down stream, which is equivalent. I advocate
their use for the areas which the National Electric Code
already allows.

Don't be misled to believe that you are
forbidding their use in the marketplace. They are out
there. We produce them. Several of the other people
produce them. They have a limited application. I urge
you to make sure that application is a safe application
providing the same level of protection that people have
expected for the past almost 20 years and reject this motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

I'm going to go to microphone three, please.

MR. DESENAY: Dave Desenay speaking on behalf of the healthcare section in favor of the motion.

Yesterday at our board -- at our annual board meeting, we approved to speak in favor of this motion. Our thoughts come from two different perspectives. From the non-technical aspect, it is clear if you follow the path of how we got here, it was approved in the original -- by the technical committee. It was approved the second time, and there was a non-technical ballot that was put out after the fact. That's where it has failed. Somebody mentioned already it's like throwing the baby out with the bath water.

So from that prospective, we want to support the technical committee's discussion and the decision that they have. So we would ask that you vote in favor of this motion.

Secondly, it is clear that it will limit options to the consumer. So from the healthcare section's prospective, we want to provide adequate options to the consumer. We urge everyone to vote in
favor of this motion.

CHAIRWOMAN MANLEY: Thank you.

I'm going to go on back to microphone six, please.

MR. LARSEN: Thank you.

My name is Ed Larsen. I am with Schneider Electric, and I'm speaking against the motion.

This is all about safety. This is not a commercial topic. So let's talk a minute about the comparison that's been made between fuses and circuit breakers. We know that the purpose of fuses and circuit breakers are both to provide overload and short circuit protection for conductors. And so regardless of whether you choose to use a circuit breaker or choose to use a fuse in your system, you will get equivalent protection.

In the UL 1699 standard for AFCIs, there are several different types of AFCIs that are defined in the standard. All of them need to meet the same performance requirements. So regardless of whether the AFCI is in accord or whether it's in a receptacle or whether it's in a circuit breaker, meets the same requirements.

What this motion is proposing is that standard circuit breakers could be used to protect the portion of the home wiring called the homerun. We know that standard circuit breakers can't provide this
protection in all circumstances. Therefore, if this motion is approved, we will have a decrease in safety.

I sit on the UL technical committee for the AFCI standard, and I can tell you why the -- why we were unsuccessful in passing a standard. It is because the wiring device consortium wanted to reduce the performance requirements in the standard to a level that they could meet. So why in the world would we want to reduce performance requirements, put the residents of homes and first responders at risk with these lower requirements? We have to keep in mind the reason why we have AFCI requirements in the code and have had so since the 1999 edition, is that standard circuit breakers could not provide the level of arc fault protection that AFCI circuit breakers do.

So I encourage you to vote no on this motion. Thank you.

CHAIRWOMAN MANLEY: Thank you.

I'm going to go over to microphone one, please.

MR. BUUCK: Thank you, Madam Chair.

My name is Dan Buuck. I represent the National Association of Home Builders, and I am in speaking in support of the motion. And I am also speaking in support of alternatives in the code, which
allow us to meet the requirements in the National Electric Code.

I listened to the technical arguments that were made at the last meeting and voted in favor of this change. However, I was surprised that the balloting, as was mentioned, this was combined with some editorial changes, but not only that, there was another technical change that this was attached to in one ballot. And I could not support that. So I was forced to vote against the entire ballot, although I was in support of this change.

So I'm here to hopefully rectify that.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

I'd like to go to microphone two, please.

MR. HICKMAN: Thank you, Madam Chair.

Paul Hickman with the IBEW. I'd like to call to question.

CHAIRMAN MANLEY: All right. There is a motion to call the question.

UNIDENTIFIED AUDIENCE MEMBER: Madam, I've been standing up here about 15 minutes.

CHAIRWOMAN MANLEY: I understand but the motion --

UNIDENTIFIED AUDIENCE MEMBER: Well, you've
been calling people that was not up nearly as long as I was.

CHAIRWOMAN MANLEY: Understand.

So I do notice that there are a number of people remaining at the microphones to speak, but we will go ahead and proceed with the vote on the call of the question.

We do have a second.

How do you want to do it? All right. I just want to confirm that everyone does have their tablets. And is there anyone out there that does not have a tablet up and working?

All right. So I do see a handful of people still at the back. So we are going to go to a hand vote for a call of the question.

If you wish to vote in favor of the motion to call the question, please raise your hand.

Those opposed, please raise your hand.

This one is too close, guys. Sorry, we're going to count. Standing count please, gentlemen and ladies. If you have -- okay. The vote is too close to call. We will now go to a standing vote count. Will NFPA staff please come forward to count.

So if you wish to vote in favor of the motion to call the question, will you please stand up.
Make sure your badges can be seen, folks. Please remain standing until I say otherwise.

(Standing vote being taken.)

CHAIRWOMAN MANLEY: All right. I think we'll go ahead and have those that were in favor of the motion please sit.

Those who are going to be in opposition of the motion to call the question, please stand. Remain standing and please make sure your badges are showing.

(Standing vote being taken.)

CHAIRWOMAN MANLEY: All right. You guys can have a seat. Thank you very much. We're just going to do our math up here.

In the meantime we're actually curious to know whose device is still not working. We want to send in some people to see if we can't help you there. Raise your hands up, and we'll have staff come take a look. Raise them up high. We have a couple down here and a couple over there I see. Anyone else in the far distance? Yeah, a couple at the back corner there.

All right. The motion to call the question failed. All right. So we are going to continue debate. So I'll give you guys a second to get back up towards the microphones. All right. And first at the microphone I see number four. So I'll go ahead and
recognize microphone four, sir.

MR. LLOYD: Thank you, Madam Chair, and thanks to allow me to continue to speak on this issue. I'm speaking against.

I'm really the guy that first introduced the receptacle into the code for this AFCI circuit --

CHAIRWOMAN MANLEY: Sir, did you announce your name and affiliation.

MR. LLOYD: Richard Lloyd speaking for myself.

CHAIRWOMAN MANLEY: Thank you.

MR. LLOYD: And speaking against.

But I go back in this -- the history of the AFCI arc fault circuit interrupter protection to when the beta tests were being done and the original CPSE study, and we learned where the fires were occurring in homes. And they occur all the way from the panel board, the line clear through into the inside of the rooms of a house. It's true the receptacle will protect anything inside that room. And if an arc occurs upstream from that receptacle, it's not protected. I submitted a receptacle request as a proposal about the second cycle we had AFCI in bedrooms. It was discussed, and it was -- I really brought about the fact that many residential installations, high-rise residential, multifamily
residential utilized metal wiring methods. The panel at that time determined because of the low arc fault current in branch circuits in residential construction that the metal would protect the upstream. And so they accepted the receptacle.

This argument continues. Now we're willing -- or the proposed 70-1 is requesting that we forget about protecting the upstream where a good number of fires do occur.

So I'm speaking against. So I think that we need to protect our residents' entire circuit. If the fault occurs from a nail in a picture hanger or wherever upstream from the room, we should have protection. So I'm speaking against.

CHAIRWOMAN MANLEY: Thank you very much.

Microphone five, please.

MR. HARTWELL: Thank you, Madam Chairman. Fred Hartwell, Hartwell Electrical Services, Incorporated, speaking in favor of the motion.

Let me say for me this is a hard vote because both sides are right. But I think in the end it comes down to something that Voltaire said in 1768 that the perfect is the enemy of the good. And in this case, you'll have diminished applications and utilization of AFCI technology because of what's involved in these
installations. And I want to remind everyone that the permission to use the AFCI receptacle at the end of the homerun is mitigated by other provisions, and you can see them up there. There's a total -- maximum total length, a branch circuit and so forth. So there's limited exposure, and the AFCI does provide serious protection at all points in the circuit. And statistically that's where the issues are. And the short circuit protection still is provided by the circuit breaker.

So in the end, I come out in favor of this, and I just think that overall we do better with it than without.

CHAIRWOMAN MANLEY: Thank you.

I'm going to go over to microphone four, please.

MR. BACLAWSKI: Thank you, Madam Chair.

I'm Vince Baclawski with the National Electrical Manufacturers Association, and NEMA speaks in opposition to the motion.

Thank you.

CHAIRWOMAN MANLEY: All right. Let's go back to microphone number three, please.

MR. RUDE: Thank you.

My name is Steve Rude with Legrand North
America, representing the AFCI consortium, and I'm speaking in favor of the motion.

As has been noted already a little bit, this CAM removes the artificial impediment blocking the expansion of genuine AFCI installation choice. It makes no sense to limit installation flexibility while maintaining a near monopoly of one type of product solution by retaining a code requirement that is inherently impossible to meet.

The NEC provides the informational note referencing 16.99(C) to allow usage of AFCI receptacles with basic plug-in residential molded case circuit breakers to provide a true installation choice. If only this option existed in reality. Each of us in the consortium repeatedly field requests from contractors asking how to locate 16.99(C) to allow them to pursue this option. We advise them that in spite of what's in the code, this choice is just not possible to implement due to 16.99(C) being nonexistent. And their take, like ours, is that they also cannot see why the code publishes this so-called installation option that is simply unachievable, because it's not a real option.

Affordability of greater installation choice, as you've heard already, is what home building companies, electrical contractors and installers of all
types need. If this motion to remove the blocking of installation choices is rejected, it will rob installers as well as our overall industry of one of the most economical options for AFCI protection where such protection is mandated. Reference to a so-called acceptable method for a mandated installation that is actually unattainable has no place within this legally enforceable document, and therefore, it should be deleted.

We ask for and urge a yes vote on this CAM to see that installers will now truly be able to utilize the system combination AFCI installation option thereby ensuring that more AFCIs become placed in new residential construction as was the intent of panel 2.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

I'm going to go over to microphone four again, please.

MR. WILLIAM: Thank you, Madam Chair.

My name is David Williams. I'm an electrical inspector for Delta Township in Lansing, Michigan, representing myself, and I speak in opposition of the motion.

I reviewed the documentation and the involvement of AFCI protection to protect people and
property in one and two family dwellings. The branch
circuit wiring concealed in the framing of our homes
needs to have a combination-type AFCI to provide optimum
protection. I attended and witnessed the panel actions
and comments, especially the comments from Underwriter
Laboratories.

If this motion passes, we are requesting a
reduction in safety. I urge you to vote in opposition
to the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone five, please.

MR. GOODSELL: My name is John Goodsell from
Hubble representing the AFCI consortium. I speak in
favor of the motion.

During the meetings, CMP 2 was convinced
that there were protection gains through consideration
of the UL and the park studies, which show that by
allowing AFCI receptacle as an alternative to an AFCI
circuit breaker, there is a net gain and total
protection because the AFCI devices would become
available to a larger number of dwellings.

Plain and simple, this is a commercial
issue. By voting yes on this amending motion, you will
expand the use of safe alternatives that will foster
competition. AFCI receptacles will provide an equivalent alternative to AFCI circuit breakers. The promotion of vested commercial interests on one side should not control the outcome of the code development process designed to enhance safety. And panel statements rejecting the public comments that were attempting to reinstate the listed requirement, the panel clearly alluded to this commercial interest when they wrote, and I quote, "as with other code required products, acceptable alternatives promote competition and new product development."

Panel 2 understood that alternatives are good. I urge you to vote yes and vote with panel 2 to support their work during the meetings to provide a net gain in protection.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone two, please.

MR. DOMITROVICH: Yes. My name is Thomas Domitrovich. I'm with Eaton, and I speak in opposition to the motion.

So I think we have to understand how we got to where we're at. The initial public input on this topic reference the UL report entitled Evaluation of Run Length and Available Current on Breaker Ability to
Mitigate Parallel Arcing Faults. I have to hand it to UL. They did -- UL tried to bring technical information to this panel to help them make a decision. Unfortunately, the focus was on an old report. This was the first in a series of technical research that UL conducted. It was a subsequent report that stated, and I quote, "the initial set of circuit breakers suggested a 99 percent of all circuit breakers with magnetically trip at or below 300 amps or 15 amp breakers and 350 amps or 20 amp breakers" -- and this is the important part. "However, follow-up testing one year later negated these findings."

UL's technical research negated the findings of their initial document, which was used to remove this listing requirement. This listing requirement will reduce safety as UL noted in their ballots that this decision, the Panel's statement and the technical substantiation for many of the public inputs that led to this first revision did not consider the findings of subsequent research projects, and they do say it will reduce safety.

This is about safety. This is about removing a requirement for a listing of two products together, very similar to that which we have for series of rated over-current protective devices, and UL 508(A)
testing required for a source of the current ratings. This is a reduction in safety that does not need to happen, and I urge those present here to vote in opposition to this certified amending motion.

CHAIRWOMAN MANLEY: Thank you.

Microphone one, please.

MR. OSTERBROCK: Thank you.

Jim Osterbrock from Legrand North America speaking for the AFCI consortium. I'm speaking in favor of the motion.

Our fault circuit interrupter receptacles have been approved or allowed since the 2011 code for existing construction. They're listed. They're safe. They're reliable. They're field proven. They offer point of use reset.

Support of this motion will allow for greater product options and also greater manufacturer's competition. I urge your support.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone four, please.

MR LARSEN: Ed Larsen, Schneider Electric, speaking against the motion.

So I need to have somebody explain a couple things to me. So we say that we have to have this
motion passed so that we have more protection. The code already requires in new construction in certain applications you have to install AFCI protection. So having more choice doesn't get us more protection. We say, oh, we have to have more options. There are six different options in the code today. All right. One of which is not available because there's no standard for a listed system combination AFCI that reduces at the five. There are already five alternatives there. Oh, we have to have more options. Don't understand that. Keep in mind the fact that this homerun wiring we're talking about, the wiring that extends from the circuit breaker panel to the first outlet, can be approximately one-third of the wiring in your home. So what we're saying is, well, we're going to take a gamble here on protecting this wiring. Yeah, we've had that wiring protected against arcing faults since the 1999 edition of the code, but since we're in Vegas, we could gamble a little bit and say, well, maybe we don't need that protection. Well, what are the instances that you would have to have it if you wanted to rely on the standard circuit breaker to protect this? Well, you would have to have a situation where the available short circuit current was high enough. The arcing fault current was high enough.
circuit breaker was low enough. The homerun is not run in a hot environment so as to increase the resistance of the wire. Where the homeruns were run but in hot attics. And, oh, by the way, the circuit breaker is not in an environment that's too hot or too cold, so as to affect its instantaneous trip characteristic. You miss any one of those, and now you've lost protection. Oh, somebody said, well, AFCI receptacles provide series protection. Please explain to me how a series arc takes place in MM cable when you've got a bare equipment ground conductor between two current carrying conductors. Any kind of fault in that cable is going to be a parallel fault, and the receptacle can't protect against that.

Once again, I urge the membership to support the safety that we've had in the code since the 1999 edition and vote no on this motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone five, please.

MR. CAMPOLO: Thank you.

Steve Campolo, Leviton Manufacturing.

CHAIRWOMAN MANLEY: Please. Go ahead, sir.

MR. CAMPOLO: Speaking for the motion.

Those speakers that you've heard speak
against the motion have all said this is a reduction in safety; yet, the ones that I saw and most of them have voted for the other section in the code that allows receptacle AFCIs to be used where you have circuit extensions or modifications. Even if you change the wire in the branch circuit, you're allowed to use the receptacle AFCI. Yet, they don't argue that that's unsafe. That's in the code. That's present code right now. They try to trick you and say it's unsafe when the receptacle impinges upon the larger market that circuit breaker enjoys. If this is unsafe, take it out of the other section of the code. It's there. They voted for it because it's safe. If it's safe in that application, it's safe in the new construction application.

This is a commercial issue. It's about protecting turf.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone two, please.

UNIDENTIFIED AUDIENCE MEMBER: I'd like to call the question.

CHAIRWOMAN MANLEY: All right. There's a motion and a second to call the question.

At this time, I do want to take a moment to announce that we do believe that all the tablets are up
and working. If you are having a problem with your tablet, you need to go back to the help desk outside. We will hold the vote for a couple minutes while you have your tablets addressed, but we feel pretty confident that we have reached the point where we're ready to move -- work with these tablets again.

So we'll hold for just a couple of seconds, but the motion on the floor right now with a second is to call the question.

(Pause in proceedings.)

CHAIRWOMAN MANLEY: All right. I think we're pretty close to getting a vote ready to go. Is there anyone who doesn't have a tablet that really, really wants one? Come on. Don't be shy. This is not the point in time to be shy.

All right. So anyway, we're ready to move to the vote on calling the question.

All right. So in order to vote on this motion, please scroll down to the bottom of the tablet to vote. If you wish to vote in favor of the motion, touch yes. If you wish to vote against the motion, touch no.

Please record your vote now. Thank you.

All right. The balloting is going to close in about five seconds.
All right. The balloting is now closed.

Please go back to the back, sir, if you're waving your hand and get your tablet readjusted. You've got to go back to the help desk at this point.

All right. Well, I believe that the motion to call the question passed. So we are now going directly to the vote on Motion 70-1 to Accept an Identifiable Part of the Committee Comment No. 19002.

Mr. Chair, do you have any final comments?

CHAIRMAN JOHNSTON: I have nothing to add to the discussion, Madam Chair.

CHAIRWOMAN MANLEY: Thank you, Mr. Chair.

Before we vote let me restate the motion on the floor. The motion is to Accept an Identifiable Part of the Committee Comment No. 19002.

To vote touch the vote button. If you wish to vote in favor 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, vote no now.

Please record your vote.

All right. We're going to close the balloting in about five seconds.

All right. The balloting is now closed.

All right. Thank you. The results of the
vote are 396 against the motion and recommend the text on screen two.

(Audience applause.)

CHAIRWOMAN MANLEY: Please. Thank you.

And there were 152 votes for the motion recommending the text on screen one.

The motion has failed. Thank you.

(Motion 70-1 to Accept an Identifiable Part of Committee Comment 19002 failed with a vote of 152 in favor; 396 against.)

CERTIFIED AMENDING MOTION 70-2:

CHAIRWOMAN MANLEY: All right. With that we're now going to proceed with the discussion on Certified Amending Motion 70-2.

Give you a second to head up to the microphone.

All right. There we go. Microphone five.

MR. HERNDON: I'm Howard Herndon with Southwest Electritech Services, and I would like to move to accept Comment 1134.

CHAIRWOMAN MANLEY: All right. Thank you.

There is a motion on the floor to Accept Public Comment 1134.

Is there a second? Thank you. We do have a second.
Please proceed with the discussion on the motion.

MR. HERNDON: Again, this is Howard Herndon with Southwest Electritech Services.

The motion at 225.27 requiring that all conduits enter a building from outside creates a corrosion issue in a lot of circumstances. Where I'm moving from different environments, you'll find will have corrosion within any type of metal piping, especially EMT. We've seen circumstances of this in many locations, especially when you're moving from an air-conditioned environment to a hot attic type environment. And this is circumstances we don't necessarily see when we're in an underground application because we're typically using a monometallic type conduit system.

Again, I would ask you to vote for this motion.

CHAIRWOMAN MANLEY: Thank you very much.

Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

70-2 is under the responsibility of code making panel 4. I would like to defer to the Chair of panel 4, Ron Toomer, please.
MR. TOOMER: Madam, I'm Ronald Toomer. I'm chair of CMP 4. I represent the National Electrical Contractors Association, and I speak against the motion.

It is intended to have all raceways that enter a building or structure to be sealed. The requirement for sealed raceway where they enter a the building that have temperatures inside are different from outside. Condition and under-condition spaces is already located in Section 300.7. This requirement simply supports that requirement.

Thank you, Madam.

CHAIRWOMAN MANLEY: Thank you. Thank you very much, gentlemen.

With that we're going to open up debate on the motion. Please provide your name, your affiliation, and whether you're speaking for or against the motion on the floor.

Microphone five, please.

MS. HUNTER: Thank you, Madam Chairman. I'm Christel Hunter with General Cable, and I'm speaking in support of the motion.

First, I'd like to say that no one actually asked for the change to this language. The public input actually asked for simply a clarification of the language, kind of to clean up, but to still limit the
requirement to underground conduit systems.

What happened is that the panel actually changed it to apply to every wiring method entering a building. There were two public comments that asked the Committee to reverse their position and return to language limiting the requirement to underground applications. The Committee responded by saying that 300.7 already required this, but it doesn't.

300.7 is phrased in such a way that enforcement and compliance is based on the expectation of problems with condensation. Up until the 2002 NEC, 300.7 only applied to interior wiring that passed from refrigerated areas to non-refrigerated areas.

In the 2002 cycle there were two well substantiated proposals to expand the requirement to include wiring that traveled from the exterior to the interior of the building. Those proposals came from submitters in Wisconsin and Michigan. They stated that there are issues with frost forming on an equipment due to condensation and freezing. We don't have that problem in the southwest U.S., and the panel at that time recognized that. They actually said when they put the language in 300.7, that still is in place for the 2017, that the major problems appear to be concerning raceways or sleeving for cables that enter a building.
from outside where there is a difference of temperature and where there is a known condensation problem. Not all areas of the country nor all interior building applications would require this sealing. But that's exactly what the new language in 225.27 does. Even where we have known problems, such as those submitted in the public comments, we're going to require the sealing of those systems even though we know that it leads to condensation and corrosion.

I ask that you support the motion on the floor.

CHAIRWOMAN MANLEY: Thank you.

Microphone four, please.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski, National Electrical Manufacturers Association, and NEMA speaks in opposition to the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you. All right. I'm looking out at the microphones. I don't see anyone else who would like to speak. Is there anyone else?

All right. Seeing no further -- no one else wanting to discuss the motion on 70-2 to Accept Public Comment No. 1134, we will go ahead and -- I'm sorry.

Mr. Chairman, do you have anything further
you want to say?

    CHAIRMAN JOHNSTON: Madam Chair, I have
nothing to add to the discussion. Thank you.

    CHAIRWOMAN MANLEY: All right. So we're
going to go ahead and move to a vote.

Before we vote please let me restate the
motion. The motion on the floor is to Accept Public
Comment No. 1134.

    To vote please touch voting button. If you
wish to vote in favor of the motion and recommend the
text on screen one, vote yes. If you wish to vote
against the motion and recommend the text on screen two,
vote no.

    Please record your votes beginning now.

    Okay. We're going to go ahead and close the
vote in about five seconds.

    And the balloting period is now closed.

Thank you.

    So the results of the vote are 111 for the
motion recommending the text on screen one and 289
against the motion recommending the text on screen two.

    The motion has failed. Thank you.

(Motion 70-2 to Accept Public Comment No.
1134 failed with a vote of 111 in favor; 289
against.)
CERTIFIED AMENDING MOTION 70-3:

CHAIRWOMAN MANLEY: Let's now proceed with the discussion on Certified Amending Motion 70-3.

Microphone three, please.

MR. AYER: My name is Larry Ayer, representing Independent Electrical Contractors, and I'd like to make a motion to accept the certain identifiable part of Public Comment 793.

CHAIRWOMAN MANLEY: Thank you.

MR. AYER: I am speaking in favor of this motion. This is regarding Section 225.30(F). We are in support of what the panel did, except we would like to accept deletion of the one ought restriction in this section.

The panel put this in, and we want to accept this deletion for three reasons. First, there was no technical substantiation to put the one ought
restriction in. The panel indicated that the one ought
was used to align with sizing restrictions for parallel
conductors. However, these are feeders. These are in
Section 225. They are protected by over-current device,
and the parallel conductor argument does not hold water.
Number two. The NEC needs to be consistent across other
sections of the code. There are -- you cannot find in
Article 215 or in Article 225 for feeders this one ought
restriction. And third, there are many installations
that warrant the size to be less than one ought. There
are many installations where utility companies across
this country have installed meter pedestals with
multiple circuit breakers on the output, and they might
use that for redundancy to a single family or a two
family home. And in some cases you need a 100 amp, but
in this restriction you will be required to install one
ought conductors. If I install for a two family, and I
want to put a one ought or 100 amp feeder to one
dwelling, but if I go to put the second feeder in for a
two family dwelling, I'm now required to upsize that to
one ought.

There's other sections in 225.30 that
concern commercial buildings and in these commercial
buildings. And in these commercial buildings, they do
not have a one ought restriction. And also when you
look at load calculations in today's world, many load
calculations are based upon 100 or 125 amp, and putting
this requirement in is overly restrictive.

We urge you to support this Certified
Amending Motion 70-3.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to provide the
Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Sequence 3 is also under the responsibility
of code making panel 4. So I would like to defer to the
chair of code making panel 4 for a position and
response.

Mr. Ronnie Toomer.

MR. TOOMER: My name is Ronald Toomer. I
represent the National Electric --

CHAIRWOMAN MANLEY: Let me tell everyone
where you are. Aren't you back there on number four?

MR. TOOMER: I'm on -- okay. Number four.

Speaking against the motion.

CHAIRWOMAN MANLEY: Thank you sir. All
right. Go on.

MR. TOOMER: I said I represent the National
Electrical Contractors Association, and I'm chairman of
the panel 4. As it states, the minimum size of one
ought was chosen by the Committee to align with the minimum size allowed for a parallel conductor. That's how we came up with one ought.

CHAIRWOMAN MANLEY: All right. With that we'll open up debate on the motion. Please provide your name and affiliation and whether you are speaking for or against the motion.

Let's begin with -- well, looks like microphone four is ready to go.

MR. HILBERT: Thank you, Madam Chair.

Mark Hilbert representing the electrical section. And at the codes and standards session -- excuse me -- speaking against.

CHAIRWOMAN MANLEY: Thank you.

MR. HILBERT: At the codes and standards session on Tuesday, the members voted to oppose the motion. Thank you.

CHAIRWOMAN MANLEY: All right. Microphone five, please.

MR. DOLLARD: Thank you, Madam Chair.

My name is Jim Dollard representing IBEW Local 98 in Philadelphia, and I rise in support of this motion, and I intentionally tried to time it to follow the section telling everybody at the conference here that we voted not to support it. We made a mistake at
the electrical section. And with all do respect, code making panel 4 made a mistake.

Take a look at the text on the screen.
We're talking about one and two family dwellings only. We're talking about feeders. They're conductors that are protected at their rated ampacity. This has nothing, absolutely nothing to do with parallel conductors. Choosing an arbitrary number of one ought was wrong. It was dead wrong. There is no issue. If you've got a safety issue with this, please get to a red mic and tell us what it is. Because the issue at hand here is that in one in two family dwellings, you can't have a feeder unless it's rated at least 150 amps, which is what a one ought would require. So tying this to parallel conductors was, in a word, ridiculous.

There's -- there's good reason for this change. It's a good change. We could have a situation where we want to take a number four to 100 amp panel board and then have a 60 amp feeder that is going to have in it a manual transfer switch. If we leave this in there, now I need one ought conductors in each of those devices, and I'm not going to be able to land the conductors.

This is not good code. We have to support the motion on the floor as seen on the screen.
Thank you, Madam Chair.

CHAIRWOMAN MANLEY: All right. It looks like we're going to be back at microphone five, please.

MR. MANCHE: Alan Manche representing Schneider Electric, and I rise in support of the motion.

I think Jimmy made a good point as a manufacturer of electrical equipment being able to land that one ought conductor and all the options that the contractors need to provide is important. So I urge you to support the motion.

CHAIRWOMAN MANLEY: All right. Thank you very much.

Is there any further discussion on Motion 70-3 to Accept an Identifiable Part of Public Comment No. 793?

All right. Mr. Chair, do you have any further comments?

CHAIRMAN JOHNSTON: Thank you, Madam Chair. I have nothing to add to the discussion.

CHAIRWOMAN MANLEY: All right. Before we vote please let me restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 793.

To vote please touch the vote button. If you wish to vote in favor of the motion and recommend
the text on screen one, vote and touch yes. If you wish
to vote against the motion and recommend the text on
screen two, touch no.

Please record your vote now.

All right. We're going to close the voting period in about five seconds.

And the voting period is now closed. Thank you.

All right. The results of the vote are:

350 for the motion recommending the text on screen one
and 86 against the motion in recommending the text on
screen two.

This motion has passed.

(Motion 70-3 to Accept an Identifiable Part of Public Comment No. 793 passed with a vote of 350 in favor; 86 against.)

CERTIFIED AMENDING MOTION 70-4:

CHAIRWOMAN MANLEY: Let's now proceed with
the discussion on Certified Amending Motion 70-4.

Microphone one, let's proceed.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski with NEMA. I move that we
support Certified Amending Motion 70-4 to Reject Second
Revision 1004.

CHAIRWOMAN MANLEY: Thank you.
There is a motion on the floor to Reject Second Revision No. 1004.

Is there a second please. All right. We do have a second.

Please proceed with the discussion on the motion. Microphone one.

MR. BACLAWSKI: Thank you.

NEMA speaks in support of the motion. The proposed text of 230.7(A)(4) is intended to protect firefighters by allowing them to safely and easily disconnect power from the exterior one or two family dwellings. It is also intended to provide service entrance conductor protection before the conductors enter the dwelling. NEMA agrees with the concepts of these goals in general, but the text as written does not provide the required practical safeguarding as described in Section 90.1. The language permits a remote disconnect to be placed outside the dwelling and to remotely trip the breaker in the load setting. The communications conductors from the remote control device to the service disconnect could be involved in the fire thereby placing emergency responders unnecessarily in harm's way. The remote control disconnect therefore should not be an option. In addition, as written and for economic reasons, the text would encourage entire
branch circuit panel boards to be installed outdoors
where it's not in the best interest of the homeowner.
In many parts of the country, it is branch circuit
circuit breakers that the homeowner normally needs to
reach, whether tripping occurred due to an over-current,
a ground fault, or an arcing fault. A requirement needs
to be added to the enclosure containing the branch
circuit over-current protective devices to be located
indoors.

Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to offer the
Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Again Sequence 70-4 is under the
responsibility of code making panel number 4. So I'd
like to refer to the chair Ronnie Toomer for a position
and response, please.

CHAIRWOMAN MANLEY: Microphone four, please.

MR. TOOMER: I'll speak against the motion.

Ronald Toomer. I'm chair of panel 4 representing the
National Electrical Contractors Association.

By providing external disconnect, this
allows for the safe interruption of utility power from
outside the structure. The requirement for remote
control device allowed exterior activation of an internal device per 230.7(A)(3). The effective date allowed time implementation of new products.

Thank you, Madam.

CHAIRWOMAN MANLEY: All right. Thank you very much, gentlemen.

With that we're going to open up debate on the motion. Remember to please provide your name and affiliation and whether you're speaking in support or against the motion.

And I'm looking around. And I see someone standing right at microphone six ready to go. So let's start there.

MR. PACE: Thank you, Madam Chair.

My name is Matt Pace with the San Jose Fire Department. I speak today representing the International Association of Firefighters. I'm also a member of code panel 4.

I'm speaking to ask for your no vote on this motion. This proposal will remove the requirement that will provide a safe option for firefighters and other responders including gas personnel and others that need to eliminate the electrical service to a building in an emergency in a NFPA compliant method, which does not exist today in many areas of the country.
I ask you to vote no on this motion. Thank you.

CHAIRWOMAN MANLEY: Thank you.

I'm going to move to microphone five, please.

MR. BUUCK: Thank you, Madam Chair.

My name is Dan Buuck, and I represent the National Association of Home Builders, speaking in support of the motion.

I want to point out that this change brings some unintended consequences with it. I believe that is part of the fact that it was brought up at the second round of technical committee meetings. In this case, I would like to point out that service equipment disconnecting means need to be installed in a readily accessible location. I hope that somebody would correct me if I'm misstating this, but up until this point, readily accessible only applied to the occupant or the electrician, but because the definition applies to those to whom ready access is requisite, and this change is brought forward by the fire service, it now applies to them. So the disconnecting means before the occupant or the electrician had access to the place, the location where that was, if it was on the exterior, let's say it's inside a fenced in area, they would have access to
that. Now we are looking at the fire service pulling up to the curb possibly with nobody -- no occupants there to let them in. So not only can we not install these in a fenced-in area in new construction, we are in effect making all exterior shut-offs non-code compliant where there is a fence installed.

I would like to remind -- remind you that readily accessible means that you cannot resort to action such as using tools, climb over, or remove obstacles or resort to portable ladders and so forth. I understand that this is a serious issue for the fire service, but I believe we have jumped the gun, and this needs to be looked at in a much more thorough manner.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone two, please.

MR. DOLLARD: Thank you, Madam Chair.

My name is Jim Dollard representing IBEW Local 98 in Philadelphia, and I stand in opposition to the motion on the floor.

I have multiple comments I would like to make, but I would first like to address some of the points the previous speaker made.

He mentioned no occupants being at home and a fence being -- the meter location being inside the
They can get through a lot. But what they can't do is when the building is burning and people are in it and they've got to pour water on it, they can't get a crystal ball and determine where that disconnecting means is, and if they can possibly get to it.

And the previous speaker mentioned occupants and electricians. I would like to point out that the purpose, the scope of the National Electrical Code is the practical safeguarding of persons and property. And the last time I looked firemen are persons. You could see two firemen in the front. They're the people that are going to be called upon when that static situation that we lived in for 20 years is now chaos, and they're going to risk their lives to save ours. We need to take steps to make sure they can find that disconnecting means.

If you take a close look at this language, there is no impact. It's compromise language. It simply says installed outside the structure at the meter location or at the nearest point of entrance of the service conductors. There's an option. It was compromised language, but what it's intended to do is push the process to push task groups to develop language that will address this in a more descriptive manner.
I urge you to -- to vote against this motion and to support the men and women of the fire service that currently risk their lives when we're in trouble. They deserve access to that disconnect. I urge you to oppose the motion on the floor.

CHAIRWOMAN MANLEY: Thank you.

Microphone three, please.

MR. KENNEDY: Thank you.

Chad Kennedy, Schneider Electric, and I am for the motion on the floor.

As the last speaker just said, if you read this very carefully, there are no changes to the service disconnect requirements. This will not give the fire service the outside disconnect that they so desire, but what it does do is leave flawed text in the National Electrical Code that will force state-by-state amendment across the country. This will impact the adoption of the 2017 NEC. Certainly we support the fire service. They need to have this type of protection for their activities, but this doesn't get us there by sticking it in the code, and forcing state-by-state amendment is a bad idea.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone six, please.
MR. RILEY: Thank you, Madam Chair.

My name is Michael Riley. I'm representing the International Association of Firefighters, and I'm here to oppose this motion.

As 40 years in the fire service, the last 38 with Fairfax County, and as a fire marshal, firefighters operating in emergency situations are not the only ones that require immediate access to control utilities both during fires as well as hostage situations and other law enforcement scenarios, the first thing emergency personnel want to do is control the utilities. And the best way to do that is from the outside and not subject our personnel to enter an nonideal environment.

So I strongly urge you support public safety, not only firefighters, but also our law enforcement brothers and sisters to vote against this motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

I'm going to move over to microphone four, please.

MR. REEDY: Thank you, Madam Chair.

My name is Jim Reedy. I'm from San Antonio, Texas. I'm here with the International Association of Firefighters. I'm here more importantly as a
I'm a line firefighter, get up and down off the truck every third day. I can tell you for a fact that we need this outside cut-off. I go to fires. One of the first things we do operationally at a fire is cut the power off to the house. That's the first thing we do. We can't go inside that house if it's burning up from top to bottom and cut the power off inside. We need some kind of outdoor cut-off.

As a firefighter, it's safer for me to do it from the outside, and we don't have the luxury of having a power company respond to every fire with us. The firefighters are the ones that are responsible to do this.

As a homeowner, I've lived my entire life in a house with an outside cut-off. Unfortunately, I've had a couple of floods upstairs where I couldn't shut the power off inside the house and actually had to go outside and use the outside cut-off. So for a homeowner it's even as valuable for us.

Having the outside cut-off just makes sense to me. And I don't understand why you wouldn't have them.

Thank you.

CHAIRWOMAN MANLEY: Sir, can you just clarify again, that you're speaking in --
MR. REEDY: I'm sorry. Against.

CHAIRWOMAN MANLEY: I'm sorry?

MR. REEDY: I'm speaking against the motion.

CHAIRWOMAN MANLEY: Thank you.

All right. Microphone five.

MR. BUUCK: Thank you.

Dan Buuck, National Association of Home Builders, speaking in support of the motion.

I would like to just rebut what was spoken before. I have full confidence that fire service would be able to get through a locked fence or closed fence. The point I was making is that it would not be allowed by code, and enforcers -- code enforcers around the country would look at this and might come to that same conclusion, and it would cause issues for our home builders and the occupants that buy those homes.

Also, I would like to point out that this is a regional issue. I know in this area specifically, and I heard also in parts of Texas, just anecdotally, that the fire service doesn't shut off the electrical service at all. They work through the utility. And the utility shuts it off remotely or they come out and shut it off at the transformer or at the pole.

So this may be adding cost and -- to houses where it's already being taken care of in other means.
So thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone six, please.

MR. DeCRANE: Yes. Thank you.

Sean DeCrane with the Cleveland Division of Fire speaking today on behalf of the International Association of Firefighters. I'm speaking against the motion.

You see a number of our representatives here at the microphone here today speaking against this motion because it is important to the fire service. I'll try to avoid me-two testimony, but I'm a battalion chief on the west side of Cleveland, and like Jim, I climb in my rig every third day. In Cleveland we're pretty busy, and almost every third day I have to send my members into a hazardous atmosphere. Currently, we don't have the luxury of the utility companies arriving in a timely fashion. Most times it's 40 minutes or longer until we can get a utility representative to the scene. Waiting 40 minutes to initiate interior operations is not an option in most cases. I'm asking my members to go into a limited visibility atmosphere and start to conduct their operations. I can't tell you how many times over the last 25 years when the smoke clears, we start to see how close members came to being
injured during those operations.

Shutting off the utilities is a critical priority for me as an incident commander. We -- we've had the utility company come in to provide training. I could tell you one of the things they emphasize is they do not want us to pull that meter. Yet, because of necessity, we have to pull it in many occasions. We cannot rely on just shutting off the breakers to shutting off the power to the interior of the house.

And unfortunately, a couple of weeks ago we saw where a secondary fire occurred because we were relying on the breakers to shut the power in the house.

I urge you to vote against this motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone one, please.

MR. MULLER: John Muller. I am representing myself. I'm not speaking for or against. Rather, I'm asking a question of interpretation of the text. It says in the middle there -- excuse me -- shall be installed outside the structure at the meter location comma or at the nearest point of entrance, etc.

Is that comma and the or to include outside, so it would be interpreted as or outside at the nearest point? Or is that not clear? I ask that because in
230.70(A)(1), after the or has the word inside, and I'm not sure what the wording here is. Perhaps it might be wise if we were to make an amendment to insert the word or outside at the nearest point. That might clarify this, but I could see a number of people being puzzled by this.

CHAIRWOMAN MANLEY: Thank you, sir. I'll just kindly remind you that we're not here to provide interpretations or do we have the ability to amend from the floor. Right now we're speaking only for or against the motion on the floor.

And with that I'll go over to microphone two, please.

MR. DOLLARD: Thank you, Madam Chair.

Jim Dollard, IBEW Local 98 in Philadelphia, and I rise in opposition of this motion.

And I would like to just make one brief statement, and that is that the purpose of the National Electrical Code is the practical safeguarding of persons and property. We have seen over multiple cycles requirements for new installations that allow installers and maintainers that go back to maintain equipment to be able to do it in a safe manner. This is similar. It's easy to do. It's feasible. The purpose of the code doesn't state the practical safeguarding of persons and
property as long as it doesn't cost more money.

Previous speakers said it would add cost. We're talking about saving lives.

I urge you to oppose the motion on the floor.

CHAIRWOMAN MANLEY: Thank you.

I'm going to move over to move six, please.

MR. PACE: Yeah, my name is Matt Pace from the San Jose Fire Department speaking for the International Association of Firefighters against this motion. I'd like to call the question.

CHAIRWOMAN MANLEY: I'm sorry. You're out of order, sir, because you began with a statement of for or against.

So if there's someone else that wants to entertain that or not, but otherwise, I actually don't see anyone else at the microphone wanting to speak.

So do you want to go through this exercise of calling the question? We can do that. Otherwise, we can continue on, make sure there's no one else that wants to speak.

All right. Seeing no one else to discuss Motion 70-4 to Reject Second Revision No. 1004, I just want to confirm there's nothing further, Mr. Chair, that you would like to say?
CHAIRMAN JOHNSTON: No, Madam Chair, I have nothing to add to the discussion. Thank you.

CHAIRWOMAN MANLEY: Thank you.

All right. Before we vote let me restate the motion on the floor. It is to Reject Second Revision No. 1004.

To vote please touch the vote button. If you wish to vote in favor 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, vote -- touch no.

Please record your vote now.

Okay. We're going to close the voting period in about five seconds.

All right. Balloting is now closed. Thank you.

All right. We have 272 -- the results of the vote are that we have 272 for the motion recommending the text on screen one and 226 against the motion recommending the text on screen two.

The motion has passed.

(Motion 70-4 to Reject Second Revision No. 1004 passed with a vote of 272 in favor; 226 against.)

CERTIFIED AMENDING MOTION 70-5:
CHAIRWOMAN MANLEY: All right. Now let's proceed with the discussion on Certified Amending Motion 70-5.

Where are you?

MS. HUNTER: Right here.

CHAIRWOMAN MANLEY: Thank you. Okay. I'm sorry.

MS. HUNTER: Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Lights are very bright. Microphone five, please.

MS. HUNTER: Thank you.

I'm Christel Hunter with General Cable, and I'd like to make a motion to Accept Public Comment 1136.

CHAIRWOMAN MANLEY: Thank you.

Is there a motion on the -- excuse me. There is a motion on the floor to Accept Public Comment No. 1136.

Is there a second? Thank you. We do have a second.

Please proceed with the discussion on the motion.

MS. HUNTER: Thank you, Madam Chair.

Again, I'm Chris Hunter with General Cable. I'm speaking in support of the motion.

This language is attempting to return the
definition of a tap conductor back to the form in the 2014 code.

I understand the intent of trying to change the language as it currently appears in the second draft. Unfortunately, we're going to have unintended consequences. No one actually asked for the removal of the words as used in this article, and those are there for a specific reason. They were added when this language was added in the 1999 NEC in order to limit the application of this definition to the rules for tap conductors in Article 240, specifically 240.21. The public input simply asked for the words tap and is defined as a conductor to be removed. And that would have been a good change. Unfortunately, the Panel went a little beyond that and said that removing the words as used in this article was simply editorial. Public Comment 1136 pointed out that this change is not merely editorial, but creates an unintended and far-reaching technical change. The proposals in the '96 NEC when we first tried to add this language were held and were the subject of a task group that looked at this and submitted the proposal for the '99 code to add it. Part of the reason it was held were concerns by the panel that this definition would have an effect on other parts of the code including 725-12, exception 3, service.
conductor in many places of the code.

Now the code making panel said that a definition appears in the .2 section of an article only applies within that article. Unfortunately, that's not true. Neither the style manuals, the supplemental operating procedures, or the NEC limit the application of that to that article. And 90.3 tells us that Chapters 1 through 4 apply generally to all installations.

So this will create confusion, and we should return to the 2014 language. Please support the motion on the floor.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair. Sequence 5 is under code making panel 10's responsibility. I'd like to ask Julian Burns to provide a position and a response, please.

MR. BURNS: Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Let me just recognize the microphone. Microphone four, please.

MR. BURNS: I am Julian Burns. I am
chairman of panel 10. Panel 10 did extensive evaluation. I do want to state that Christel is a little bit off. PI 40.25 specifically said tap conductors and struck through as used in this article a tap conductor is defined as those were struck through. There was a task group within the panel to evaluate this. It came back with an affirmative. The panel discussed it, and the panel accepted that verbiage. Christel was the -- provided Public Comment 1136 on this. It was evaluated during the second revision. It was also unanimous with the panel to not accept this public comment.

I ask you to support the Panel's actions and vote against this CAM.

Thank you.

CHAIRWOMAN MANLEY: Thank you, gentlemen. With that we'll open debate on the motion.

Please provide your name and affiliation and whether you are speaking in support or against the motion.

Microphone one, please.

MR. ANDRE: Thank you, Madam Chair.

My name is Joe Andre. I speak on my own behalf on this one in support of the motion.

Christel has identified a problem here. I
am a member of code panel 5. We deal with grounding conductors. We deal with grounded conductors. Grounding conductors do not have over-current protection in them. Most grounded conductors do not. We don't have a definition for our articles. Without the statement that -- used in this article, in Article 240, this is going to add confusion. The definition absolutely cannot be applied to any of the uses of the tap in Article 250 and probably a lot of other locations.

I ask you to support this motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Further -- at microphone one, please.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski with NEMA. NEMA speaks in support of the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Is there anyone else? All right. I just want to confirm that there's no further discussion on Motion 70-5 to Accept Public Comment No. 1136.

Mr. Chairman, any final comments?

CHAIRMAN JOHNSTON: Thank you, Madam Chair, I have nothing further to add to the discussion.
CHAIRWOMAN MANLEY: All right. Before we vote please let me restate the motion. The motion on the floor is to Accept Public Comment 1136.

To vote please touch the voting buttons. If you wish to vote in favor 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, vote no.

Please record your vote now.

All right. We're going to close the voting period in about five seconds.

And the voting period is now closed. Thank you.

The results are of the vote are 166 for the motion and recommend the text on screen one; 244 against the motion and recommend the text on screen two.

The motion has failed.

(Motion 70-5 to Accept Public Comment No. 1136 failed with a vote of 166 in favor; 244 against.)

CERTIFIED AMENDING MOTION 70-6:

CHAIRWOMAN MANLEY: The next motion on 70 -- 70-6 appeared on our agenda; however, no one has signed in to make the certified amending motion. Therefore in accordance with NFPA Rules (Convention Rules in Section...
2.7) the motion may not be considered by the assembly as a certified amending motion and is removed from the agenda. We will now move on to the next motion.

CERTIFIED AMENDING MOTION 70-7:

CHAIRWOMAN MANLEY: Let's proceed with discussion on Certified Amending Motion 70-7.

Is it microphone one? Thank you, sir.

MR. ANDRE: Yes.

My name is Joe Andre, JFA Consulting, and I rise to recommend acceptance of motion -- Certified Amending Motion 70-7.

CHAIRWOMAN MANLEY: Thank you.

There is a motion on the floor to Reject an Identifiable Part of Second Revision No. 1223.

Is there a second? Thank you. We do have a second.

Please proceed with the discussion on the motion.

MR. ANDRE: Thank you.

I don't know how this even came about. I'm on -- a member of panel 5. What this does is seeks to go back 15 years, five code cycles or undo good work by panel 5 over five different revisions. This wants to revert back to language that was in the 1999 code. The panel has carefully considered proposals and PIs on this
for several code cycles and decided that it needs to be
for more than just voltage drop.

Now here is the conundrum. We didn't get
any proposals or public inputs to do this. As such, we
didn't have anything in a first revision that somebody
could look at. So how did this come about? There was a
single comment by a single code making panel 5 member in
a ballot. That's really, I guess, technically part of
the process, but it's very difficult to get to. It's
not where anybody is going to look, and it really didn't
indicate that it was going to come up again. So I don't
know there's even a vehicle for somebody to make a
comment either for or against a ballot comment. The
fact is most of the panel 5 members didn't know that
this was going to be an issue and didn't have a chance
to prepare for it until we sat down at the code panel
hearings in San Diego. This was passed, and then they
struggled mightily to come up with a panel statement.

The panel statement says increase of the
equipment grounding conductor size due to adjustment or
correction factors is not necessary because of the short
duration of the fault.

Well, there's two things wrong with that
sentence. The first half and the second half. The
first half talks about adjustment of correction factors.
Look at the 2014 language. It says you only have to increase the grounding conductor from the minimum size that has sufficient ampacity for the intended installation. Correction and adjustment factors take into account addressing the minimum size. So if that's what you're doing, you don't have to worry about it anyway.

I'm running out of time. I'm not even going to talk about the technical aspects because we didn't discuss technical aspects. They weren't part of this discussion. I would like to point out though that this will introduce a lot of loopholes for the inspectors for the AHJ in the field to try to address. There's too many ways that people can get around this now.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Sequence No. 7 is under the responsibility of code making panel 5. So I would like to defer to Nathan Phillips, chair of code making panel 5, for a position and response, please.

CHAIRWOMAN MANLEY: All right. I see you back there on microphone four. Please proceed.
MR. PHILLIPS: Thank you.

I am Nathan Phillips. I represent the National Electrical Contractors Association and am chair of panel 5. And I'm speaking in opposition to the motion.

Code making panel 5 discussed Section 250.122(B) at length. At both the first revision and second revision meetings, the action was taken after a full discussion of the technical issues and the clarity of the language. The committee action is intended to remove language that has been subject of repeated PIs and comments over the last several cycles because it is unclear and difficult to enforce.

In taking this action, consideration was given to the insignificant effect of conductor heating on the impedance of equipment grounding conductors and the operation of over-current protective devices. The committee ballot voting reflects consensus on the second revision action.

As chair of the committee, I support the committee action and urge that you oppose the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you. Thank you, gentlemen.

With that we will open up debate on the
motion. Please provide your name and affiliation and whether you are speaking in support of or against the motion.

Let's start with microphone one, please.

MR. HILBERT: Thank you, Madam Chair.

Mark Hilbert speaking for the electrical section who has voted to support the motion.

Thank you.

CHAIRWOMAN MANLEY: All right. I'm going to move over to microphone six, please.

MR. HORNING: Hi. Scott Horning, FP Horning Electrical Contractors. I represent IEC on code panel 5. I'm also speaking against the motion.

We had a lot of debate about this on panel 5. So just think about the technicals for a second. Forget the fact that the 2014 code was extremely confusing for code users, but think about this: If we're saying that if you increase the equipment grounding conductor any time the phase conductors are increased, then what need do we have for table 250.122? We increase the phase conductors for voltage drop. If you do that, then you have to increase the equipment ground conductor size. Otherwise, use the over-current device to size your equipment grounding conductor.

But if any time we increase the phase
conductors, which is what this has led users to believe, then you have to increase the equipment grounding conductor, we don't need 122.

So again, I'm speaking against the motion.

CHAIRWOMAN MANLEY: Thank you.

Microphone one, please.

MR. SAPORITA: Vince Saporita, Saporita Consulting, speaking for the motion.

The panel action may have brought about some unintended consequences. Larger phase conductors installed for reason, not just for voltage drop, will result in greater available short circuit currents. Greater available short circuit currents result in greater currents that must be safely carried by the equipment grounding conductor underground fault conditions. If too much current flows over the equipment grounding conductor, it will overheat to the point where it begins to anneal. When that happens, it will no longer be tight under the lug after if cools back down. When that happens, the ground return path is no longer adequate. The next ground fault may not be cleared by the over-current device, allowing for the worker that touches the case of the equipment to be electrocuted. This concept is not new. It was published decades ago by use to source and is now
detailed in the IAEI book on grounding. The point at which the equipment grounding conductor will no longer be tight under the lug is called its validity rating, and it can be calculated. Look in the IAEI book on grounding if you want to make the calculation.

I urge you to vote for this motion, which may prevent the unintended consequence of an electrocution of an electrical worker.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

I'm going to go over to microphone -- let's see, where was I? Oh -- yeah, I'm going to go back to microphone one. Thanks. Sorry.

MR. HUMPHREY: I'm David Humphrey, speaking in favor of the motion.

I've been an electrical inspector for nearly 30 years now, and whenever we include language such as to account the voltage drop and the inspector has to define the intent of the installer, it effectively guts the section. Because we cannot determine from cite of violation; we'll simply hear it wasn't from voltage drop. Now what do we have left to stand on?

I encourage you to support the motion.

CHAIRWOMAN MANLEY: All right. Sir, can you actually just let me know what your affiliation is or
confirm that it is --

MR. HUMPHREY: I am speaking for myself.

CHAIRWOMAN MANLEY: All right. Thank you.

Microphone six, please. Microphone six.

MS. HUNTER: Thank you.

CHAIRWOMAN MANLEY: Sorry.

MS. HUNTER: Sorry. I saw Bobby up there for a while. Thank you, Madam Chair.

I'm Chris Hunter with General Cable, and I'm speaking against the motion.

Unfortunately, this language will result in some very odd effects. For example, if we have an installation, say our load is 130 amps and we can use a one ought copper, it's good for 150 amps, we'd be required to use a number six equipment grounding conductor. So say we didn't have one ought for some reason, but we had two ought now because we have not used the absolute minimum size, we have to increase the equipment grounding conductor size no matter what. Even though if you look at Table 250.122, we're allowed to use a six gauge copper for over-current device sizes including 110 amps 125, 150, 175 and 200. And we could use conductor sizes including a two gauge copper, one gauge, one ought, two ought, and three ought. All of those would be allowed to use a six gauge. But because
we decided to use a two ought, because that's what we had available, we now have to increase the equipment grounding conductor size to a four gauge. It doesn't make practical sense when you look at how Article 250 is applied. And if you're using a cable assembly, you're now not going to be able to find one that has that increased equipment grounding conductor size.

So one ought and two ought copper cable assemblies will have a six gauge equipment grounding conductor. Now you're actually going to have to go up to a three ought to get that four gauge.

So this is, I think, a -- it is impractical, and it will create confusion and conflict within the industry.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone three, please.

MR. SIMMONS: Thank you.

My name is Phil Simmons, representing myself and speaking for the motion.

I'm also a member of code making panel 5, and I just want to mirror the comments that have been made by the original submitter that the way this issue came before the panel was not acceptable at all. There was no public input that was submitted to the panel.
Rather a panel member went and found a comment by a panel member on a vote. It simply said it's my opinion that this needs to change to address only voltage drop. That's all the technical substantiation that the panel had to undo several code cycles worth of work. It's just incredible that this action was allowed to proceed in the panel. Should have been ruled out of order.

And so if -- if this proposal or the certified amending motion is not accepted, and the language that you see on screen two is accepted, you really gut the effectiveness of this requirement because all somebody has to say to avoid compliance with the -- with increasing the size of the equipment grounding conductor was I just increased the wire size just because I thought I'd like to do that. I have a little extra money in my bank this month, bank account, and I just assume put that in the job. I mean, it can be any kind of ridiculous reason for increasing the wire size, and you've simply gutted the effectiveness of this rule.

So it's really bad code, and I urge you to support the motion.

CHAIRWOMAN MANLEY: Thank you.

Microphone number four, please.

MR. GRAY: Thank you, Madam Chair.

Bobby Gray, Hoyterbuck Electric Contractors
in Seattle, Washington, an alternate member and NEMA representative on code making panel 5. I rise in opposition to the motion.

Code making panel 5 has discussed this provision at length at every panel meeting for the past four cycles. The panel struggled to develop language that is concise, clear and logically consistent.

At the first revision meeting for the 2017 cycle, the panel began to consider the technical merits of the requirement and after a lengthy discussion at the second revision meeting, two-thirds majority of the panel agreed to limit the application of this provision to cases where the phase conductors were increased in size only to compensate for voltage drop. Reasoning is that increases in conductor size due to conduit fill and ambient temperature were made to mitigate the heating effects and protect the conductor insulation by reducing the conductor impedance. Equipment grounding conductors by design only carry current during a fault which should not last more than a few seconds at most. It's not long enough to generate excessive heat and damage the circuit conductors or create excessive impedance. Under catastrophic conditions such as when the over-current protective device fails to operate, damage to the equipment grounding conductor and the other circuit
conductors would likely be extensive. It would not be mitigated by increasing the conductor size of the equipment grounding conductor.

The concept to limit this provision to the effects of voltage drop was introduced in a ballot comment at the first revision and has thus been subject to public reviews in accordance with the regulations. The physics is similar to the effects that occur on the grounding electrode conductor during lightning surges. 250.60.6.8 permits the grounding electrode conductor to be no larger than a number six regardless of the size of the phase conductor. We know the surge currents can be very high, and we desire minimal impedance in the path. CMP 5 accepts the reduce grounding electrode conductor size because it recognizes the conductors are robust and can tolerate surge currents and fault currents without adverse sequences for the short period of time of a fault condition. Similar, the size of equipment grounding conductor taken directly from Table 251.22 is adequate without adjustment for no technical reason.

Thank you for supporting the action of the panel and voting to oppose this motion.

CHAIRWOMAN MANLEY: Thank you.

Microphone one, please.

MR. BURRIS: Thank you.
My name is Jay Burris. I'm representing the Steel Tube Institute of North America.

We agree with the recommended text and please vote in favor.

Thank you.

CHAIRWOMAN MANLEY: All right. I think I'm going to head back over to microphone four, please.

MR. MOHLA: I'm Daleep Mohla. I'm with DCM Electrical Consulting and representing myself. I'm a registered professional engineer in the state of Texas and I'm not speaking on behalf of my organization.

The change -- I've been long-term member of code panel 5, and I agree with the chairman that this has caused consistent confusion in application. Okay.

I'm probably the longest terming member.

The new language provides very clear and concise when it has to be updated as opposed to giving confusing statements at how to do that. One of the purpose of the code is prescriptive requirement, and this new revised wording does that. People who are in favor of the motion, most of them have challenged the process that we did not get enough time or it was introduced without preparation. Even the one person I have a lot of respect for who mentioned that conductor will be a anneal and may not operate later on, they do
not challenge conductor will operate. His job is to trip the device. After a fault is a common practice to check that device and the conductors.

So I urge you to speak -- to vote against the motion.

Thank you.

CHAIRWOMAN MANLEY: All right. Thank you, sir.

Microphone one please.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski with NEMA, and NEMA speaks in support of the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

I think I'll go to microphone two, please.

MR. DANPIER: Thank you, Madam Chair.

Shane Danpier. I call the question.

CHAIRWOMAN MANLEY: Thank you very much.

There is a motion to call the question.

All right. Do we have a second? All right. 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 favor of the motion, touch yes. If you wish to vote against the motion, touch no.
Please record your vote beginning now.

All right. We'll go ahead and close the voting period in about five seconds.

The voting period is now closed. Thank you.

Results of the vote are 273 for the motion to call the question and 28 against the motion to call the question.

The motion has passed.

We will now move to vote.

Before we vote let me restate the motion on the floor. It is to Reject an Identifiable Part of Second Revision No. 1223.

To vote please touch the voting button. If you wish to vote in favor of the motion and recommend the text on screen one, please touch yes. If you wish to vote against the motion and recommend the text on screen two, please vote no.

Please record your vote now.

Okay. So we'll go ahead and close the ballot period in about five seconds.

And the balloting is now closed. Thank you.

All right. We have the results of the vote. 179 for the motion recommending the text on screen one and 138 against the motion recommending the text on screen two.
The motion has passed.

(Motion 70-7 to Reject an Identifiable Part of Second Revision No. 1223 passed with a vote of 179 in favor; 138 against.)

CERTIFIED AMENDING MOTION 70-8:

CHAIRWOMAN MANLEY: Let's now proceed with the discussion on Certified Amending Motion 70-8.

I believe I'm looking at microphone one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for The Vinyl Institute, and I move to approve a certified amending -- Certified Amending Motion 70-8 to Accept Public Comment 1219.

CHAIRWOMAN MANLEY: Thank you.

Is there -- there is a motion on the floor to Accept Public Comment No. 1219.

Is there a second? Thank you. We do have a second.

Please proceed with the discussion on the motion.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for The Vinyl Institute.

What this is, is to add an added safety concern. What we see here is that at present underground service conductors are identified by warning
ribbon, but feeders are not. This was presented to panel 3 several times, and panel 3 decided it was not a good idea. There was an original public input and then several public comments asking the committee to change their opinion. The issue is an issue of safety electrical workers involved. Consider that there is virtually no difference in costs between having a ribbon for just conductor, so having a ribbon for both the conductors and feeders.

I want to point out some of the comments that were received as public comment, the -- for example, one of the public commentators explained that an electrical inspector on a military base, he constantly sees installation damage when there are no ribbons. When there are, there's no damage and consequently no safety issue.

I urge you to support the motion.

Thank you very much.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Okay. Thank you, Madam Chair.

The actual chair Paul Casparro is not with us, but the designated rep to respond on 70-8 is Palmer
Hickman. I'd like to defer to Palmer Hickman for a response and a position, please.

CHAIRWOMAN MANLEY: All right. I think I'm looking at microphone number two.

MR. HICKMAN: Yes.

Palmer Hickman with the IBEW speaking on behalf of panel 3 Chair Paul Casparro. Paul would like the record to speak for itself.

Thank you, Mr. Chairman.

CHAIRWOMAN MANLEY: All right. Thank you, gentlemen.

With that we're going to open debate on the motion. Please provide your name and affiliation and whether you're speaking in support or against the motion.

Oh, my goodness. Let's go ahead and start with microphone three, once you get it back on.

MR. DOLLARD: Yeah, it's a safety issue. But I didn't get hurt, so everything is good. It's not a recordable injury or anything.

My name is Jim Dollard, IBEW Local 98 in Philadelphia. I rise in support of the motion on the floor.

This is an issue that has been brought to panel 3 for many years. And this requirement has
existed for decades for service conductors. There is no feasible or practical reason that we don't include it for feeders. And this doesn't get into feeders that are in duct backs, that are in concrete, but it's a ribbon. So if I've got 100 foot run of UF cable or PVC conduit buried at 18 inches, what is the cost for putting a ribbon 12 inches above that? Imagine yourself, you bought a home, and the home has a detached garage, and you know there's a feeder going from the house out to the garage. If you were digging to plant shrubs or other, and you hit red tape. And you pulled it up, and it said buried electrical line, you would stop. This is an issue that at some point I'm certain the National Electrical Code is going to embrace. We do it for service conductors. We should do it for feeders as well.

I ask you to support the motion on the floor.

Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Thank you.

Moving over to microphone number four, please.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski, NEMA, and NEMA speaks in opposition to the motion.
Thank you.

CHAIRWOMAN MANLEY: All right. Is there anyone else who would like to speak?

Okay. Seeing no further discussion on Motion 70-8 to Accept Public Comment No. 1219, I'll just confirm, Mr. Chair, nothing else to say?

CHAIRMAN JOHNSTON: No, Madam Chair. I have nothing else to add to the discussion.

CHAIRWOMAN MANLEY: All right. Thank you.

Before we vote let me restate the motion.

The motion on the floor is to Accept Public Comment No. 1219.

To vote touch voting the button. If you wish to vote in favor of the motion and recommend the text on screen one, vote yes. If you wish to vote against the motion and recommend the text on screen two, touch no.

Please record your vote now.

All right. We're going to close the voting period in about five seconds.

And the voting period is now closed. Thank you.

Results of the vote are: Wow. Let's go 148 for the motion recommending the text on screen one; 158 against the motion and recommending the text on screen...
two.

This motion has failed.
(Motion 70-8 to Accept Public Comment No. 1219 failed with a vote of 148 in favor; 158 against.)

CERTIFIED AMENDING MOTION 70-9 & 70-10:

CHAIRWOMAN MANLEY: All right. The next two motions on 70 -- NFPA 70, 70-9 and 70-10 appeared on our agenda; however, the authorized maker of the motion or their designated representative has notified NFPA that they no longer wish to pursue these motions. Therefore, in accordance with NFPA Rules (Convention Rules of Section 2.7), the motions may not be considered by the assembly and are removed from the agenda.

CERTIFIED AMENDING MOTION 70-11:

CHAIRWOMAN MANLEY: We will no move on to the next motion, which is Certified Amending Motion 70-11.

All right. I think I'm looking over at microphone three, sir.

MR. LINDSEY: Thank you, Madam Chair.

My name is Travis Lindsey, Travis Lindsey Consulting Services, Inc.

I would like to introduce Certified Amending Motion 70-11 to support comment 1401.
CHAIRWOMAN MANLEY: Thank you.

There is a motion on the floor to Accept Public Comment No. 1401.

Is there a second? Wonderful. We do have a second.

Please proceed with the discussion on the motion.

MR. LINDSEY: Thank you.

This is about the table 315.10(B)(3)(C) in the 2014 code, which has to do with sunlight and temperature adjustment for conductors over rooftops.

This research with the research that established this table was generated by (inaudible) Development Association. I actually did the installation, but it was overviewed by Underwriters Laboratories. As a matter of fact, Underwriters laboratories in two separate fact-findings investigations created what would be the research, provided oversight for the research and all the requirements for all of the technicalities included in the research. All that I did was install and monitor and provide the information to Underwriters Laboratories. The subsequent fact-finding investigation, and there was a supplemental fact-finding investigation, is a very high quality research project.
that was completed. It was accepted for the 2014 code
and established this table. You will hear our opponents
stand up and say that there are other research products
that have been done; that there was a technical
committee that was established after the acceptance in
2014 of this table.

First, it's befuddling that we required a
technical committee to study something that had just
been adopted into the National Electrical Code. And
secondly, you will hear from other experts the flaws in
the other research projects that may have been done.

I would challenge anyone to find the flaws
in the research that was done by -- by Underwriters
Laboratories. Underwriters Laboratories is the premium
in the industry. It's the standard. It's what we all
rely on. So ignoring it is probably the worst thing you
could probably do.

When conductors are on rooftops, they heat
up. We know that. The National Electrical Code already
requires that temperature is adjusted, several tables
and several code sections dealing with adjustments for
temperatures. The code doesn't care where the
temperature . It doesn't matter if it's in a boiler
room. It doesn't matter if it's across the rooftop.
It's the same temperature.
So doing something different over rooftops does not make any sense at all.

Thank you very much.

CHAIRWOMAN MANLEY: Thank you very much.

Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Sequence 11 falls under code panel 6's responsibility. So I'd like to defer to the chair of code panel 6, Mike Smith, for a position and response, please.

CHAIRWOMAN MANLEY: All right. I see him back there at microphone four, please.

MR. SMITH: Thank you very much, Madam Chair.

I'm Michael Smith. I'm the chairman of code panel number 6, and I represent National Electrical Contractors Association. I am -- obviously we're against the motion. I support code panel number 6's actions on the changes in Article 310.15(B). These changes reflect the recommendation of the task force group assembled by the correlated committee, which produced PI 33.73. This then created the first revision of 1503.

In -- in respect for all of the work that
has been done over the past several code cycles and the
information that was brought to the code panels, I would
like to make the statement that there was no actual
failures of any conductors that were installed over the
past 30 to 40 years above rooftops. All of a sudden now
we have some other, you know, recommendations and some
good supporting documentation that came from the
correlating committee's task group.

    I thank you very much for your time.

CHAIRWOMAN MANLEY: Thank you. Thank you, gentlemen.

    With that we'll open up debate on the
motion. Please provide your name and affiliation and
whether you're speaking in support or against the
motion.

    Microphone three, please.

    MR. ROHATGI: I'm Dr. Pradeep Rohatgi. I
serve as a distinguished professor and director of UWM
Composite Center at University Wisconsin-Milwaukee, and
I speak in favor of the motion.

    I have reviewed and analyzed the different
reports which have been generated on the heating of
conductors and its influence on the insulation
temperature since the issue of safety is at stake. A
report by UNN (inaudible) is flawed; that since it has a
four inch vertical section at the end of three inch wireways providing a chimney effect, which will cool down the wireways.

In addition, common wireways were installed at the end, and the loading current was much lower than it should have been, indicating lower temperatures than would have been generated. The lines by Dr. Shep, again from the University of Wisconsin, are also flawed because their numerical simulation does not take into act the variation of several physical properties with time and temperature. Wrong inputs in simulation always lead to wrong outputs.

The most careful work done on this subject is the two reports, 2011 and 2012, by Underwriters Laboratories, UL. These are the most accurate, most comprehensive and the most carefully done reports. And these reports indicate that you do have a significant temperature rise even above the 7/8 inch distance. It is impossible to have zero temperature rise shortly after 7/8 inch height certainly. These reports also indicate that on the roof, you could have temperature rise as much as 60 degrees. And even above 60 inches, you could have temperature rise as much as 40 degrees.

Therefore, I strongly support the motion since there's a possibility of overheating of the
insulation, which could lead to short circuits and fires.

CHAIRWOMAN MANLEY: Thank you.

Let's go over to microphone four, please.

MR. HILBERT: Thank you, Madam Chair.

Mark Hilbert in representing the electrical section. The section members have voted to oppose the motion.

Thank you.

CHAIRWOMAN MANLEY: All right.

Back to microphone three, please.

MR. BRENDER: Thank you, Chairman.

I'd like to address certain comments that were made regarding 30 years of no failure on a rooftop.

CHAIRWOMAN MANLEY: Sir, I'm sorry. Can you identify yourself?

MR. BRENDER: David Brender. I'm with Copper Development Association.

CHAIRWOMAN MANLEY: Speaking?

MR. BRENDER: I'm speaking in favor of the motion.

CHAIRWOMAN MANLEY: Thank you very much, sir.

MR. BRENDER: The comment was made that there's been no failures in 30 to 40 years. That's
Absolutely belied by rhetorical information that we were given by several contractors that there have been failures that were attributed. In fact, one fire that was attributed to overheating conductors on a rooftop. This not reported. It's not in any logical sequence. It's not reported through any government agency.

So these failures that do occur are rhetorical in nature, and there's no factual record to go back to, to check on it.

I would like to remind everyone that the purpose of this table was temperature measurement only. The conductors were unloaded. They were placed on a rooftop, and they were sealed on both ends. And the purpose was solely to measure temperature. The temperature, as Travis Lindsey has stated, is no different on a rooftop as it would be in a boiler room.

The code already requires that you must adjust the ampacity based on conductor temperature.

You further -- I'd like to state that the data was certified UL. It was resulting in the fact-finding, as stated. The panel was not -- the panel's opposition was not independently reviewed. The reports it viewed in opposition were not verified by a third-party independent organization. And as far as we are concerned personally that the panel's work was
fought.

Solar heating rises cond -- and conduits is no different than any other requirement that's involved in temperature, no other location. If you place a tool on a rooftop, you know it's going to get hot. We were trying to merely state how hot, so that you could then apply all the adjustment factors.

One other side comment regarding XHHW2 conductor, which was not addressed directly by this finding, and that is it's still a 90-degree conductor. There's no reason that I could see that XHHW2 should be accepted from any degrading.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone number two, please.

MR. DOLLARD: Thank you, Madam Chair.

My name is Jim Dollard, IBEW Local 98 in Philadelphia, and I rise in opposition to the motion on the floor.

As was previously stated, the -- the calling committee was asked by the code making panel to develop an independent task group and make a determination. We did just that. I cochaired that group with Larry Ayer. We involved Ph.D.s in thermal sciences. We got the best of the best. And as you heard the previous speaker
state that the UL numbers were the best, well, that's the numbers that we use. Okay. We use their temperatures, and it was in modelling software that NASA uses. And I'm not going to challenge NASA when it comes to heat.

We tend to be conservative, and you know what we do the next cycle? We get more conservative. And the next cycle we get more conservative. And before you know it we're at where we are right now. There is no documented failures. Our research showed that table 315.16 originated with a guy named Kenley. His work began in 1894. In 1901 he published tables on code grade rubber, and the Underwriters at that time took his values at 50 percent because they wanted to be conservative. Those values were on code grade rubber. And if you compare those tables to what we have today, they're virtually the same.

We used a number, okay, we put 7/8 inch off the rooftop, and it was mentioned in the section yesterday where did the panel get that? Science tells us if the conduit is on the roof, you've got a problem. We chose 7/8 because that's probably the lowest installation on a piece of unistrut that we would have. If we were to believe that this is a problem, we can't have anything in the sun. This is not a problem.
Today's insulations do a terrific job, an absolutely terrific job. If this were true, if we clearly needed this, rooftops all across the United States of America would be on fire. When we walk out of here in Vegas, it's hot. I'm from Philadelphia. I thought that was hot. This is hot. I don't see anything burning on the skyline.

Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Thank you.

Microphone three, please.

MR. SIMMONS: Yeah, thank you.

My name is Phil Simmons speaking for myself and in favor of the motion.

The previous speaker just mentioned the 7/8 inch rule, and while I'm not a scientist and I'm not a Ph.D., which somebody said means bio higher and deeper, is that what some -- that means -- but in any regard I'm neither a scientist nor a Ph.D. But I am an electrician, and I've been one for a long time. And I'm a retired member of the IBEW. I don't know any of my brothers or sisters that would even think about going out and picking up a stick of two inch rigged conduit that's been laying in the sun for an hour or two without gloves. They know it gets hot. And it's almost -- pardon me for saying -- almost ridiculous to think that
at 7/8 of an inch, you have to add 60 degrees Farenheit to the temperature, just outside air temperature. If you raise it an 1/8 of an inch to 1 inch, it completely goes away. I think that most thinking people would say that just doesn't make sense.

The present language in the 2014 is clear. It's enforceable. It's easily understood. And several people have objected to the requirement to consider solar exposure. The fact that we might not like it certainly doesn't mean it's not realistic and that it doesn't exist.

One other comment about the exception, if you read through the -- the text that you would have gotten from NFPA, you'll see that this particular certified amending motion strikes out the permission to use or to exclude XHAW-2 from sunlight exposure, and that would revert the language back to the 2011 NEC for that particular element. And I just want to share with everybody that if you put XHAW-2 conductors in conduit or you use cable that has XHAW-2 conductors, you run it through a hot environment like in a boiler room or you run it up the side of a building, and it's in a really hot environment. You have to de-rate it. Now where's the logic that says if you put that in conduit in the rooftop you don't have to? So a part of the rules in
310.15(B)(2), you have to de-rate at a part you wouldn't for XHAW-2. It really makes no sense.

Thank you.

CHAIRWOMAN MANLEY: All right. Thank you.

Let's go with microphone six, please.

MR. AYER: Thank you.

My name is Larry Ayer representing Independent Electrical Contractors, and I speak in opposition to the motion.

First, I'd like to say as part of the cochair with Jim Dollard on this task group, we did put together an independent task group, and we allowed the people from the Copper Development Association and the Aluminum Association and other parties to come on to our conference calls and speak and indicate and tell us what their position was and to provide all supporting documents so we could provide an independent final solution to this problem that panel 6 has asked us to do. The task group members that we put on this group, we chose them particularly from warm areas of the country. We had people from Alabama, Las Vegas, Florida. We had people representing NEMA, IAIEC, IAEI. We also put on Dave Deney who was apart of the original UL fact-finding report, and we also had Intertech on there. And if you look at this -- the supporters
basically are saying, we have -- they went and did the
testing on the roof and put a temperature probe inside
the conduit and said we have 80 degrees. So if we put
current flow in there, it must go above 90, so we have a
problem. The other researchers such as what we did for
computer modelling and the other people from the
University of Nevada Las Vegas, they did similar testing
what we did, actual real-world testing, with current
flow. And what did we find? We found that it's
extremely difficult to determine the heat transfer on a
rooftop. It is different -- the gentleman before us has
said that a boiler room is the same as a rooftop, and
that's not true at all. When you get to a rooftop, you
have wind, and a small amount of wind, even 2.5 miles an
hour, will negate the effects of the sunlight. There's
internal air flow inside of the conduit that helps
reduce that temperature. And we also found that as
conduits on the roof heat up, eventually they act as an
insulator and push back on the temperature trying to get
inside the conduit.

So as Jim Dollard said, we came up with a
7/8 of an inch just to get air flow under the conduit
and eliminate any problems that arise.

So we urge you to vote against this motion.

CHAIRWOMAN MANLEY: Thank you.
Microphone five, please.

MR. STRAMERO: George Stramero, AFC Cable Systems, speaking in support of the motion.

Just want to point out, you know, Underwriters Laboratories Standard 4703 for photovoltaic wire covers wires temperatures rated 90 degree C, 105, 125 C and 150 degrees C. We're talking about photovoltaic systems up on rooftops, and there's requirements for high temperature wire in that application. It's no different from wiring on a rooftop supplying an air conditioning system.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Moving over to microphone number four, please.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski with NEMA, and NEMA speaks in opposition to the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Back to microphone number three, please.

MR. BRENDRER: David Brender, Copper Development Association again.

I'd like the audience to recognize that we never claimed the entire southwest would be on fire.
That's a rather dramatic statement made for dramatic effect. In fact, we never claimed any fires. The purpose of the entire experiment predated my position at Carney. It was originally designed because IAEI inspectors had approached us and said they have no way to enforce temperature de-rating because there's no reliable way to know what the temperature is. The experiment was started with the intention of merely measuring temperature, and that's what it did. That's why conductors were unloaded. We never claimed a fire. We don't claim any failures, although many have been reported to us.

So I would like those comments -- my comments to reflect that this was an experiment that was done for enforcement purposes to provide temperature data, and that's what it does.

Thank you.

CHAIRWOMAN MANLEY: All right. I'm going to go with microphone number two, please.

MR. DANPIER: Thank you, Madam Chair.

Shane Danpier, and I rise to call the question.

CHAIRWOMAN MANLEY: All right. I will note there are a couple of people that were still standing at the microphone, but we're going to go ahead and proceed
with the vote to call the question.

We have a second.

And in order to vote on this motion, please scroll down to the bottom of your tablet to vote. If you wish to vote in favor of the motion, touch yes. If you wish to vote against the motion, touch no.

Please record your vote now.

All right. We're going to close the voting period in about five seconds.

And we are now closed.

The results of the vote are, let's see, 267 for the motion to call the question and 34 against the motion to call the question.

The motion has passed.

So we are going to move to a vote, unless, Mr. Chair, you have anything further you would like to add?

CHAIRMAN JOHNSTON: No, thank you, Madam Chair. I don't have anything to add to the discussion.

CHAIRWOMAN MANLEY: All right. Before we vote please let me restate the motion. The motion on the floor is Accept Public Comment No. 1401.

To vote touch the vote button. If you wish to vote in favor 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.

All right. We're closing the balloting period in about five seconds.

And we're now closed. Thank you.

The results of the vote are 63 in favor of the motion recommending the text on screen one and 207 against the motion recommending the text on screen two.

The motion has failed.

Almost said the wrong one.

(Motion 70-11 to Accept Public Comment No. 1401 failed with a vote of 63 in favor; 207 against.)

CERTIFIED AMENDING MOTION 70-12:

CHAIRWOMAN MANLEY: All right. We're going to go ahead and move to the next motion on NFPA 70 just quickly. The next motion on NFPA 70-12 appeared on our agenda; however, the authorized maker of the motion or their designated representative has notified NFPA that they no longer wish to pursue the 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 take a short ten-minute break.

Before we proceed with the next motion.
Thank you very much.

(A break was taken from 2:33 p.m. through 2:46 p.m.)

CERTIFIED AMENDING MOTION 70-13:

CHAIRWOMAN MANLEY: Microphone five, please.

Thank you for being ready to go.

MR. HARTWELL: Thank you, Madam Chair.

Pursuant to Sequence No. 70-13. My name is Fred Hartwell, Hartwell Electrical Services Incorporated. And I move to Reject Second Revision No. 2110.

CHAIRWOMAN MANLEY: Thank you. There is a motion on the floor to Reject Second Revision No. 2110. Is there a second? All right. We do have a second.

Please proceed with the discussion on the motion, sir.

MR. HARTWELL: Thank you.

This motion addresses a very unfortunate development that presents a major disincentive to the use of a Chapter 3 wiring method with almost nonexistent substantiation.

Cable bus has operated with permission to use free air ampacities since it entered the code 50 years ago. To my knowledge, and I have ROPs, ROCs,
TCRs, TCDs going back to the '68 edition, and there hasn't even been a proposal to change that allowance until this cycle, and there was a public input to basically remove one-third of that ampacity by using cable tray ampacities. That has -- the substantiation for that indicated a problem because somebody landed cable bus at free air ampacities on to -- apparently on the switch gear or something. They didn't really specify where it -- they were -- in so landing it, they were plainly committing a violation of 110.14(C) when they landed it. Since when do we remove one-third of the allowed ampacity of a wiring method because somebody committed a code violation when they landed it? This is unbelievable.

The -- that one sentence was all was there to support it, and the panel rejected it at the proposal stage. Now there was -- was there a possible problem with the termination? Sure. IAEI had a public input to put informational notes in that pointed to other -- the 110.14(C) and 110.40 determinations. Those were accepted, and they stand.

At the comments stage then, the submitter came back and said, oh, well, why didn't you put in my adjustments to look like cable tray? And the panel went and accepted it. Now remember these new provisions are
conditioned on term -- for 2000 volts and less on the literal text. They're not conditioned for meeting voltage at all. When cable bus conductors are terminated with the applicable code rules, they perform as well today as they did in '68. This is a -- turns out is motivated in part by competitive considerations by other wiring methods, and it is simply run and has no support.

Thank you.

CHAIRWOMAN MANLEY: Thank you very much. It seems that Mr. Johnston has stepped away and not yet returned, but I have it on good authority that we was going to ask the chair of panel 8 to provide the statement on the Panel's position, and so I'm going to ask that that chair to step forward at this time.

MR. COGDON: I'm at mic number four.

CHAIRMAN OWEN: Thank you so much. I'm going to kick it over to microphone four.

MR. COGDON: Thank you, Madam Chair.

Larry Cogdon. I'm chair of CMP 8, representing NEKA, and I'm here speaking to oppose the Motion Sequence 70-13.

What panel 8 was looking at was the -- some people are not taking into consideration the termination temperatures when they land cable bus terminations where
as they do with cable tray. Cable tray and cable bus are both installed in very similar situations. Mr. Hartwell has a good point that in free air the conductors are rated at a higher temperature; however, I'm not sure that that temperature rating has been adhered to properly.

So what our decision was, was to bring the ratings of the conductors of cable bus to the same as cable tray; thus, eliminating that problem and not solving the problem of terminations adhering to the requirements of the NEC.

Again, we oppose that motion. Thank you.

CHAIRWOMAN MANLEY: Thank you so much.

With that we're going to go ahead and open up debate on the motion. Please provide your name and affiliation and whether you are speaking in support or against the motion.

I think we'll go ahead and start with microphone three. Thank you.

MR. STAGMILLER: Thank you, Madam Chair.

My name is Dan Stagmiller, and I'm from MP Huskey, and I support the motion.

Cable bus is a free air rated system from the NEC article on cable bus, and we designed the system per that article. We strictly adhere to the ampacity
ratings and the free air table. We do not take liberties with that table, and so in doing so we designed a system with that in mind.

So comparing cable bus to cable tray is inaccurate. Like I said, this is a designed and engineered system that throughout the process we get approval from our customers' engineer to proceed to manufacturing. And in doing so, we get the environmental specifications, ambient air temperature, operating temperature of our terminations, of the surrounding environment, and any other environmental conditions that we need to adhere to that would potentially de-rate or change or de-rate the free air table.

The unintended consequences of this standard change would virtually eliminate our product from the market because by using free air opposed to rating it like cable tray, we would eliminate any cost competitive advantage with copper compared to tray or conduit would be eliminated. And therefore, it would eliminate our product from the market.

Furthermore, with cable bus being apart of the NEC for decades, the free air table being part of the NEC for decades, and with countless installations during that same time, we have not seen any incidents,
safety recordable incidents or anything substantiating
this change.

Thank you, and I hope you support the
motion.

CHAIRWOMAN MANLEY: All right. Thank you.

Microphone number two, please.

MR. DOUGLAS: My name is Steve Douglas. I'm
speaking in opposition of the Certified Amended Motion
70-13. I am the submitter of the original public input.
I serve on code making panel 8, and I'm the chair of the
committee developing the new U.S. standard on cable bus.

The public input was to address an
inconsistency between the existing available ampacities
limitations for single conductor cables installed in
cable tray with that of conductors installed in cable
bus. The existing cable tray requirements in Article
392.80 allows free air ampacities for single conductors
with 100 percent or greater space and would not
terminate at distribution equipment.

This is the same for cable bus. So you can
have cable bus that has free air ampacity; that as long
as it has to terminate on the distribution equipment.
The allowable ampacity for single conductor cables in
cable tray terminating at distribution equipment is
limited to aligning with the size of conductors used
during the temperature testing in the UL standards for the represented distributed equipment. Without this reduction and allowable ampacity for single conductor cables, installation will result in conductors considerably smaller than that was used during the UL listing the temperature testing of the distribution equipment, exposing the distribution equipment from possible damage of overheating of the terminations.

So again, it isn't a case of whether or not the cable bus can handle the current. It's whether the equipment you're connecting to it can handle the small conductor and the effects of the heat on it.

The installation of cable bus is similar to that of cable, single conductor cables and cable tray. Both installations have or can have ventilated enclosures, 100 percent or greater spacing and the same cable configurations. Adding a name on the side of the installation and calling it cable bus should not result in a smaller conductor used in the installation.

The second revision wording agreed on by code making panel 8, after extensive discussion, will align with the existing correct conductor sizes of cable tray with that of cable bus in Article 370.08. For this reason I encourage you to acknowledge the hard work of code making panel 8 and vote in opposition of certified
 motion No. 70-13.

CHAIRWOMAN MANLEY: Sir, can you just let me know your affiliation?

MR. DOUGLAS: I'm with QPS Evaluation Services.

CHAIRWOMAN MANLEY: Thank you.

Let's go with microphone number one, please.

MR. MILLER: My name is Mike Miller. I'm with MDF Cable Bus Systems. I'm in favor of the motion.

Voting for the motion will remove an unqualified restriction on cable bus. As the language is currently written, as they've been talking about, it aligns the standards of cable bus with cable tray. These are entirely two different products. They are correct. They are similarly installed, but as far as how they're developed and how they're designed is entirely two different procedures.

Cable bus is developed in '57 it was introduced in the NEC in '69 as a very well track record of suitable installations without failure. I can attest for that. Our company's being manufacturing the product for 27 years. Some of our personnel that have been involved with the cable bus have been involved with cable bus even before that. So you're looking at almost a 40-year history where we have not seen any kind of
issues relating to overheating of the cable bus or
failure of the bus due to limitations.

Going to the differences of cable bus and
cable tray, cable tray is basically that. It's a tray
they put in cables. Sure they can maintain spacing.
You can put any kind of cables into the system, any size
cables into the system, and they have to file the
ratings per the NEC.

The difference is a cable bus is an
generated product. It's designed to meet the client's
specifications. They're short circuit tested. They're
heat rise tested. Their currents are tested. All of
these items are combined to make a product that is
designed and engineered to suit the customer's needs.

Basically all those tests validate the
design to where we can use the free air ampacity just as
indicated in the NEC and has been for, you know, since
'69.

So I ask everyone here to please vote for
the motion.

Thank you, Ms. Chairman.

CHAIRWOMAN MANLEY: Thank you very much.

Microphone number four, please.

MR. HILBERT: Thank you, Madam Chair.

Mike Hilbert representing the electrical
section, and this section has voted to oppose the motion.

Thank you.

CHAIRWOMAN MANLEY: All right.

Let's go to microphone five, please.

MR. HOTEY: My name is Mark Hotey. I work for Underwriters Laboratories, but I'm speaking for myself, and I'm in support of the motion.

When we make changes to various sections and articles in the NEC, we have to be real careful about what we're doing, and -- and provide the appropriate information and the background to make those changes. And I -- I caution people when they do something like this because in the cable tray application, for example, we've had issues in the past using Table 310.17. For example, let's say that I'm going to put a 500 kcmil conductor in a cable tray using the free air ampacity. It's 610 amperes. Now the termination for whatever equipment you're going to be connecting it to is going to be based upon Table 310.16, which means that you're limited to 380 amperes at the termination. Now you can use the free air application, but you can't terminate it more than what the bus bar is listed for.

So if I had a 610 ampere, 500 kcmil conductor, then I would have to split that into twin
350s that are good for 310 amperes a piece to total the
620 amperes that you have on the 500 kcmil conductor.

Now in -- in -- in this table and this text
that they're trying to put into 370, the same as what's
been put into 390 too for cable trays it says 65 percent
or 75 percent, but even that can't be terminated on the
bus bar of the equipment because it's rated at usually a
testing value of the ampacity from Table 310.16.

So I -- I hesitate putting this into the
code until we have those things spelled out. Too many
people follow the code and don't really understand
things such as termination when the equipment is only
listed at the ampacity termination in Table 310.16.

Thank you. Again, I'm in support of the
motion.

CHAIRWOMAN MANLEY: Thank you very much.

Microphone four, please.

MR. LLOYD: Richard Lloyd speaking for
myself. I'm in opposition of the motion. I'm on code
panel 8. I'm representing myself, as I said. I also
consult for various different groups. Been on panel 8
for years.

I agree with Mark Hotey and what he said,
even though I'm against the proposal. We've been
dealing with cable bus on panel 8 as long as I've been
there. And that's a long time. And we haven't had any 
input from that industry. This proposal was put in. It 
was accepted by the panel. We got no input from that 
industry. And I think they acted with good faith. The 
electrical section heard these arguments on Tuesday 
extensive, and they voted to support the committee. I 
would intreat the industry to come through under the 
normal code process and give us substantiation for the 
free area and termination process that they have found 
to be safe.

But for -- to do it in this body at this 
time, I think is wrong. So I support the committee. I 
support the electrical section, and I'm against the 
motion 70-13.

CHAIRWOMAN MANLEY: Thank you.

Microphone five, please.

MR. LUKOVIC: Yes.

My name is Velko Lukovic. I'm here on 
behalf of Advanced Cable Bus Incorporated, and I would 
like to extend, first of all, what cable bus is. We did 
hear earlier that it is an engineered system. It is 
also a system that is using the IEEE 37.23 as a 
guideline. The ampacity tables that are in the IPCA, 
okay, that are identical or close to the tables for free 
air rating in the National Electrical Code, okay.
In the design process, we do ask that we do know what kind of equipment do we connect to, what the temperature rating supposed to be. There is different ratings that are applied depending on the ampacity requirements, the number of cables, solar D rating and other things that are applied as an engineer system.

So it's not something like cable tray where it is a supported cables that you literally take the ampacity from the electrical code tables. We do on our end take care of proper engineering. Therefore, there is no heating that is going to be applied on the equipment. In other words, we do not use a cable bus. Or I should say the equipment as a heat sink for cable bus. Okay. That's the portion of the engineering that is taken exactly with each of the requirement.

The other issue is that cable tray with maintained spacing of cables is allowed to use actually a free air rating that cable bus uses. Okay. In our case we 100 percent of the time use cables that have a minimum one cable diameter between conductors. So that table is used correctly. And in the past over 50 years, we didn't have any issues with the systems. Okay.

I do thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone two, are you ready to speak?
MR. DUBBUS: Steve Dubbus from QPS Evaluation Services, speaking in opposition to the motion.

One thing that we need to keep in mind is that if we compare cable tray with cable bus, and we have an installation that appears very similar, same size cable, same size separation but mentally the enclosure, but we call it a cable bus. It now has a higher ampacity. The thing that that doesn't take into account was how that equipment was tested that it's connected to. The last speaker mentioned that they don't use the cable bus as a heat sink. That's exactly wrong. The equipment itself uses the cable to dissipate heat off the equipment. That's the way it is. And the UL standards for the distribution equipment require that a conductor be a certain size when they do the temperature test. Installing the conductors with free air ampacity, whether it's cable tray or cable bus, is going to result in the conductor smaller than was used during the testing of that distribution equipment, and as a result, can cause problems with heating on those terminations.

Thank you.

CHAIRWOMAN MANLEY: All right.

Microphone one, please.
MR. MILLER: My name is Mike Miller with MDF Cable Bus Systems. I am for the motion.

One additional notation I wanted to make was I was on the IEEE panel that was recently updated for the cover of metal enclosed bus ways, and by voting in favor of this motion is going to keep the NEC standard in line with the IEEE standard. By voting against the motion, you're going to have two standards that are misaligned at that point.

CHAIRWOMAN MANLEY: All right. Thank you.

Microphone five, please.

MR. HARTWELL: Thank you. Fred Hartwell, Hartwell Electrical Services Incorporated, speaking in favor of the motion.

A couple things to add. The speaker mentioned the history in the -- in this cycle. I want to point out that the only substantiation has gone to the terminations, the -- that's it. Even at this meeting, there's no -- been no challenge to the validity of the free air limitations here. And frankly, if such arguments were raised, they really would be improper because they never came to the panel. The panel never reviewed that. This is absolutely wrong. It is fundamentally wrong to hold the entire cable bus assembly over its entire length hostage to failure to
apply 110.14(C) to the terminations. That is just wrong. And, you know, in this very cycle, code panel 2, you know where do we see cable bus use? We see it used for high capacity industrial theaters. Panel 2 in this cycle is including language in 2.15(2)(A)(1) specifically addressing an issue where you have -- and this is a typical industrial situation, where you have one ampacity calculation that applies over the length of the run that is significantly higher than what you need a determination and how you would go about making a transition from those -- from point A to point B. And it is ironic that in this cycle -- if this motion fails, in this cycle, we will have a provision in 2.15(2)(A)(1) that expressly provides for this type of a transition to do it safely and to meet all requirements at -- yet in 370.80, oh, sorry, your entire allowable ampacity over the length of your run is diminished by a third with no observable technical substantiation.

This is a competitive issue, and it's simply not going to stand close examination of the Standards Council.

CHAIRWOMAN MANLEY: All right. Microphone number three, please.

MR. CROUSHORE: Thank you. Thank you, Madam Chair.
My name is Timothy Croushore. I am standing in support of this motion. I work for First Energy Technologies, but my comments are my own.

The big difference between cable bus and cable tray is what's already been mentioned. A cable bus system is an engineered and tested system at a certain ampacity; where a cable tray system is an installed system with conductors laid in by the installing electrician or electrical contractor. The issue with terminations in this section in this proposal does not vitiate 110.14(C). That is still an issue for cable bus. The cable bus individuals need to engineer the system in such that the terminations do not violate 110.14(C) and the ampacity rating of the terminations at 75 degrees C. They do that.

It's the issue -- the difference between an engineered and tested system versus one that is field installed, and that's why the ampacities are the way they are in the cable bus article.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone two, please.

MR. DOLLARD: Thank you, Madam Chair.

My name is Jim Dollard, IBEW Local 98 in Philadelphia. I call the question.
CHAIRWOMAN MANLEY: All right. There is a motion to call the question.

Is there a second? We do have a second.

In order to vote on this motion, please scroll down to the bottom of your tablet to vote. If you wish to vote in favor of the motion, touch yes. If you wish to vote against the motion, touch no.

Please record your vote beginning now.

All right. We're going to close the voting in about five seconds.

And the balloting is now closed.

Well, all right, let's see. Thank you very much. The results of the vote are 327 for the motion to call the question and 6 against the motion to call the question.

The motion to call the question has passed.

We are going to move directly to vote, but before we vote I want to restate the motion. The motion on the floor is Reject Second Revision No. 2110.

To vote touch the vote button. If you wish to vote in favor 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.

We're going to close the vote in about five
seconds.

All right. Balloting is now closed. Thank you.

The results of the vote are 151 for the motion and recommend the text on screen one; 160 against the motion and recommend the text on screen two.

The motion has failed.

(Motion 70-13 to Reject Second Revision No. 2110 failed with a vote of 151 in favor; 160 against.)

CHAIRWOMAN MANLEY: All right. We are going to proceed with the discussion on Certified Amending Motion 70-14. But I've been told that we just need to make a small adjustment to what's going to be shown on the screen, so we're going have a bit of a small break.

Two minutes, guys. So...

(A break was taken from 3:16 p.m. through 3:22 p.m.)

CERTIFIED AMENDING MOTION 70-14:

CHAIRMAN OWEN: The correction that has been made is on the legislative text if the next motion passes. We have not yet had that motion moved. So we're going to go ahead and just start right from the beginning.

So I'm looking for someone to proceed with
the discussion on Certified Amending Motion 70-14. I think I'm looking over at mic one. Thank you.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski, National Electrical Manufacturers Association, and I move to support CAM 70-14 and to Accept Public Comment 834.

CHAIRMAN OWEN: Thank you, and there is a second for the motion on the floor to Accept Public Comment 834.

Again, I want to know that what should be coming up on the screen momentarily is a small correction to the legislative text on the -- if the motion passes. And so this is slightly different than what you may see on your voting devices and/or posted on the NFPA website, but we felt it was critical to get you the most current and up-to-date information.

Anyway, moving on. Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Thank you.

CHAIRWOMAN MANLEY: I'm sorry. There's a point of order.

UNIDENTIFIED AUDIENCE SPEAKER: The maker of the motion should not --

CHAIRWOMAN MANLEY: You're right. I jumped ahead. I'm very sorry. It was an accident. Go on.
MR. BACLAWSKI: Thank you, Madam Chair.

NEMA speaks in support of the motion, and the wording in public comment 834 should be accepted.

During the panel action on this summit, the panel supported public comment 834, but the proposed NEMA wording was modified. The resultant wording would have permitted 16 or 18 gauge conductors to leave the cabinet without restricting them to flexible cords or jacketed multi-conductor cable assemblies.

During the voting, NEMA and others voted against the action and pointed out that the deletion of the words, and I quote, "where installed in a cabinet or enclosure," closed quote, would have allowed the use of 18 or 16 gauge wires for branch circuit wiring to motors. No substantiation was submitted to relax the requirement in 310.1.06 limiting branch circuit wiring to 14 gauge and larger.

NEMA did not request deletion of the requirement that 18 and 16 gauge single conductors be limited to use in a cabinet or enclosure.

The original public comment should be accepted.

Thank you.

CHAIRWOMAN MANLEY: Thank you so much.

Mr. Johnston, would you like to provide the
Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

70-14 falls under code panel 11's responsibility, and the actual chair John Thompson is not with us, but the designated spokesperson Mr. John Kavotchic is. I'd like to defer to John Kavotchic for his position and response please.

CHAIRWOMAN MANLEY: Thank you so much for waiting. Microphone three please.

MR. KAVOTCHIC: Thank you, Madam Chair.

I am John Kavotchic. I work for Underwriters Laboratories, and I am here to speak on behalf of my UL colleague John Thompson, and I speak in favor of the motion.

I will proceed to read you a statement that Mr. Thompson has given to me, and I proceed.

I would like to state for the record that the motion on the floor and public comment 834 are identical to public input 1357 that was submitted by Vince Baclawski of NEMA who is the submitter of the motion on the floor.

A review of the panel's activities makes it clear to me that the intent to panel 11 was intend to accept public input 1357. However, there were two public inputs submitted on this section in question.
which is 430.22(G). And both of these public input works -- public inputs were inadvertently resolved. This mistake was revealed via public comment 834. It's not clear what happened to the wording in the second revision, which resulted in a change in the requirement and ultimately the failure of the public comment. But it remains clear to me that the panel supported the intent of the original public input 1357 and would support certified amending motion 70-14.

Therefore, it is my position as CMP 11 chair to ask the members of the association to support this motion.

And before I leave the microphone, I speak on behalf of UL in that we also support this motion.

Thank you.

CHAIRWOMAN MANLEY: All right. Thank you very much, gentlemen.

With that we're going to open up debate on the motion. Please provide your name and affiliation and whether you are speaking in support of or against the motion.

Is there no one at the microphones? All right. I'm just -- all right. No one is running to the mic.

So seeing no further discussion on Motion
70-14 to Accept Public Comment No. 834, I'll just look over to the chair, make sure you don't have any additional comments.

CHAIRMAN JOHNSTON: I have nothing additional to Mr. Kavotchic's comments.

CHAIRWOMAN MANLEY: All right. Let me go ahead and restate the motion on the floor, which is to accept public comment 834.

Let's go ahead and vote and please touch the voting button. If you wish to vote in favor 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 go ahead and record your vote now.

All right. We're going to close the balloting in about five seconds.

All right. And let's go ahead and close that balloting period. Thank you.

The results on the vote are 282 in favor of the motion recommending the text on screen two {sic} and 32 against the motion recommending the text on screen two.

The motion has passed.

(Motion 70-14 to Accept Public Comment No. 834 passed with a vote of 282 in favor; 32
CERTIFIED AMENDING MOTION 70-15:

CHAIRWOMAN MANLEY: We're going to now proceed with the discussion on Certified Amending Motion 70-15.

Thank you so much for the wave. That helps.

Microphone five, please.

MR. HOLUB: Good afternoon. Richard Holub, representing American Chemistry Council, DuPoint. I'd like to move we accept Motion 70-15 and reject an identifiable part of second revision 1808.

CHAIRWOMAN MANLEY: Thank you.

There's a motion on the floor to Reject an Identifiable Part of Second Revision No. 1808.

Is there a second? We do have a second.

Go ahead and proceed on microphone five with the discussion on the motion.

MR. HOLUB: I sit on panel 14, and I also sit on the correlating committee. In my opinion the correlating committee missed an opportunity here to define jurisdiction and to weigh in on whether or not we had proper review of this proposal. Fundamentally there was no proposal made at the first revision stage.

So what's happened here is panel 7 has written rules for hazardous locations in Chapter 3. The
hazardous location rules appear in Chapter 5. If panel 7 had input, they had an opportunity based on first input, first revisions and second revisions. They had an opportunity to submit that to panel 14 and panel 14 to evaluate what is installed as hazardous location, but that didn't happen. We took the argument to another panel.

The correlating committee simply took the easy way and said we're going to throw out what panel 14 has done and what panel 7 has done, and we're going to create a task group to establish the right language for the 2020 code cycle.

What, in fact, the correlating committee did was throw out panel 14's action and not act on panel 7's action. So I'm asking the floor to correct that and throw out panel 7's actions and put it back to the next cycle.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Yes. 70-15 is panel 7's responsibility, and I'd like to defer to the Chair David Williams for a position and response, please.
CHAIRWOMAN MANLEY: All right. We're going
to go over to microphone four, please. Thank you.

MR. WILLIAMS: Thank you, Madam Chair.

My name is David Williams. I'm the chair of
Code Making Panel No. 7, representing enforcement
through the International Association of Electrical
Inspectors, the IAEI.

CMP 7 approved adding a new list item number
11 to 336.10 in order to correlate the use of permitted
for type TC cable with the permitted installations in
sections 501.10(A)(1)(F) and 505.15(B)(1)(I).

Proposals were submitted during the 2014 and
2017 NEC revision cycles requesting and opposing the use
of type TC cable for use at hazardous locations. This
resulted in first revision 3940 for Code Making Panel
14, expanding the use of tray cable and (inaudible)
wiring for class one, division one, locations and
removing the size restrictions for class one, zone one,
locations.

Code Making Panel 7 evaluated all the
proposals and information provided by manufacturers of
type TC cable and added language in 336.10 that will
provide guidance to users of type TC cable for the
allowed uses at hazardous locations for the 2017 NEC.

Technical substantiations were submitted to
the panel indicating that many of the hazardous materials will have verse affect on commercially available jacketed materials. CMP 7 did not receive a public input nor public comment, but was allowed under the committee regulations to create a second revision to address a hazardous condition that affects a wiring method under the purview of CMP 7. The correlating committee intended to remove this section and was missed.

There are three other certified amended motions that could have a negative safety impact if this motion is passed. The action taken by CMP 7 is still valid with or without those motions being accepted or denied.

I encourage the opposition of this motion.

Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Thank you very much, gentlemen.

And with that, we'll open debate on the motion. Please provide your name and affiliation and whether you're speaking in support or against the motion.

Let's kick it off with microphone five, please.

MR. DOLLARD: Thank you, Madam Chair.
My name is Jim Dollard, IBEW Local 98 in Philadelphia, and I rise in support of the motion. In fact, if you look at the top of your --
at the screen, there were three submitters that created this CAM, and I am one of those submitters. I am a member of the correlating committee and the task group that dealt with this issue, I was the chair. We made an error. It happens. We worked on this and multiple actions in Chapter 5. We forgot to go back and get this one out. That's why I submitted, and we have this CAM.

The correlating committee didn't take the easy way out. We identified a very serious issue. And the issue comes down to purview. What panel 7 did was acceptable in the process. They have purview over type TC cable. That's the issue at hand here. Do we want to set a precedent? Do we want to set a precedent that says if I've got TC cable or any other cable assembly or equipment, and as soon as we put an acronym at the end, in this case, HL, that purview now shifts to panel 14. That's a dangerous precedent. Somebody could build a panel board that's going to be used only for swimming pools and put an SP at the end of it. Now panel 17 has purview, not panel 9. The correlating committee recognized that, and we took actions to hold everything that occurred that's tied to this. This action here was
So our intent was to basically hold this action here and all of the actions in Chapter 5. It was a package deal. The issue here is purview. Code Making Panel 7 has purview over TC cable. Yes, there will be requirements in Chapter 5, and panel 14 will deal with those, but we need to get it right.

The correlating committee is developing a task group that is going to monitor this as we move forward. We'll fix this issue for the 2020 cycle. We'll monitor it as we move forward. It's about purview. This is a package deal. We need to accept the motion on the floor and then continue to reject the actions in Chapter 5.

I urge you to support the motion on the floor.

Thank you, Madam Chair.

CHAIRWOMAN MANLEY: All right. I'm going to go to microphone two, please.

MS. HUNTER: Thank you, Madam Chair.

I'm Chris Hunter with General Cable, and I'm speaking against the motion.

I'd like to make it clear I actually support the actions of the correlating committee. I'm here to speak as a member. I serve on Code Making Panel 7, and
the actions the Code Making Panel 7 took were based on
class one, division one, location and class one, zone one, locations with no
construction requirements, there were many public
commits put in. Now they were submitted to panel 14,
but panel 7, as the chair said, has the responsibility
and the right to look at the record and put in
construction requirements for the cable types under our
purview. Code Making Panel 7 is responsible for tray
cable. That includes the installation, the use, and the
construction of that cable.

We did nothing about the use. We said
nothing about the use of this cable in those locations.
What we said is that if you use them, they have to be
built like this. They have to be tested to make sure
that they are safe and they are not going to fail and
create a fire and explosion risk in those locations.

I fully support the actions of the
correlating committee. I simply wanted to explain to
the members here why Code Making Panel 7 took these
actions and it was completely within the responsibility

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone one, please.

MR. COBURN: Thank you, Madam Chair.

Mike Coburn on behalf of the electrical section, and the section members have voted to support the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

All right. We're going to go over to microphone three, please.

MR. SAVAGE: My name is Gary Savage with the Prysmian group, one of the submitters of the CAM and obviously speaking in favor of it.

First, I'd like to take umbrage with the statements respectfully by David Williams and with Crystal.

We continually call this type TC cable. It is not simply type TC cable. It is type TC-ER-HL cable. These are cables that the HL designation or acronym at the end is not privy. What it means is that these are tray cables, but they're a special category of tray cables. And they must withstand the same rigorous electrical and physical requirements that UL 22.25 as
the MC-HL cables. So they are suitable for the application. The reason -- the primary reason that code panel 14 expanded the use of these cables into general use for class one, revision one, and zone one was to address shortcomings of MC-HL cables in certain applications where dangerous situations could occur with respect to armor breakage, causing potentially dangerous situations. These applications include continuous or repeated flexing motions, vibrations at motor terminals and other -- other types of applications as well.

A primary issue seems to be the jackets and potential deterioration of the jackets in the environment. I contend that this is a cure for which there is no known disease. PVC jackets on MC-HL cables have operated for many decades, and there are chemicals that will attack PVC and subsequently attack aluminum.

Another thing is that this situation is already addressed in the code in articles 110.11, deteriorating agents, and 501.20, conductor installation for class one, division one, and division two.

IEC cables have been used for many, many generations as well. And in the IEC world, which constitutes probably nine percent of the world, there's no requirement for this type of testing. This testing is not also expanded to MC-HL cables. If it's germane,
then it should be also expanded to sealing materials in class one, division one, and zone one, and this basically is a very onerous requirement that does not apply, should not apply. It places undue burdens on manufacturers driving the cost of cable --

CHAIRWOMAN MANLEY: All right, sir. I apologize. You're out of time.

MR. SAVAGE: Thank you very much.

CHAIRWOMAN MANLEY: Thank you.

I'm going to kick it over to microphone four, please.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski with NEMA, and NEMA speaks in opposition to this motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone five, please.

MR. ELLIOT: Thank you, Madam Chair.

My name is Bob Elliot. I work at FM Approvals, and I speak in favor of the motion.

NFPA -- FM Approvals as well as FM Global is sort of an active participant on CMP 14, in agreement with the submitter, and is looking for your support on this motion.

Thank you.
CHAIRWOMAN MANLEY: Thank you.

Microphone number three, please.

MR. CLEMENT: Thank you Madam Chair.

My name is Greg Clement. I'm with Fleur Enterprises.

The information added to this section was a late edition and not subject to complete public input. Requirements imposed on utilizing type TC-ER-HL cable in class one, division one, areas do appear excessive without the proper substantiation. There are technical concerns for the full utilization of TC-ER-HL cable, class one, division one, locations. They should be properly vetted during the next code cycle.

On that note utilizing a normal cable, class one, zone one, areas it's quite common in off-shore applications and international installations. Class one, div one, locations they're common on off-shore platforms due to the high concentration of equipment. It's impractical to use TC cable in these areas due to the larger diameters or larger areas. Ultimate cable designs were developed and had been used without incident. (Inaudible) have already recognized cable designs, a number of cable designs as meeting under the requirements for TC-ER-HL. Many of these designs are presently utilized in the international community. One
of the main reasons is they are safe -- safer installation methods as well as easier to install. TC-ER-HL cable meets the crush and impact resistant test of MC-HL cable and is listed for class one, div one locations. Since it is NUR (phonetic) listed, then OSHA would accept it as the wiring method. There isn't any practical difference in the MC-HL, which is currently allowed, and the TC-ER-HL cable.

This motion should be passed for industrial facilities, and that's the thing we need to keep in mind is it's all for industrial facilities. And allow for the cable meeting the same standard requirements of MC cable in class one, division one areas.

As an industry, we need to progress and allow new products to market as they're listed for the purpose and provide safe installation.

As a consultant who to the petrochemistry industry, we support new products as they're evolved. And, you know, if they provide lower installation costs, allow for a safer installation, we'll stand behind it as long as it doesn't compromise the overall design safety.

Thank you.

CHAIRWOMAN MANLEY: Thank you. All right.

Is there another one at microphone three, come on.
MR. KAVOTCHIC: John Kavotchic, Underwriters Laboratories, speaking for the motion. I'm a member of the correlating meeting, and I'd like to echo the comments of my colleague on the committee Jim Dollard.

I want to clarify for everyone where we should go with this if the original intent of the correlating committee is met when we originally dealt with this issue. This motion should be accepted, and then, as James said, there's a package, and the rest of the package is the next three motions, which would then -- should appropriately be rejected or perhaps more appropriately be withdrawn.

Thank you.

CHAIRWOMAN MANLEY: All right. Thank you very much.

Is there any further discussion on Motion 70-15 to Reject an Identifiable Part of Second Revision No. 1808?

Seeing none, I'll ask the Chair if he has any further comments?

CHAIRMAN JOHNSTON: Thank you, Madam Chair. Just to confirm Mr. Dollard and Mr. Kavotchic's thoughts related to support of 70-15, and the fact that there is a task group that's being formed to look ahead to make sure that we don't end up with
these purview issues; that both committees work together so that what we end up with in both locations is consistent and correlates together. Right now what we identified at the correlating committee does not work consistently. It doesn't correlate. This has to be done. And the correlating committee missed it. It was inadvertent, and we're correcting it through these actions.

Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Thank you, Mr. Chair.

Before we vote let me restate the motion on the floor, which is to Reject an Identifiable Part of Second Revision No. 1808.

To vote please touch the vote button. If you wish to vote in favor 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.

All right. We're going to close the balloting in five seconds.

The balloting is now closed. Thank you.

The results of the vote are 232 for the motion recommending the text on screen one and 61 against the motion recommending the text on screen two.
This motion has passed.
(Motion 70-15 to Reject an Identifiable Part of Second Revision No. 1808 passed with a vote of 232 in favor; 61 against.)

CERTIFIED AMENDING MOTION 70-16:

CHAIRWOMAN MANLEY: Let's now proceed with the discussion on certified amending motion 70-16. Thank you.

Thank you for waving. Microphone five, please.

MR. HOLUB: Certainly.

Richard Holub representing DuPont and American Chemistry Council. I move we accept certified amending motion 70-16 and accept committee comment 3902 and reject the second correlating revision No. 3.

CHAIRWOMAN MANLEY: Thank you.

There is a motion on the floor to Accept Committee Comment No. 3902 and Reject Second Correlating Revision No. 3.

Is there a second? Great. We have a second.

Please proceed with the discussion on the motion.

MR. HOLUB: Much of this is the same argument we just heard. Panel 14 this cycle at the
first revision stage and again consistently at the second revision stage voted overwhelmingly to support the expansion of cable type TC-ER-HL to general wiring methods for class one, division one locations. This was not done haphazardly. The cable type was put in the code in the 2014 code cycle for flexible wiring methods. The argument about compatibility of materials, as we've heard, is already addressed in 110.11, also in 501.20 and 505.18. If this was an issue, we'd have that issue today with the flexible wiring methods, and we would have already had TIAs attempting to get this line to jell. Clearly that hasn't happened. Panel 14 acted within its purview to expand the use of TC-ER-HL in industrial locations with restricted public access and has consistently done their work in open format in the first revision and the second revision cycle.

And I urge everyone here to support panel 14's actions and let this move forward.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Sure.

On 70-16 Code Making Panel 14, the chair,
the actual chair is not present. Robert Jones is not here. The designated representative for Robert is Steven Blaze. So I'd like to defer to Steven Blaze for a response and position, please.

MR. BLAZE: Yes. Thank you, Madam Chair.

My name is Steve Blaze with Appleton Group, and I am also the NEMA principal rep on code panel 14. I was asked by the chairman of panel 14 to read his statement regarding his support for this -- this motion, and I am not representing the NEMA position in doing so.

His statement reads as follows: Code panel 14 supports Motion 70-16. Panel 14 operated under the regulations governing the development of NFPA standards. Panel 14 developed first revision 3940 in response to public inputs 4598, 1250, and 1906. First revision 3940 passed ballot with a vote of 10-4, 4 against. The issue of allowing type TC-ER-HL cable as an acceptable general allowing method for class one, division one locations was thoroughly debated at the first draft meeting. Panel 14 developed second revision 3902 during the second draft meeting, and it passed ballot with a vote of 16-4 and none against.

During the second draft meeting, there was a presentation made in support of public comment 1341
which recommended not allowing type TC-ER-HL cable in
class one, division one locations. The presentation was
given by Mr. Tim Waters representing General Cable, and
panel members were allowed to address Mr. Waters. The
issue of allowing type TC-ER-HL cable as an acceptable
general wiring method for class one, division one
locations was thoroughly debated again at the second
draft meeting. Panel 14 did not receive a correlating
committee comment relating to TC-ER-HL cable during the
comment period. The work of panel 14 was not a
correlation issue with Section 333.10.11 because item 11
of Section 336.10 did not exist until after the second
draft meeting. Panel 14 in second reinvitation 3902
actually referred users of the code to Section 330.10.7.

The addition of item 11 to Section 336.10
was the result of second revision 1808 and second
revision 1809 as a ballotable item. The material in
item 11 Section 336.10 has not had public review, which
is a violation of Section 4.4.9.2 of the regulations
governing the development of NFPA standards.

The work of co-panel 14 shall remain in the
2017 edition of the National Electrical Code as stated
in second provision 39 --

CHAIRWOMAN MANLEY: Sir, your time is up.

Thank you very much.
MR. BLAZE: Thank you.

CHAIRWOMAN MANLEY: Thanks, gentlemen.

With that we're going to open debate on the motion. Please provide your name and affiliation and whether you're speaking in support or against the motion.

I'd like to go to microphone number five, please.

MR. ELLIOTT: Thank you, Madam Chair.

My name is Bob Elliott. I work at FM Approvals, and I speak in favor of the motion. FM Approvals is a nationally recognized testing laboratory with active participation in CMP 14, and we look for your support in this motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you very much.

Microphone two, please.

MR. DOLLARD: Thank you, Madam Chair.

My name is Jim Dollard, IBEW Local 98 in Philadelphia, and I stand in opposition to the motion.

This motion deals with second correlating revision, and I'm speaking on behalf of the correlating committee. We just fixed the work that we did, and we deleted what was in 336.1011. This motion needs to fail or we've got major, major problems. We've got
correlation issues, significant correlation issues, and we will have set a precedent that without regard to the type of cable assembly, raceway device or equipment, if you go to an RT lab and you get HL behind it or swimming pool behind it or marina behind it, then we take purview away from the committee that has that purview. This is a significant problem. It's a serious safety issue. There are multiple issues that are embedded in each one. In fact, in some cases, panel 14 said you could take TC-ER-HL and put cord caps on it. That's a major problem.

I urge you to support rejection of the motion on the floor, and then at that point, hopefully we see withdraw of the next two motions. Thank you.

Next two CAMs. Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone number three, please.

MR. SAVAGE: Again, Gary Savage with the Prysmian Group. I'm the original submitter of the public inputs on this as well the submitter on this CAM.

I believe the procedure is that if this motion passes, that does not mean that it goes into the code. What it means is that it goes back to the correlating committee who did not have proper time in their meeting in February in Biloxi to thoroughly
address the issue. This would provide them the proper
time for discussion on both sides to make a final
determination and for the 2017 code and not defer it to
the 2020 code. When dangerous situations potentially
exist, we don't need to wait another four years.

The National Electrical Code is unique in
that it contains both the most restricted and both
prescriptive set of rules in the world governing cables
for hazardous locations. Other than conduit wire and MI
cable, the only allowable option for general division
one locations is MC-HL cable, which must have a
continuously corrugated metallic sheath with an overall
jacket. No other options are allowed even though there
are safety issues with these cables and some
applications are far superior alternatives available
today.

It can look like a duck, quack like a duck,
but it's no good. It has to be a duck, okay.

The potential safety issues surrounding
MC-HL cables are that they perform poorly are not
recommended for applications involving continuous or
repeated flexing, as in calibration of instrumentation
or removal of the cables to serve as wellheads.

As has been demonstrated many times in
service of these applications, limited fatigue, strength
of the aluminum armor can result in breakage which could result in the sharp edges of broken armor to impinge on unprotected insulation, insulate conductors below upon subsequent bending or vibration. Also if the armor is being used as a ground conductor, which is allowed by the code, the ground is effectively lost.

Today's polymer technology allows us to make assure that a stop of a 38 slug or a suit coat that will stop a high velocity rifle bullet. When applied to cable, these technologies have resulted in designs that have up to five times the impact resistance of MC-HL cables and double the crush resistance. They are also more flexible than MC-HL cables, safer to install, and are exempt from armor breakage that can result in potentially dangerous conditions.

Passage of these motions and inclusion of the appropriate wording in the code will result in more options for users and the elimination of dangerous conditions that can occur in some cases by the utilization of MC-HL cables.

I'm asking you to trust your experts and hazardous location equipment usage in panel 14 and vote in favor of this motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.
Microphone four, please.

MR. BACLAWSKI: Thank you, Madam Chair.

Vince Baclawski with NEMA, and NEMA speaks in opposition to the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Let's see last number two, please.

MS. HUNTER: Thank you, Madam Chair.

My name is Chris Hunter. I'm with General Cable, and I'm speaking against the motion.

We just passed a motion to get rid of all construction requirements for this non-metallic sheathing tray cable and general wiring for class one, division one locations. I'm in opposition to this motion because it would allow the unrestricted use of that cable type without the appropriate construction requirements and without the appropriate testing. The UL standard for hazardous location cables and cable fittings requires testing for the non-metallic portions of the cable fittings that are used in those locations, and yet we have no similar testing for those cables themselves, which will now have only a non-metallic sheath. There will be no metal protection like we have for every other wiring method required for these locations.
Unlike the conduit or the corrugated -- continuously corrugated welded cable. If the PVC jacket that is on that non-metallic sheathed cable is degraded in these locations in general wiring where it's not subject to the flexing, it doesn't have the limitations that have been referred to, then you have no further protection from the hazardous materials in those locations.

I'm speaking against the motion. Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone number five, please.

MR. HOLUB: Richard Holub with DuPont and American Chemistry Council, speaking in favor of the motion.

Once again, this wiring method is very similar to marine shipyard cable, which as we've heard, has been used in offshore applications for 40 years. I mean, I think it's time we accept new wiring methods. We may need to update standards. We may need to come up with other wiring connection devices in future code cycles. We've heard that our panel overstepped its bounds in trying to use a cable with an attachment plug, and that's a violation of definition. I didn't rehash that here. We can address that in the next cycle, but a first step is to get TC-ER-HL and the general wiring
methods in Chapter 5 as panel 14 did this cycle.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone number two, please.

MR. KAVOTCHIC: Thank you.

John Kavotchic, Underwriters Laboratories, member of the correlating committee.

I'm disappointed that panel 14 is pursuing this. This really flies in the face of what we just did for panel 7 and also with the way the correlating committee is going forward to handle this.

I'm hoping after we reject this motion that the makers of the next two motions will professionally withdraw them.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

We're going to go microphone five, please.

MR. SAVAGE: Yes. Gary Savage with the Prysmian Group.

The argument that these jackets will just be deteriorating and fall off the cable and expose the underlying insulation is ludicrous. If you have enough concentration of these chemicals floating around your petrochemical plant that they would deteriorate the jackets in this manner, you've got much more serious
problems than jacket damage.

This -- again, nowhere else in the world is this a requirement. Unarmored cables in the IEC world have been tested in service for decades without any issues.

Again, this is a cure for which there is no known disease. Thank you.

CHAIRWOMAN MANLEY: All right.

Microphone number six, please.

MR. JOSEPH: Joseph (inaudible) The Okonite Company, call the question.

CHAIRWOMAN MANLEY: All right. We have a motion to call the question.

Is there a second? We do have a second.

In order to vote on this motion, please scroll down to the bottom of your tablet to vote. If you wish to vote in favor of the motion, touch yes. If you wish to vote against the motion, touch no.

Please record your vote now.

All right. We're going to close the balloting in five seconds.

The balloting is now closed. Thank you.

The results of the vote to call the question are 318 for the motion to call the question, and 9 against the motion to call the question.
We now proceed to a vote on the motion on
the floor.

I'm sorry. There's a point of order. Was
anyone else blocked out of voting? I see a couple of
hands. What I'm going to ask you to do is go back to
the help desk and exchange your tablets. If you do it
quickly, I'll wait. I better see some hustle, I'm just
saying.

(Pause in proceedings.)

CHAIRWOMAN MANLEY: All right. How are we
doing? Are we good to go?

Motion on the floor is Motion 70-16 to
Accept Committee Comment No. 3902 and Reject Second
Correlating Revision No. 3.

Do you have any final comments, Mr. Chair?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Other than what Mr. Kavotchic --

CHAIRWOMAN MANLEY: You know what? I called
the question. I'm out of order. Calling -- let me
restate the motion. I'm sorry, folks. We go straight
to the vote.

The motion on the floor is to Accept
Committee Comment No. 3902 and Reject Second Correlating
Revision No. 3.

To vote touch the vote button. If you wish
to vote in favor 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.

All right. We're going to close the voting period in five seconds.

And the balloting is now closed. Thank you.

The results of the vote are: 80 for the motion to recommend the text on screen one, and 235 against the motion to recommend text on screen two.

This motion has failed.

(Motion 70-16 to Accept Committee Comment No. 3902 and Reject Second Correlating Revision No. 3 failed with a vote of 80 in favor; 234 against.)

CERTIFIED AMENDING MOTION 70-17:

CHAIRWOMAN MANLEY: Let's now proceed with the discussion on Certified Amending Motion 70-17.

Microphone five, please.

MR. SAVAGE: Thank you, Madam Chair.

Gary Savage with the Prysmian Group. I would like to respectfully withdraw this motion.

(Audience applause.)

CHAIRWOMAN MANLEY: All right. Hold on.

Where is it? All right.
So the next motion 70-17 on NFPA 70 appeared on our agenda; however, the authorized maker of the motion has notified NFPA that they no longer wish to pursue this motion. Therefore, in accordance with NFPA Rules (Convention Rules in 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.

CERTIFIED AMENDING MOTION 70-18:

CHAIRWOMAN MANLEY: Now I have to catch up. All right. So we are now on Certified Amending Motion 70-18.

Microphone five, please.

MR. HOLUB: Rich Holub speaking on behalf of the American Chemistry Council and DuPont. I would respectfully withdraw this motion.

CHAIRWOMAN MANLEY: All right. The next -- (Audience applause.)

CHAIRWOMAN MANLEY: -- motion on NFPA 70 Certified Amending Motion 70-18 appeared on our agenda; however, the authorized maker of the motion has notified NFPA that they no longer wish to pursue this motion. Therefore, in accordance with the NFPA Rules (Convention Rules in Section 2.7), the motion may not be considered by the assembly and it removed from the
We will now move on to the next agenda item.

CERTIFIED AMENDING MOTION 70-19:

CHAIRWOMAN MANLEY: Let's now proceed with the discussion on Certified Amending Motion 70-19.

Microphone one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA, and I hereby move Motion 70-19 to Accept Public Comment No. 806.

CHAIRWOMAN MANLEY: Thank you. There is a motion on the floor to Accept Public Comment 806. Is there a second? We do have a second. Please proceed with the discussion on the motion. Microphone one.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA.

What this is, is a very simple thing. The term operator is defined by 525.2 as the individual responsible for starting, stopping, or controlling an amusing ride or supervising a concession. That -- the proposal is to restrict that definition to what the article talks about, which is carnivals, circuses, fairs, and similar events. The reason for that is when it gets put into the glossary of terms, it just goes as an operator for NFPA 70 for the National Electrical
The term operator appears 80 times. And the first time it appears is the most interesting one. That's on -- excuse me one second, please -- appears in Article 100 in the scope. So -- actually appears in Article 80 where it says -- it talks about that any an order or note to speaker pursuant to the scope code shall be served upon the owner, operator, occupant or the person responsible. So if this defines only someone who rides -- operates a ride, then a notice of violations on penalties would only apply to that particular person. The term operator, as I said before, appears 80 times in the National Electrical code, in Articles 100, 250, 404, 430, 490 seven times, 515, 522, 525, which is this article; it appears three times. 530, 551, 610, 620, 625, 686, 690, 694, 705, 708, 750 in annex D. It appears everywhere throughout the code. And when this would move to the glossary of terms, it means that every one of those 80 locations in the code is someone who is responsible for starting, stopping, controlling an amusement ride. That's not what was intended. And all this does, as we've done multiple other times, is restrict the definition to what it really applies to, related to carnivals, circuses, fairs, and other similar events.
Thank you.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Thank you, Madam Chair.

Certified amending motion 19 is under panel 15's responsibility. I would like to defer to the chair Larry Todd for a position and a response, please.

CHAIRWOMAN MANLEY: Thank you.

Microphone six, please.

MR. TODD: Thank you, Madam Chair.

My name is Larry Todd. I work for Intertech, and I'm chair of Code Making Panel 15.

The panel determined that this definition is in the section that covers carnivals, fairs, and similar events, and there was no reason to add those words again in the definition. They become redundant. And this definition because it's in Section 525-2, is only related to that section of the code.

Thank you.

CHAIRWOMAN MANLEY: Thank you, gentlemen.

With that we open up debate on the motion.

Please provide your name and affiliation and whether you are speaking in support or against the motion.
All right. If anyone is heading toward a microphone, wave because otherwise I'm -- oh, there we go.

Microphone one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA in support of the motion.

The chairman said that it is unnecessary, but he didn't say that it would cause any trouble. He didn't say that it would cause any difficulty if that gets added. On the other hand, if it does not get added, it will cause a lot of difficulty because it will mean that the other 86 -- sorry, 76 references to this term in the code would all relate to starting, stopping, controlling amusement rides.

Again, there's nothing that adding this -- this clarification as has been done multiple times in the past in other opportunity -- in other places, nothing would hurt. It would do nothing and it would clarify and help the code.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone number four, please.

MR. KRAMER: Eddy Kramer, Radio City Music Hall, member of panel 15.
When this was first proposed by the proponent, he didn't inform us of the additional concerns about listing the -- about listing the term operator to be taken as a definition for the whole NEC. We determined that it was important to have the definition in the article and to control the definition. That's why the language as related to carnival, circuses, fairs, and other similar events was added in. The existing definition goes back to the first public input.

Thank you.

CHAIRWOMAN MANLEY: Can you clarify for the record that you're speaking in support or opposition?

MR. KRAMER: I'm sorry. Against the motion.

CHAIRWOMAN MANLEY: Thank you, sir.

Microphone number six, please.

MR. ELLIOT: Yes, I'm Steven Elliot. I'm independent registered engineer who works in the amusement industry, and I'm also a member of the ASTM F24 committee. I'm not speaking for F24, but I'm against this motion as a private individual.

Having been involved with the code development in ASTM, this definition has never had any issue with the carnival and amusement industry, so I
think it's unnecessary.

Thank you.

CHAIRWOMAN MANLEY: Thank you.

Microphone number two, if you guys are standing there, step forward.

MR. HAFNER: Mitch Hafner. I'm a member of panel 15, representing the IES but speaking for myself.

CHAIRMAN OWEN: For or against?

MR. HAFNER: There are multiple types of operators called out. There are multiple instances, but some of them have very different meanings. We wanted it to be specific to this article which is why it was set up that way. A general definition that actually caused confusion.

Thank you.

CHAIRWOMAN MANLEY: Can you state for the record whether you're support or are opposed to the motion?

MR. HAFNER: I oppose the motion.

CHAIRWOMAN MANLEY: Okay. All right.

Microphone number two.

MR. HOTEY: Mark Hotey, Underwriters Laboratories, member of panel 3, 13 and the correlating committee, and I'm speaking against the motion.

We have definitions in specific articles
within the NEC, and they're specifically addressing only
the information in that particular -- in that particular
article. If we were to do this to every one of our
definitions that are located in individual articles, it
would probably necessitate another day's worth of --
well, maybe a half a day worth of actions that we're
going to have to look at, and I don't think it's
necessary. It certainly could be referenced in the
definitions not only to NFPA 70 in the definition --
NFPA definitions as coming from Article 525 in the NEC,
and that would make it easy to use.

CHAIRWOMAN MANLEY: Thank you.

Microphone one.

MR. HIRSCHLER: Marcelo Hirschler, GBH Internation, for NFPA, in support.

I think a couple of the previous speakers
misrepresented what I was saying. I have not proposed
any time to move it from where it is to -- to the
Article 100 definitions. It's perfectly fine where it
is. With regard to the point that was just made by Mark
Hotey, that we have gone through a whole load of these
definitions when they refer to terms that are general --
of general use. Most of the definitions in Section 2 of
every article refer to something that is specific to
that article, but when we have something, we've had it
in this cycle, a definition of guy, for example, when we had a definition of guy, we added a delimiter that explained that guy for that particular article meant whatever that definition said.

Here we have one of the very few cases, and I have gone through every definition in every article -- in part two of every article, and I have checked those that are generic things like operator or guide. And this is the only one that's missing that really has not been fixed yet.

Adding this delimiter will not cause any problems in the article, will not cause any problems to the industry, but will prevent that when this gets put in the glossary, which is where it belongs, it means the same for every one of the 80 terms -- 80 times the term is used in the NEC.

Please support the motion.

Thank you.

CHAIRWOMAN MANLEY: All right. Is there any further discussion on -- there we go. Number three.

MR. SIMMONS: Madam Chair, my name is Phil Simmons, speaking for myself. I call the question.

CHAIRWOMAN MANLEY: All right. There is a motion to call the question. And we 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 favor of the motion, touch yes. If you wish to vote against the motion, touch no.

Please record your vote now.

It's stuck? How many people are stuck? Is it working now?

All right. If you're having trouble, please see the people at the back of the auditorium.

All right. We're closing the ballot in five seconds.

And the ballot is now closed. Thank you.

The results of the vote are: 351 for the motion to call the question and 4 against the motion to call the question.

With that we go straight into the vote. I'm going to restate the motion. The motion on the floor is to Accept Public Comment No. 806.

To vote touch the vote button. If you wish to vote in favor of the motion and recommend the screen on text one, touch yes. If you wish to vote against the motion and recommend the text on screen two, touch no.

Please record your votes now.

Do we have a point of order? Go to the back of the assembly hall.

All right. We're going to be closing the
voting in five seconds.

All right. And we're closed at this point.

All right. The results of the vote are 89 for the motion recommending the text on screen one and 255 against the motion recommending the text on screen two.

This motion has failed.

(Motion 70-19 to Accept Public Comment No. 806 failed with a vote of 89 in favor; 255 against.)

CHAIRWOMAN MANLEY: Just to let you know, there's some thought that a few of you might be getting -- hitting the voting button too early. Don't hit the button until I say it's okay. All right. You only have to put up with me for one more. So let's get going.

CERTIFIED AMENDING MOTION 70-20:

CHAIRWOMAN MANLEY: Proceed with the discussion on Certified Amending Motion 70-20.

All right. Where are you? There we go.

Microphone three, please.

MR. DOLLARD: Thank you, Madam Chair.

My name is Jim Dollard, IBEW Local 98 in Philadelphia, and I would like to move acceptance of Certified Amending Motion 70-20.
CHAIRWOMAN MANLEY: All right. Thank you.

There is a motion on the floor to Reject Second Revision No. 607.

Is there a second? All right. We do have a second.

Please proceed with the discusses on the motion.

MR. DOLLARD: Thank you, Madam Chair.

This is an action taken in the second revision by Code Making Panel 3. And with all due respect to Code Making Panel 3, they made a serious error. In fact, there's a comment from the chairman, and I imagine we'll get to that next, but what happened was they added a new sentence, and you can see it on the screen struck out from screen one. And that's what we want to do.

That's what my motion is, to delete that sentence. It creates significant conflict inside the section itself because we have a sentence that says cable assemblies and flexible cords and cables installed as branch circuits or feeders shall not be installed on the floor or on the ground. And then they added multiconductor cord or cable of a type identified in Table 400.4 for hard usage or extra hard usage shall not be required to comply with 590.4(J). So they're
conflicting with themselves in the same requirement.

There was zero substantiation.

Here's the big problem. The big problem is we're in Article 590, temporary line, so we're talking specifically about construction. If you want to put cords and cables on the ground in a trade show like we have here, that's Article 518. You got different rules. If you want to put cords or cables on the ground for a carnival, circus, or fair, that's Article 525. You got a different set of rules. In construction it's an extremely destructive environment, and anything that you put on the floor will get destroyed. Both OSHA and the National Electrical Code require any extension cord that you put on the ground without regard to voltage or amperage be protected by GFCI or the assured equipment grounding conductor program.

Adding this sentence, adding this sentence undoes all of those requirements. Because 590.6, where those requirements are located, addresses only receptacle outlets. If we allow this to happen, we can put an hard or an extra hard usage cord as a branch circuit, lay it on the floor, put a cord cap on it, we got no GFCI, no short equipment grounding conductor, and I can tell you that will kill in construction. It's a wet conductive environment.
I urge you to support the motion on the floor.

Thank you, Madam Chair.

CHAIRWOMAN MANLEY: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN MANLEY: Thank you, Madam Chair.

Sequence 20 is the responsibility of code panel 3, and our actual chair Paul Casparro is not with us. The designated spokesperson on his behalf is Palmer Hickman. I'd like to call on.

For the position and the response, please.

CHAIRWOMAN MANLEY: All right. Can you wave? All right. So I'm a little confused because you're standing at a "for the motion."

Do you mean to stand there, sir?

MR. HICKMAN: Should I stand against one?

CHAIRWOMAN MANLEY: Just be very clear about what your statement is, okay? So I'll let you go ahead.

Microphone five.

MR. HICKMAN: Palmer Hickman with the IBEW reading a correspondence that I received from Paul Casparro, panel three chairman.

I support the motion on the floor to reject second revision 607. The submitter of this certified
amending motion has clearly identified various serious conflicts within Article 590 and very serious safety concerns as well.

Before ramifications of the action taken in the second revision 607 was not fully understood by code panel 3 during the second draft meeting. This floor action to reject second revision 607 is necessary to prevent serious conflict with requirements for ground fault circuit interrupter protection and assure equipment grounding conductor requirements in Section 590.6.

CHAIRWOMAN MANLEY: Thank you very much. You were standing at the right mic. I appreciate that. All right. Thank you, gentlemen.

And with that we're going to open up debate on the motion. Please provide your name and affiliation and whether you're speaking in support or against the motion.

Microphone one, please.

MR. HILBRICK: Thank you, Madam Chair.

Mark Hilbrick on behalf of the electrical section. The members have voted to support the motion.

Thank you.

CHAIRWOMAN MANLEY: Thank you. All right.

Microphone number three, please.
MR. HILLIER: David Hillier representing Independent Electrical Contractors, member of code panel one and correlating committee.

I'd like to point out we're in favor of the motion, but I would like to point out that the pad has -- the word vegetation is also struck out. So it doesn't match what's up on the screen.

CHAIRWOMAN MANLEY: All right. So I believe that the information on the screen is the correct language. Linda? We're just getting clarification. Thank you for pointing that out.

MR. HILLIER: I would agree that is the right word.

CHAIRWOMAN MANLEY: Yeah. The screen is right. So that's what they're whispering in my ear behind me. So thank you for pointing that out.

MR. HILLIER: I urge you to support this motion.

Thank you.

CHAIRWOMAN MANLEY: All right. Thank you so much.

Microphone five.

MR. DeCRANE: Yeah, Sean --

CHAIRWOMAN MANLEY: Sorry. Hold on one moment. Hold on one moment. I think I'm getting a
point of order.

UNIDENTIFIED AUDIENCE MEMBER: Would the correct motions be published somewhere so we know what we actually voted on? So will the correct motions be published somewhere?

CHAIRWOMAN MANLEY: I believe so. Will the correct motions be published somewhere? They'll be online. But he wants to know after we vote.

MS. FULLER: Yes. I will post it on the website.

CHAIRWOMAN MANLEY: So what I've been told is the agenda will be corrected and posted on the website after the meeting. So thank you very much. All right.

Now I think I was at microphone number five; correct.

MR. DeCRANE: Correct. Thank you.

CHAIRWOMAN MANLEY: Thank you for your patience.

MR. DeCRANE: Absolutely.

Sean DeCrane with the Cleveland Division of Fire, representing the International Association of Firefighters.

We strongly support this motion, and this is consistent with the efforts that we've undertaken with
another code organization that will go unnamed at this microphone and industry reps to reduce the number of fires at construction sites. These fires tend to be very resourced manning for our member organizations, and we think this will go a long way to help reduce the risk of fires.

So I urge you to sport the motion.

Thank you.

CHAIRWOMAN MANLEY: Okay.

Microphone number one, please.

MR. BACLAWSKI: I thank you, Madam Chair.

Vince Baclawski with NEMA, and NEMA speaks in support of this motion.

Thank you.

CHAIRWOMAN MANLEY: All right. Is there any further discussion on Motion 70-20 to Reject Second Revision No. 607?

Seeing no one getting up, I just want to ask the Chair if there's anything else he would like to provide?

CHAIRMAN JOHNSTON: Nothing further, Madam Chair. Thank you.

CHAIRWOMAN MANLEY: All right. So before we vote, let me restate the motion. The motion on the floor is to Reject Second Revision No. 607.
To vote touch the vote button. If you wish to vote in favor of the motion and recommend the text on screen one, touch yes. If you wish to vote yes against the -- excuse me. If you wish to vote against the motion and recommend the text on screen two, touch no.

Please record your vote now.

All right. The balloting is going to close in five seconds.

And the balloting is now closed. Thank you.

The results of the vote are 408 for the motion recommending the text on screen one and 5 against the motion recommending the text on screen two.

This motion has passed.

(Motion 70-20 to Reject Second Revision No. 607 was passed with a vote of 408 in favor; 5 against.)

CHAIRWOMAN MANLEY: Before we begin the next motion, I'd like to introduce James Golinveaux. He'll be taking over after our break. We're going to take a ten-minute break. He is a member of the Standards Council and will be the presiding officer for the remainder of the NFPA 70 document. Thank you.

(A break was taken from 4:36 p.m. through 5:02 p.m.)

CERTIFIED AMENDING MOTION 70-21:
CHAIRMAN GOLINVEAUX: My name is James Golinveaux, member of council. And the next motion on NFPA 70-21 appeared on our agenda; however, the authorized maker of the motion or their designated representative has notified NFPA that they no longer wish to pursue the motion. Therefore -- I told you I'd get this done. Therefore, in accordance with the NFPA Rules (Convention Rules of 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.

CERTIFIED AMENDING MOTION 70-22:

CHAIRMAN GOLINVEAUX: We'll now proceed with the discussion on Certified Amending Motion 70-22.

Microphone number one, please.

MR. KIDDOO: Yes. I'm Dave Kiddoo. I'm the executive director of the Communications Cable & Conductivity Association, and I ask for support of Certified Amending Motion 70-22, which seeks to reject an identifiable part of second revision 5124 and return to the first revision text of the identifiable part.

CHAIRMAN GOLINVEAUX: Thank you.

There is a motion on the floor to Reject an Identifiable Part of Second Revision No. 5124.

Is there a second. We do have a second.

Please proceed be the discussion on the motion.
MR. KIDDOO: Yeah, what we have here is the code panel 18 sought to take information from Article 725 and permit substitutions and create a table at Article 600. That would be Table 600.33 and put that information in that table. Somewhere along the line there was an editorial or mistake made that would permit riser cables to be installed in plenums.

So what that motion does is to seek to remedy that and make that important correction.

Second Revision 5124 for Table 600.33 now says that it will permit riser cables to be installed in plenums, which does conflict with 725. This conflict was introduced in the second revision, and the first revision does not have the conflict.

So returning to the first revision fixes the problem, and we certainly need to fix this problem before we issue the 2017 National Electrical Code. The conflicts in Section 600.33 cannot be permitted to become part of the NEC 2017 revision.

I ask for your support of this motion.

CHAIRMAN GOLINVEAUX: Okay. Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

Sequence 70-22 is responsibility of code
making panel 18. I'd like to defer to the chair of code panel 18, Mr. Bobby Gray, for the position and response, please.

CHAIRMAN GOLINVEAUX: Microphone number four.

MR. GRAY: Thank you, Mr. Chair.


The Code Making Panel 18 became aware of this error, this oversight in our attempt to move the information from 725 into Article 600. This was a transcription error. There are another number of similar type errors, and the committee would like to correct those as a total package. And we think we have an alternate way to do that and would request that you vote against this motion.

Thank you, Mr. Chair.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

With that we'll open up debate on the motion. Please provide your name and affiliation and whether you're speaking in support or against the motion.

Microphone number one, please.

MR. HILBRICK: Thank you, Mr. Chairman.
Mike Hilbrick on behalf of the electrical section. The members have voted to support the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you very much.

Again microphone number one.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for The Vinyl Institute and in support of the motion.

What this does is allow into environmental air space plenums or risers CL3R and CL2R, which are riser cables. That, number one, is a fire safety problem. We do not allow riser cables in plenums.

Number two, it is a problem of jurisdiction. Back in 1980 Standards Council determined that jurisdiction for all the fire safety requirements for articles in plenums is the responsibility of NFPA 98, the standard of the air conditioning and not the responsibility of the NEC.

So this would be -- would take over because it would be in conflict with the -- with the requirements in NFPA 98.

Finally, I'd like to discuss the potential action that the chairman talked about. Although he didn't specifically discuss it; he did discuss it at the electrical section. What the committee would like to do
is create a TIA to make this and other revisions. I don't have any objection to the TIA, but the TIA may or may not pass. It may or may not address things like this, and if -- even if it does address it, it would only come into effect when people actually after the publication of this edition of the NAA of the National Electrical Code start going in and start making changes. Very often TIAs are forgotten, are omitted, not everyone adopts them.

So this is a critical fire safety issue here. And I urge the membership to support this motion, make these two changes. The only change that is happening with this motion is just changing two yeses in every event of cables for environmental air space plenums to noes. That's the only change it's making.

I urge the membership to support this.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you very much.

Before I go over to microphone number three. Microphone four, if you're going to speak, if you get closer, then I'll know you're in line; otherwise, I'll -- okay. Thank you.

Microphone number three, please.

MR. KAUFMAN: I'm Dr. Stanley Kaufman, a member of panel 16. I'm from Cable Safe Incorporated.
As you have already heard --

CHAIRMAN GOLINVEAUX: Are you in favor?

DR. KAUFMAN: I am speaking for the motion.

CHAIRMAN GOLINVEAUX: Thank you.

MR. KAUFMAN: Thank you.

I don't think this body can allow the code to go forward with a known error. We already know that riser cables are not permitted in plenums. That would conflict with Article 75, conflict with Article 800, and conflict with NFPA 98. Fixing with the -- first publishing and error and then fixing it with an TIA, in my opinion, is very bad code. We need to fix it now.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one.

MR. KIDDOO: Yeah, just to add to that. I think this motion does in fact --

CHAIRMAN GOLINVEAUX: Your name and affiliation and whether you're for or against the motion, please.

MR. KIDDOO: Forgive me. I'm Dave Kiddoo with the Communications Cable & Connectivity Association, and I'm in support of this motion.

I think what we're simply saying here is that this motion is the fix. It simply reverts back to the first revision that was proposed and accepted by the
committee. And it does solve the problem. We go forward with the good code and a corrected table.

    Thank you.

CHAIRMAN GOLINVEAUX: Thank you very much. Looking around the room. Is there any further discussion on Motion 70-22 to Reject an Identifiable Part of the Second Revision No. 5124?

    Mr. Johnston, do you have any final comments?

CHAIRMAN JOHNSTON: Mr. Chair, nothing further on either side of the issue. Thank you.

CHAIRMAN GOLINVEAUX: Thank you very much.

Before we vote let me restate the motion. The motion on the floor is to Reject the Identifiable Part of the Second Revision No. 5124.

    To vote touch the vote button. If you wish to vote in favor 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 balloting will close in five seconds.

    The balloting is closed.

    The results of the vote are 217 in favor of the motion, 28 against the motion.

    The motion passes.
(Motion 70-22 to Reject an Identifiable Part of Second Revision No. 5124 was passed with a vote of 217 in favor; 28 against.)

CERTIFIED AMENDING MOTION 70-23:

CHAIRMAN GOLINVEAUX: Now let's proceed with the discussion on Certified Amending Motion 70-23.

Microphone one, Please.

MR. KIDDOO: Yes. I'm Dave Kiddoo. I'm with the Communications Cable & Conductivity Association. And again, I ask for support for Certifying Amending Motion 70-23, which seeks to reject an identifiable part of second revision 5124, including any related portions of first revision 5139.

CHAIRMAN GOLINVEAUX: Thank you very much.

There's a motion on the floor to reject an identifiable part of the second revision No. 5124, including any related portions of the first revision of 5139.

Is there a second? We do have a second.

Please proceed with the discussion on the motion.

MR. KIDDOO: Yes. Again, Dave Kiddoo with the Communications Cable & Conductivity Association, and I'm in support of this motion.

Essentially, we've had a similar problem
that we've just addressed in the same table in Article 600.33. There was a line for power limited tray cable, and in the current text, it allows for substitutions that are not allowed as stated in Article 725.

So again, I urge you to support this motion to create a -- the fix, and again, this is exactly the same situation where we can't allow the code to go forward with this error. And I certainly hope we don't take the temporary interim amendment route, and we just fix it in the correct way.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

Again I'd like to defer to code panel 18, Chair Mr. Bobby Gray for a position and response, please.

CHAIRMAN GOLINVEAUX: Microphone number four, please.

MR. GRAY: Thank you. Bobby gray, Hoyterbuck Electric, representing the National Electrical Contractors Association on Code Making Panel 4. I stand in opposition to the motion representing the panel action, same argument, same discussion.
So I won't add anything further.

Thank you, Mr. Chair.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

With that we'll open the debate on the motion. Please provide your name and affiliation and whether you're speaking in support or against the motion.

I'm going to go to microphone number one, please.

MR. HILBRICK: Thank you, Mr. Chairman.

Mike Hilbrick on behalf of the electrical section. The members have voted to support the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three.

MR. KAUFMAN: I'm Dr. Stanley Kaufman from Cable Safe Incorporated. I'm speaking for the motion.

If you look at Article 725, you'll find there are no substitutions of PLTC cable. What the panel did is they copied it backwards. PLTC is committed to -- with all these other cables, and there's only one fix that we could do in my mind that's accept this motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.
I will go to microphone number one, as you were first up there.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for The Vinyl Institute in support of the motion.

Again I think it's been stated twice that the PLTC substitution are not allowed, but I want to reiterate what we discussed before. Try to resolve this by a temporary interim amendment, a TIA, is not a guaranteed solution. Please do not go that way.

Please support the motion. Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number two, please.

MR. MULLER: John Muller, private investigator. I speak against the motion as it is presented on the tablets, not as it's presented on the screen. The first portion of it has the same error for environmental air spaces and plants that we just voted and changed. And if -- I'd like the clarification. Are we voting to undue our previous motion by this one as its presented, or are we just voting on this one line that's on the screen?

CHAIRMAN GOLINVEAUX: It's a good question, and the answer is, no, we are not revising the previous motion. That motion has been recorded and that will
modify this table as appropriate based on the revisions presented in front of you.

Okay. Is there any further discussion on Motion 70-23 to Reject an Identifiable Part of Second Revision No. 5124, including any related portions of the First Revision No. 5139?

Seeing none, Mr. Chair, do you have any final comments?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

No, I have nothing further to add.

CHAIRMAN GOLINVEAUX: Okay. Before we vote let me restate the motion. The motion on the floor is to Reject an Identifiable Part of Second Revision No. 5124, including any related portions of First Revision No. 5139.

To vote touch the vote button. If you wish to vote in favor 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 balloting will close in five seconds.

The balloting is closed.

The results of the vote are 240 in favor of the motion; 16 against the motion.

The motion passed.
(Motion 70-23 to Reject an Identifiable Part of Second Revision No. 5124, including any related portions of First Revision No. 5139 passed with a vote of 240 in favor; 16 against.)

CERTIFIED AMENDING MOTION 70-24:

CHAIRMAN GOLINVEAUX: Now let's proceed to the discussion on Certified Amending Motion 70-24.

Microphone number one, please. I'm sorry. I have -- oh, Mr. Sean Lui is the certified maker of the motion. I assume, Mr. Lou.

Microphone number three, I apologize. Mr. Lou.

MR. LUI: My name is Sean Lui. I'm a staff engineer with Tesla Motors, and I move to accept public comments 1588.

CHAIRMAN GOLINVEAUX: Thank you very much.

There is a motion on the floor to Accept Public Comment No. 1588.

Is there a second? We do have a second. Please proceed with the discussion on the motion.

MR. LUI: My justification for allowing a power cord longer than 12 inches for wall-mounted charges is very simple.
CHAIRMAN GOLINVEAUX: Could you please step a little closer to the microphone, so we get your voice through the hall, please. Thank you.

MR. LUI: Okay. Let me repeat.

My justification for allowing a power cord longer than 12 inches for wall-mounted charges is very simple.

Current spacing is 8 or 16 or 24 inches. If a 12-inch power cord will not reach an outlet mounted in a stud and the wall unit mounted in the stud next to it. Article 90.1(A) says the purpose of this code is the practical safeguarding of persons and property.

Practical safeguarding. In response to rejecting public comment 1588 does not address the other practical aspect of the proposal not revised as to include why or how much safeguarding is being compromised. A decision to accept or reject the proposal should be based on proper logic, rationale, and facts rather than just speculation.

I respectively ask this audience to support public comment and approve the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?
CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

Sequence 24 is the responsibility of Code Making Panel 12. I'd like to defer to Scott Kline and chairman of Code Making Panel 12 for position and response, please.

CHAIRMAN GOLINVEAUX: I'm assuming, microphone number four, Mr. Kline, please.

MR. KLINE: I'm Scott Kline, McMercury Electric Incorporated. I represent NEMA. I'm chair of NEC panel 12. And I'm speaking against the motion.

The panel evaluated that the added length to this cord was too risky and was without cause since proper planning would correctly place the dedicated receptacle. In addition compliance with item D allows a six foot cord.

Please vote no on the motion.

CHAIRMAN GOLINVEAUX: Thank you.

With that we will 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 number one, please.

MR. MINIG: Hi. Name is a Jeff Minig. I'm with General Motors, and I'm representing the SAE and IWC committee for electric vehicles.
CHAIRMAN GOLINVEAUX: Are you speaking --

MR. MINIG: I'm speaking for this --

CHAIRMAN GOLINVEAUX: Thank you.

MR. MINIG: -- proposal. And we want to express our support for the motion.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number two.

MR. BROWN: Thank you, Mr. Chairman.

My name is Kent Brown. I'm affiliated with Leviton, and I'm against this proposal.

The 12 inch has been established in the code for many years, and it's in other sections of the code.

So, for example, the personal protection section, Article 422. So to keep consistency, I think we should maintain the 12 inch or less requirement. Any increase in the cord is related to a decrease in safety.

In the original public comment 1588, proposed the change and in the rationale, it specifically said for stationary, which is fastened in place by applications; however, the actual proposed code has no stipulation. So it would affect both portable and fastened in place. So I don't think it's in line with the rationale.

CHAIRMAN GOLINVEAUX: Thank you very much.

Microphone number four, please.
Mr. Hirschler: Marcelo Hirschler, GBH International, speaking for NFPA, and in opposition. I don't see in the -- sorry, public input or public comment any justification other than it would be a good idea. There has been no fire hazards assessment conducted or any other hazard assessment conducted to indicate that this extension from 12 inches to 36 inches is justified and doesn't add a hazard that we didn't expect.

So I urge you to vote against the motion.

Thank you.

Chairman Golinveaux: Thank you.

Is there any further discussion on Motion 70-24 to Accept Public Comment No. 1588?

Seeing none, Mr. Chair, would you have any final comments?

Chairman Johnston: Mr. Chair, I have nothing to add.

Thank you.

Chairman Golinveaux: Thank you.

Before we vote let me restate the motion. The motion on the floor is to Accept Public Comment No. 1588.

To vote touch the vote button. If you wish to vote in favor 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 balloting will close in five seconds.

The balloting is closed.

The results of the vote are 92 in favor of
the motion; 194 against the motion.

The motion fails.

(Motion 70-24 to Accept Public Comment No. 1588 failed with a vote of 92 in favor; 194 against.)

CERTIFIED AMENDING MOTION 70-25:

CHAIRMAN GOLINVEAUX: Now let's proceed with
the discussion on Certified Amending Motion 70-25.

Microphone -- somebody wave. Microphone
number three, please.

MR. LUI: Again, my name is Sean Lui. I represent Tesla Motors, and I move to accept public
comments No. 1509, 1719, 1097, and 1461.

CHAIRMAN GOLINVEAUX: Thank you.

There's a motion on the floor to Accept
Public Comment Nos. 1719, 1509, 1097, and 1461.

Is there a second? Okay. I do have a
second.

Please proceed with discussion on the
MR. LUI: Tesla Motors manufacturers and sales electric cars that can travel 300 miles in a charge. An equipment that recharges the battery with over 150 miles of range just under 20 minutes. Here's the charging cable that we use today. This is really heavy, bulky and really stiff in the winter. Not really user friendly. Not only are we car makers where hundreds of thousands of customers want a better solution. We want a faster charging and cables that are smaller, lighter and easier to handle to enable long distance travel. We have to for the sake of the industry, but the current code revision severely limits our ability to do so by forcing us to use ampacity tables.

Here's a cable we developed. This is liquid gold. It's half the size and carries the same amount of current.

CHAIRMAN GOLINVEAUX: Mr. Lui, you really shouldn't be using props in this presentation. So please, if you'd refrain from showing the body props or product.

MR. LUI: Okay.

CHAIRMAN GOLINVEAUX: Just use the words what you're trying to describe or tell us.
MR. LUI: Okay. So as I said, the liquid gold cable is half the size and much lighter, easier to use and meets all the performance and safety requirements, but because of the ampacity tables, we can't -- this cable can't exist.

What we want is your support to approve this motion because what the industry needs is language in the code to allow progress and enable us to innovate, so we can make better and safer products for everyone.

Thank you very much.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

Once again, I'd like to defer to the chair of code panel 12, Mr. Scott Kline, for a position and response, please.

CHAIRMAN GOLINVEAUX: Microphone number four, please.

MR. KLINE: Scott Kline, McMercury Electric Inc., representing NEMA, chair of NEC panel 12, speaking against the motion.

The ampacities of the tables are set for the long-term heat protection of the cables installation. This particular cord will see especially rough use as
it's pulled out, connected, disconnected, pulled back to its stored condition. The added heat stress and damage to the insulation is certainly not desirable. The panel evaluated that the added risk would be unacceptable. If there is a new cable that someone might manufacture that could be rated for higher ampacity, excellent. Perhaps they should submit it and have it approved for the NEC tables.

In the meantime, the panel feels that the NEC table should rule. Please vote no on the motion.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen. 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 number one, please.

MR. KAVOTCHIC: Thank you, Mr. Chairman. John Kavotchic, Underwriters Laboratories, speaking in support of the motion.

UL is in support of the certified amended motion to add the exception to 625.17(B) that you see on screen number one. This exception will address different innovations and advancements in design and technology, which are prohibited by the current code text.
Today, the reference to the ampacity tables in Article 400 is overly restrictive and allows no change to design or technology for devices covered under Article 625.

Additionally, the ampacity table referenced in question pertains to the output cable of a listed device as required by Section 625.5. This reference does not address any installation concern with these devices and is essentially a design requirement.

If left this way, the innovative solutions for electric vehicle charging will be prohibited by the code, and this will remain for at least three years until the next code cycle. This will affect the EV industry and affect extended deployment of these vehicles and infrastructure devices.

With the addition of the exception, the end product standards can be effectively used to address the safety of these technology and design innovations with no negative effect on the installation of the infrastructure addressed by the current code.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number two.

MR. BROWN: Thank you, Mr. Chairman.

My name is Kent Brown. I'm affiliated with...
Leviton, and I'm against the motion.

First of all, cord ampacity should be addressed by Code Making Panel 6 where the tables reside. The tables were set up for not only EVSE, but all types of code-related applications, welders, for instance. Changing the table in Article 625 does not make sense. If this has validly, let the experts in Code Making Panel 6 make that decision.

The new proposed code is also vague. It --

it would not only permit the use of maybe 32 amp ten gauge wear, but could go all the way to 640 amp with ten
gauge wear. Where would it stop?

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. ELDRIDGE: Good afternoon. My name is Gary Eldridge, and I work for Charge Point, the leading provider of electric vehicle charging equipment and services, and I'm in favor of this motion.

We sell, operate, and service the largest electric vehicle charging network in the world. There are more than 28,000 cords on our networking in use across North America, and we've delivered more than 16 million charges safely providing EV drivers more than 373 million miles of electric driving over the last
seven years with no safety incidents. I realize we have a diverse audience of many different disciplines being represented. So I don't want to focus on the same things that you just heard. But I would like to take a strategic look at the challenge from a standards and safety perspective.

Article 625 of the NEC in addition to installation requirements has some end product requirements which were just mentioned, the tables. They were put in place in the 1990s because electric vehicles and the associated charging equipment started appearing in the marketplace in advance of national standards specifically covering their safety.

The scene is very different today. Now we have NSI standards covering today's electric vehicle charging equipment. These standards were developed by third-party laboratories, such as UL, Intertech, manufacturers, standards development organizations, representatives from industry associations, governments, consumer advocates, and interested members of the public, using the consensus based and signed process to development the safety requirements for those products.

Voting in favor of this motion helps keep the NEC and installation documents while relying on the NSI standard process in our third-party laboratories and
standards development organizations to develop the safety requirements for end products working in a consensus based process. There are new cable technologies and other new innovations that simply were not anticipated by the National Electric Code or the tables. And having any product table requirements on the National Electric Code blocks the innovation of these new technologies and the ability of a standard development organization to even develop the need and safety requirements for these and other emergent technologies in a timely fashion by being tied to harmonize with the National Electric Code.

Voting for this mess -- motion, excuse me, keeps the NEC focused on the installation requirements while allowing the NESCO to work with labs and industry to manage and develop product requirements for new technologies.

The NEC process is suited to developing the specific requirements of actual products. 625.5 requires that the equipment and components be third-party listed for the purpose. This demonstrates a trust in our standards development and organizations and third-party labs to formulate the safety requirements for this equipment.

Voting yes is voting for safety and
innovation.

Thank you.

CHAIRMAN GOLINVEAUX: You had that timed well.

Microphone number five, please.

MR. APPALO: Thank you, Mr. Chairman.

Tom Appalo with Siemens, and I speak in support of this CAM. Again, I'm going to keep it very short. We've heard a lot of good things on this motion. And I would just like to reiterate this is for the output cord of the EVSE. I consider that part of the product. It should be covered under the product standards. There are complete and sufficient product standards in place today that -- that verify the safety requirements of the cord used. This does not apply to the input cord. That is governed by the NEC as it should be.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one.

MR. MINIG: Yes. Jeff Minig with General Motors in representing the SAE and IWC. I worked council for electric vehicles, and we're in support of this motion.

And I wanted to reflect that too that in
1996 Article 625 was written as a result of the EE1, and there were no product standards at that time. Things have evolved. There's many UL standards, SAE standards and many others.

So the time to rearrange that to take the product design perimeters out of the code and make it strictly an installation code.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three.

MR. TODD: Thank you, Mr. Chairman.

My name is Larry Todd, and I represent Intertech. Intertech is in support of motion for 70-25.

The change that would be added would allow listed electric vehicle supply equipment to use new types of cords that might be available. And it is part of the product which listing labs deal with on a daily basis.

So I ask for your support for this motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one.

MR. WELLS: Mr. Chair, I'm Robert Wells. I sit on CMP 4 representing the American Wind Energy Association, but also I'm chief electrical inspector for
IEEE SIE event, and I've worked on electric vehicles for many years. I'd like to bring out a parallel --

CHAIRMAN GOLINVEAUX: Are you in support or --

MR. WELLS: I'm in support of the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

MR. WELLS: I'd like to bring out a parallel from the last century. Around 1900 electric vehicles were the norm, and gasoline vehicles were introduced. And there was a technological innovation that made gasoline vehicles practical and that was the electric starter.

We're at a turning point now in the electric vehicle industry. We're seeing electric vehicles coming to main line. Chevrolet will come out with a long range vehicle at the end of the year. And I would state that unless this is passed, the National Electric Code would be taking out the opportunity to have electric starters on gasoline cars last century. This is an enabler for electric vehicles. It's very important, and I encourage your vote and support.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone four, are you lining to speak?
MR. BURNS: Call the question.

CHAIRMAN GOLINVEAUX: You must identify yourself and then make the statement, please.

MR. BURNS: Julian Burns, Quality Power Solutions, speaking for myself. I call the second.

CHAIRMAN GOLINVEAUX: There's a motion on the floor to call the question. I didn't see a whole bunch of people lined up at the microphone, but I will move the motion, proceed with the vote on the call of the question.

I have a second. So in order to vote on this motion, please scroll down to the bottom of your tablet to vote. If you wish to vote in favor of the motion, touch yes. If you wish to vote against the motion, touch no.

Please record your vote.

Five seconds. The balloting is closed.

There are 275 in favor of calling the question; 21 against.

The motion passes.

Before we vote let me restate the motion.

The motion on the floor is to Accept Public Nos. 1719, 1509, 1097 and 1461.

To vote touch the vote button. If you wish to vote in favor of the motion and recommended 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.

Balloting will close in five seconds.

The balloting is closed.

The results are 176 in favor of the motion; 131 against the motion.

The motion passes.

(Motion 70-25 to Accept Public Comment No. 1719; Accept Public Comment No. 1509; Accept Public Comment No. 1097; Accept Public Comment No. 1461 passed with a vote of 176 in favor; 131 against.)

CERTIFIED AMENDING MOTION 70-26:

CHAIRMAN GOLINVEAUX: Now let's proceed with the discussion on Certified Amending Motion 70-26.

Since you're running, that's going to be pretty close to microphone number three, please.

MR. BROOKS: Yes. My name is Alec Brooks of AeroVironment. I make the motion to Accept Public Comments 1075, 1722, and 1534.

CHAIRMAN GOLINVEAUX: Thank you.

There's a motion on the floor to Accept Public Comment Nos. 1075, 1722, and 1534.
Is there a second? Thank you. We do have a second.

Please proceed with the discussion.

MR. BROOKS: These public comments are to allow 250 volt portable EV charging stations in the National Electric Code. Electric vehicles are charged through a piece of equipment called an EVSE, which stand for Electric Vehicle Supply Equipment. EVSEs come in a wide variety of sizes and shapes. Some are installed and hard wired. Some are installed and plug into a receptacle outlet. Others are small and portable and plug in. Portable EVSEs come standard with virtually all electric vehicles and plug-in hybrids. Until recently portable EVSEs have been rated at 120 volts only. Our company makes and sells compact direct plug-in probable EVSEs in versions that are both 120 volt compatible and 240 volt. The 120 volt plugs into a 515 outlet. The 240 plugs into a 620 outlet. They are identical in shape and weight, but the 240 volt version charges almost three times faster, which makes it much more useful. Both versions are UL listed. The dual voltage version of this EVSE that works on both voltages is now being delivered as standard equipment in the Volvo XC 90 plug-in hybrid SUV.

The second revision of the 2017 NEC does not
allow 240 volt portable EVSEs. Five public comments were submitted proposing to modify Article 625.44 to include 240 portable EVSEs. All five public comments were rejected by the current panel on a close vote of 5 to 4. 240 volt portable EVSEs are already in very wide spread use in the United States. About 5,000 of those 240 volt portable EVSEs are now being delivered every month by auto makers in the U.S. as standard equipment in plug-in vehicles and will soon be included with even more vehicle models. If the 2017 NEC does not allow this category of product, 240 volt portable EVSEs won't go away, but they will no longer be able to be NRTL listed to UL standards.

For that reason I respectfully ask for your support to send this proposal back to the code making panel for reconsideration.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's position?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair. Once again I'd like to defer to the chair of Code Panel Making 12, Scott Kline, for position and response, please.

CHAIRMAN GOLINVEAUX: Mr. Kline, you're
still on microphone four, I assume.

Okay, microphone number four, please.

MR. KLINE: Scott Kline, McMercury Electric, representing NEMA and chair of NEC panel 12, speaking against the motion.

The panel voted to allow 120 volt, 15 and 20 up receptacles for portable equipment. These receptacles in garages and outside must be protected for ground fault electrocution protection. 240 volt receptacles do not have a similar requirement. The panel evaluated the non-GFCI receptacles as too dangerous for portable equipment. In addition, 240 volt supply is allowed for stationary equipment and for fastened in place equipment.

Please vote no on the motion.

CHAIRMAN GOLINVEAUX: Thank you very much, gentlemen.

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'm going to go to microphone number 6, please.

MR. HOLMES: Yes. My name is Jeff Holmes. I would like to stand against this motion. I'm
representing myself.

CHAIRMAN GOLINVEAUX: Thank you.

MR. HOLMES: The public is not used to plugging in 240 volt equipment that may be up to 50 amps. When we use these types of equipment, dryers, ovens and ranges, they're put in once, plugged in and they're done. These chances are these are going to be used outdoors where there's no GFCI protection whatsoever on these outlets required. I think it's a bad move.

If this article is truly for safety, we need to reject this motion.

CHAIRMAN GOLINVEAUX: Thank you very much.

Microphone number one.

MR. MINIG: Yes. Tom Minig with General Motors, representing SAE and the upper IWEC, also other automotive manufacturers.

CHAIRMAN GOLINVEAUX: Are you speaking in favor?

MR. MINIG: Oh, speaking in favor of the motion, yes.

We have a vehicle coming out in the next four months that will have a greater than 200 mile range at 110 volts. It will take 18 hours to charge that vehicle. At 240 volts you can charge it in seven. So
obviously if we want massive option of electric
to charge. We need this flexibility to do rapid
opportunity charging to make this technology viable.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number two, please.

MR. BROWN: Thank you Mr. Chair.

I'm Kent Brown. I'm affiliated with
Leviton, and I'm against this motion.

The use of the EVSE without GFCI protection
is an added hazard that doesn't exist with the 125 volt
portables. And the chance of using extension cords,
which are also a bigger risk, is increased. And the use
of using a plug in an outside wet location with no GFCI
is also increased.

In the code making panel, back in 2014,
there was a 12-25 committee comment that rejected the
240 vote portable. So it was rejected prior to 2014
code. Then a TIA was initiated to try to change that.
TIA 1168, and that was also rejected. And then in an
NFR 3379 was submitted to clarify the code that will
only apply to -- the portable only applies to 125 volt
and that passed in the code panel.

So it's been reviewed numerous times, and
the issue is still the same. It's risky.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. LUI: Thank you, Mr. Chair.

Again, this is Sean Lui. I'm with Tesla Motors, and I'm for this motion.

As one of the largest manufacturers of electric vehicles in North America, we have considerable experience with these products and how our customers use them. Electric vehicles will benefit from higher charging rates of 250 volt with portable charging equipment. There's no very viable technical reason to prohibit 250 volt progress. Previously raised potential issues all have been addressed in public comments and successfully debated in technical meetings.

For example, today, if 250 volt outlets don't have GFCI protection, the less chance the code to require them instead of bending a complete entire class of EVSEs. This is the same as saying if you have a headache, your solution is cut your head off. It doesn't make sense.

The solution to the problem has to be commensurate with the severity. There must be a balance between utility and safety.
I respectfully ask for support to send this proposal back to the code making panel for reconsideration. It's very insufficient or even inadequate for justifying the current position in the first place.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please. You've been standing there.

MR. APPALO: Thank you, Mr. Chairman.

Tom Appalo with Siemens, and I stand in opposition of this -- of this certified amending motion.

Unfortunately I have to do that for the safety aspects. And as the panel chair said, 120 volt portables are allowed because those outlets have GFCI personnel protection, which has been required in the code since 1971 for outdoor outlets, and then later garages were added as well. That's exactly where this portable equipment will be used.

It just doesn't -- doesn't make sense from a safety standpoint to proceed with these 240 volt portable chargers without the outlets in outdoor garage locations having that same level of ground fault circuit interruption for personnel protection.

The NEC -- now the need for and the
effectiveness of ground fault circuit interrupters are cited by the NEC as an example of the code accomplishing its objective of safeguarding personnel.

So before this motion could be accepted or this code article changed, there has to be something done to get the proper ground fault protection in place.

Thank you very much.

CHAIRMAN GOLINVEAUX: Thank you.

Going by order. Microphone number two, please.

MR. BLACK: Mr. Chair, Art Black, Carmel Fire Protection. I'm neither against nor for this motion. I just rise to a question that I'm confused now. The maker of the motion and a couple of speakers have talked about returning to committee. But that's not what it says up here.

So could you please clarify the intent of the motion for us?

CHAIRMAN GOLINVEAUX: We are voting on the proposed revision that you see in 70-26 on screen number one.

MR. BLACK: That's what I thought.

CHAIRMAN GOLINVEAUX: The editorial text on that screen is what we are voting. If it doesn't pass, it will move to 70-26 fails, and I cannot control how
people are using the language.

MR. BLACK: Just checking. Thank you.

CHAIRMAN GOLINVEAUX: The motion will be on the text that you see on screen one.

Thank you for the clarification.

I'm a little bit lost track. I'm going to move to number one first, and gentlemen, I will get to you.

MR. WELLS: Thank you.

Robert Wells with CMP 4, speaking for myself. But also speaking for the electric vehicle industry and what's facing us.

I think the ground --

CHAIRMAN GOLINVEAUX: Are you in favor or opposed?

MR. WELLS: I'm in favor of the motion.

CHAIRMAN GOLINVEAUX: Thank you.

MR. WELLS: That's what the green sign means too.

CHAIRMAN GOLINVEAUX: Thank you. Don't make me come down there. I've been waiting to say that all day.

(Audience applause.)

MR. WELLS: So I think the ground fault issue is a red herring. The NEC should not stand in the
way of electric vehicles. We've got a huge possibility
to improve our world, improve the environment and to
support the work that's going on in environment and
General Motors.

   The reason why I think that's a red herring
is that even a single 120 volt portable charger could be
plugged into an inside outlet with an extension cord. I
bet you it happens all the time. I think there are
other solutions to the problem apart from GFCI outlets.

   For example, there are plenty of double
insulated tools and appliances that are entirely or have
redundant safety with respect to ground fault.

   So in some ways I think this should move to
a listing issue. I think as long as a charger is
evaluated properly for use on a 240 volt outlet, and the
FMEA goes as far as what happens if there's a ground
fault, make sure that vehicle cannot be energized and so
on, I think it's covered. The GFCI issue is a red
herring.

   And finally, there are plenty of
applications where consumers plug in 240 in rather
hazardous wet locations and that is marinas. Go to any
marina, walk along the dock, and you'll see 240 volt
outlets all over the place.

   CHAIRMAN GOLINVEAUX: Thank you.
I'm going to move to microphone number six, please.

MR. RUDE: Mr. Chair, thank you.

My name is Steve Rude. I'm with Legrand North America, and I'm speaking to oppose this motion. In addition to the reasons others preceding me previously have stated concerning inadequate infrastructure, I'll approach it from a slightly different angle. Our concern is as a full line manufacturer of bio use covers and boxes required for exterior use is the lack of availability of these types of enclosures to adequately house and physically protect many of the proposed plug-in receptacle connections. As was stated at this microphone about 15 minutes ago, particularly concerning the proposed 30 and 50 amp additions. Our thoughts are that the larger physical size of these plug-in receptacle connections would not allow for an appropriate level of user protection as these connections are truly not likely to be adequately housed in practice.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three.

MR. ELDRIDGE: This is Gary Eldridge from Charge Point. I'm speaking on behalf of myself, and I'm
in favor of this motion.

I just wanted to remind us all of a few safety facts.

Fact number one, we're talking about ground fault circuit interrupt. The keyword being ground fault. 240 volt systems and circuits in the U.S. are 120 volts with respect to ground, not 240. Electrocutions and ground faults happen between line and the person and earth. So it's the same voltage as 120 volt circuits.

Second point is that the present allowance for 250 volt equipment to exist at all, which it does, it is listed and it is allowed in the code is the one foot code. Okay. Why does it have a one foot cord? It's to bring the protection as close as possible. That is the GFCI protection as close as possible to the receptacle, so that you do not have long cords hanging to the ground.

Thank you very much.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. GOLDSMITH: Yes. Jeff Goldsmith of Seven Seas Water, but speaking for myself in opposition to the motion.

All cars are large metal objects which are
mounted on rubber insulators and used in wet areas, and anyone who gets into a car is standing in a puddle or other grounded location in a wet area and they are touching the metal surface to open the handle to get in. That's a recipe for electrocution, and so I believe that NFPA cannot allow this motion to pass without proper safety ground fault circuit protection or other protection before this is allowed.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number five, please.

MR. BROOKS: Quick follow up on the previous comment just now.

These -- all EVSEs have ground fault protection.

CHAIRMAN GOLINVEAUX: Could you please identify yourself and whether you're --

MR. BROOKS: Alec Brooks with AeroVironment.

CHAIRMAN GOLINVEAUX: And whether you're for or against the motion, please?

MR. BROOKS: I'm for.

CHAIRMAN GOLINVEAUX: Don't use the green sign excuse. Thank you.

MR. BROOKS: All EVSEs have GFCI -- or not GFCI, but it's a CCID or charge card interrupting
devices for ground fault protection built in. The issue
of whether it's a 240 volt portable or any kind of a 240
volt, yes, you have to have a continuous ground to the
car to make sure it's safe. There's a requirement now
in UL that you have to have a missing ground detect
before you could ever close the contacters. So that's
not a big issue on any of these.

I was just going to follow up on a couple of
other comments. Since we're -- I think your thing about
whether you have a safety hazard from touching 240 volts
from blade to blade on the plug itself. Now I think
that would be admitting that NEMA plugs are inherently
unsafe, and I don't think that's NEMA's position.

Finally, in an earlier commenter tonight has
a product that's called a mini EVSE that is 240 volt
rated. It's not technically categorized as a portable
EVSE, but it is similar size and weight. So products
like that they have no problem with their customers
plugging those into 240 volt outlets. So I'm not sure
where the -- how they make the distinction when there
are products of the same size and weight that are in
slightly different categories, but they both plug into a
same outlet.

CHAIRMAN GOLINVEAUX: Thank you.

And just a quick reminder. This is a
recorded proceeding. So in that transcript they don't know where you're standing and what color microphone. So it's why I keep reminding you to identify your name, affiliation, and whether you're for or against a motion. So I apologize about joking about it, but it is a recorded transcript, so I need to get it on the record.

I'm going to microphone number two.

MR. DOLLARD: Thank you, Mr. Chairman. My name is Jim Dollard, IBEW Local 98 in Philadelphia, and I call the question.

CHAIRMAN GOLINVEAUX: There's a motion to call the question. I do have a number of people remaining at the microphone just for your information, but I'll proceed with the vote on calling the question. We do have a second.

In order to take the vote on this motion, please scroll down to the bottom of the tablet to vote. If you wish to vote in favor of the motion to call the question, touch yes. If you wish to vote against that motion, touch no.

Please record your vote.

Five seconds.

The balloting is closed.

The results of the ballot are 250 in favor
of calling the question; 25 against.

The ballot is passed for calling the question.

Before we vote let me restate the motion.
The motion on the floor is to Accept Public Comments on No. 1075, 1722, and 1534.

To vote touch the vote button. If you wish to vote in favor 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 balloting will close in five seconds.
The balloting is closed.
The results are 83 in favor of the motion; 203 against.
The motion fails.
(Motion 70-26 to Accept Public Comment No. 1075; Accept Public Comment No. 1722; Accept Public Comment No. 1534 failed with a vote of 83 in favor; 203 against.)

CERTIFIED AMENDING MOTION 70-27:

CHAIRMAN GOLINVEAUX: Let's now proceed with the discussion on Certified Amending Motion 70-27.

Microphone three, please.

MR. KAUFMAN: Yes. I'm Dr. Stanley Kaufman
from CableSafe, a member of panel 16. I move CAM 70-27
which is to Accept an Identifiable Part of Public
Comment No. 46.

CHAIRMAN GOLINVEAUX: Thank you.

There's a motion on the floor to Accept an
Identifiable Part of Public Comment No. 46.

Is there a second? We do have a second.

Please proceed with the discussion on the
motion.

MR. KAUFMAN: This motion fixes a typo.

(Audience laughter and applause.)

CHAIRMAN GOLINVEAUX: Mr. Johnston, would
you please offer the Panel's Position?

CHAIRMAN JOHNSTON: I'll defer to Scott
Kline, the chair of panel 12, for a position and a
response.

CHAIRMAN GOLINVEAUX: Thank you.

And that will be microphone number one.

MR. KLINE: Scott Kline, McMercury Electric,
Inc., representing NEKA. I'm chairman of Code Making
panel 12, and I am speaking in favor of the motion.

My normal responsibility here would be to
defend the panel's action against the motion; however,
Stan's motion is proposing a simple editorial correction
in order to avoid having an error published in the 2017
In order to be totally open with and fair to the members of panel 12, I emailed them asking their opinion in regard to this motion issue. All 15 responses were in favor of the correction. I didn't receive any negative opinions.

The motion wants to remove the duplication of Table 800.154(A) from Section 646(3)(B), list item 6, and prevent the loss of the reference to Tables 820.154(A) in list item 6 which refers to Article 820 and should not have an Article 800 item in it.

This motion will correct the table reference number from Article 800 to 820.

As I mentioned Table 800.154(A) will not be lost from the code. It is already correctly referenced in list item 5. Should not be referenced twice. Should not be referenced at all in list item 6.

In the 2014 NEC table 820.154(A) was already referenced in the same subsection. It's not being added here. The intention of the motion is to prevent it from being lost. It was the intention of the panel to include the same table with a new list item 6 as part of the reconstruction of this subsection.

This motion for a simple editorial correction should be supported. Please vote yes on the
motion.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

With that we'll open up the debate on the motion. Please provide your name and affiliation and whether you are speaking in favor or against the motion.

Microphone number one, please.

MR. HILBERT: Thank you, Mr. Chairman.

Mike Hilbert on behalf of the electrical section. Members voted to support the motion.

CHAIRMAN GOLINVEAUX: Thank you.

Seeing no one else on the microphone. Mr. Johnston, do you have any final comment?

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

CHAIRMAN GOLINVEAUX: Okay. Before we vote let me restate the motion. The motion on the floor is to Accept an Identifiable Part of Public Comment No. 46.

To vote touch the vote button. If you wish to vote in favor 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.

Five seconds.

The balloting is closed.

The results of the ballot are 257 in favor
of the motion; 8 against the motion.

The motion has passed.

(Motion 70-27 to Accept an Identifiable Part of Public Comment No. 46 passed with a vote of 257 in favor; 8 against.)

CERTIFIED AMENDING MOTION 70-28:

CHAIRMAN GOLINVEAUX: Now let's proceed with the discussion on Certified Amending Motion 70-28.

Microphone number one, I assume, here.

MR. ABERNATHY: Yes.

CHAIRMAN GOLINVEAUX: Microphone number one, please.

MR. ABERNATHY: My name is Paul Abernathy with Encore Wire Corporation, also a member of code panel 17, and one of the authors of this certified amending motion 70-28.

I seek a motion to CAM 70-28 for the rejection of second correlating revision No. 43.

CHAIRMAN GOLINVEAUX: Thank you.

There is a motion on the floor to Reject Second Correlating Revision No. 43.

Is there a second? We do have a second.

Please proceed with the discussion on the motion.

MR. ABERNATHY: Thank you, Mr. Chair.
This revision contains several requirements that are new and were not subject to public or peer review. The second revision created by Code Making Panel 17 as a result of Code Making Panel 17 task group three was not based on one or more public direct inputs or first revisions, where therefore, no public comments could be committed. New chemical statements have been included that have not had public or peer review or input. It also contains a new word like acid that is not identified as to which acid is meant, which results in every acid being inadvertently included.

Some wire methods like liquid pipe flexible non-metallic conduit were arbitrarily excluded in 680.14(B) but thankfully corrected and added back to other points within 680.

The committee and ultimately task group three did not provide substantiation for the acid or other chemicals languages, nor the laden air or vapor rationale.

During the second draft meeting, I asked the UL representative if they had any such testing in place for any of the wiring methods currently per permitted as also proposed in 680.14(B). The UL panel representative response was no. The work on 680.14 did not clear up the questions presented in various other public inputs.
and comments indirectly. Trying to define what was a corrosive environment in his regards to 680 nor what constitutes the location. Subsequently, it didn't offer an actual definition of what is considered corrosive or chemically laden; as well, we have to look at the specific desire or intent for the detailed language added in the comment committee statement.

As a member of Code Making Panel 17, it is my opinion that our panel would have benefitted from an expert opinion on the technical constitution of what corrosive environments were chemically concentrations of laden air is actually regarded in terms of acid, chlorine, or bromine.

One important statement here as it said -- also the language of the proposed 680.14(B) states that all wiring methods used and the locations specified in 680.14(A), quote, "shall be listed and identified for the use in such areas."

Again, as ironic that none of the historically accepted methods have been evaluated for such use themselves. It is very hard for a statement to be meant that says listed and identified when no such testing exists.

Again, based on the panel's statement, all of the methods have to be listed and identified.
Again, the second correlating revision 43 states the same language. Again, I will reiterate, it is hard for a statement being listed and identified when no such testing exists.

I respectfully ask the members to consider supporting this CAM, and allow Code Making Panel 17 to continue to refine these and associated pool areas in the next cycle.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Yeah. Thank you, Mr. Chair.

I would like to on 28, Sequence 28, defer to the chair of Code Making Panel 17 for a position and response, but since there's a second correlating revision involved, I would like to subsequently also ask that James Dollard, who is the spokesperson for the correlating committee, respond to this issue as well.

So I would like to defer to Donny Cook for his response.

CHAIRMAN GOLINVEAUX: Microphone number two. Microphone number two, please.

MR. COOK: Thank you, Mr. Chair.
My name is Donny Cook, and I'm the chairman of NEC CMP 17, and I speak in opposition of the motion 70-28.

The first thing I would like to talk about is new material. While 680.14 was not part of the 2014 NEC or part of the 2017 first draft, the content included in the new section, proposed new section, is not new. A review of the committee actions should include review of PIs 3443, 3767, 3799, 3818 and subsequent FRs 4855, 4862, 4863, 4864. These FRs include revisions to address previously mentioned PIs and others for Sections 680.21, 680.23, and 680.25.

During the second draft meeting, CMP 17 reviewed actions from those FRs and determined a usable -- that usability would be improved by placing requirements for the wiring methods and equipment grounding in a single location in Article 680 with references to that location and requirements for motors underwater illuminators, and paddle board feeders.

I would like to remind you that 90.3 of the NEC provides the structure for the NEC. Chapters 1 through 4 apply generally and requirements of Chapters 5, 6 or 7 supplement or modify those general requirements. Article 680 and those requirements modify the general rules. For decades Article 680 has limited
wiring methods and provided amps requirements for
equipment around those special areas, around swimming
pools and other -- in similar locations.

As the submitter of the original PIs, my
assumption was that the special requirements were
related to the wet corrosive areas where that equipment
is located.

Based on the complete record of actions in
Article 680, approval of this motion will now leave
Article 680 without those special requirements, for
equipment grounding and for wiring methods. That action
seems irresponsible since special requirements have been
in place for many code cycles.

If the Body chooses to support this CAM, we
will need some follow up motions to leave -- to --
because those requirements now in 680.21 --

CHAIRMAN GOLINVEAUX: Thank you. You've
exceeded your time. I'm going to move to microphone
number one. Oh, I'm sorry. I'm sorry. Thank you,
gentlemen. That was a committee position.

With that we'll open up the debate on the
motion.

MR. HIRSCHLER: I thought you needed to hear
from the --

CHAIRMAN GOLINVEAUX: Oh, there's two. I'm
going to go with two. I'm sorry; I apologize.

Microphone number two?

Microphone number two. We're still on the committee -- the panel's comments, correlating comments.

MR. DOLLARD: Thank you, Mr. Chairman.

Jim Dollard, IBEW Local 98 in Philadelphia, and I'm speaking at this time on behalf of the correlating committee.

And as you heard from the previous speaker, there was a lot involved. The correlating committee does not get technical. We don't get into these changes and get technical. We simply correlate. And I can tell you as the chairman of the task group that got into this, we spent a lot of time. We were even emailing the chairman. You heard him read off all of those public inputs and all of those FRs. There's lots of them. And we could do it, but we'll be here until ten o'clock instead of probably nine o'clock.

You have to get your arms around all of that to understand that the action taken here was for usability and clarity and does not introduce new material. The corrosive requirement is not new this cycle. The corrosive requirement has been there. We heard a previous speaker mention, you know, there's an acid, and we don't know if it's corrosive. I'm pretty
sure if it's an acid, it's going to be corrosive.

If we do this, if we were to accept this, we're not going to be able to fix this with follow up motions; I can tell you that right now. You can get four or five or six follow-up motions there will still be compatibility issues. This is simply user friendly, and when it comes to corrosive, under the right conditions, water can be corrosive.

We stand behind what Code Making Panel 17 did, and we urge you vote no on the motion on the floor.

Thank you, Mr. Chairman.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

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 number one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH International, speaking for NFPA, in support of the motion.

Once upon a time 560 years ago when I was young, I was a chemist, and I learned in the lab about what happens when chlorine gets exposed to the atmosphere in an atmosphere where there is the potential for humidity. It disappears and becomes hydrochloride.
So chlorine cannot be found in these environments.

Same thing with bromine. As soon as it gets into an atmosphere where there's humidity, it becomes hydrobromide.

So these -- this -- these sections talking about atmospheres laden with chlorine and bromine vapors are impossible to achieve technically. They just don't happen. This is technically an incorrect statement, all the statement in A.

If you -- if you're concerned about acid, I don't have a problem. I think it should have been identified what acid, but that's by the by. But this discussion of chlorine and bromine vapors is just technically wrong.

Please support the motion. Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. SIMMONS: Thank you, Mr. Chairman.

My name is Phil Simmons speaking for myself in favor of the motion.

My issues really are threefold.

Number one, procedural; number two, technical; and number three, as mentioned before, an unfair restriction on wiring methods regarding the procedures. And I just want to applaud the NFPA and the
Standards Council because the regulations are built to ensure fairness in the process.

Unfortunately, this technical committee ignored 4.4.1 of the regs, 4.4.3, 4.4.2 as well as 4.4.8.3.1. Because as I was looking through the -- the actions of the committees, the first thing I noticed is this work in creating the new 680.14 was not based on any public comment. There was none that was submitted. In looking through the regs, the committee doesn't get to create their own comment. In fact, the only reference there is in the regs to a committee comment is if they're going to submit a comment to another code making panel.

So this work that was done really was a creation of a new rule out of old cloth, and I want to take time to address all of the other areas, but I do want to call attention to panel statement's on their second revision 4817. Panel's statement says wiring methods that have been specifically evaluated for the type of corrosive environment around swimming pool pumps and sanitation chemicals are not as yet readily available. In spite of that statement, they went off and approved three or four wiring methods and excluded others. So there's a serious fairness issue to this work that was done.
And for new material, folks, there's lots of 
new material in spite of what you've heard. Because 
there's a lot of material that was not in the previous 
code that's now named as corrosive areas, and it's just 
unfortunate that -- that the code panel went down this 
road.

I applaud what they're trying to do to get 
common rules in one place and then refer to them in 
other places. It's just that they were one part of the 
cycle out of synch. They should have done this at the 
first revision meeting and not created new material at 
the second revision.

CHAIRMAN GOLINVEAUX: Thank you. Your time 
is expired.

I'm going to go in order of the standing at 
the microphones.

Microphone number five, please.

MR. STRANIERO: George Straniero, AFC Cable 
Systems, speaking in favor of the motion.

AFC is a manufacturer of wire cable and 
conduit products. Our products are listed for use in 
accordance with the National Electrical Code. That 
necessarily means we look to the code for design 
characteristics for the cables and raceways. When we 
look at the language that's been proposed by the panel,
we have language like the air in such areas shall be
considered to be laden with acid, chlorine, bromine
vapors. Then it goes on to say combinations of acid,
chlorine or bromine vapors. And then liquids,
condensation and also combinations of vapor. There's no
way for us to design product under those conditions.

Part B includes products that presumably are
resistive to those conditions.

The short of it is that the information
that's been provided by this section is that'd it'd be
impossible to design a product to wire that section of
the code, corrosive environments.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number two.

MR. MULLER: John Muller, speaking as an
individual. I speak in opposition to the proposal.

I have, also like my colleague, been a
chemist. Unlike my colleague, I have also maintained
pools, instructed others on safety with pools, and been
there for training. I have been gassed at least once or
twice with the chlorine fumes that you can readily find,
and there are many rules about pool maintenance,
operation, as you will find, that address that very
point. Granted the wording of the text as presented by
the code making panel leads much to be desired; however, I think the elimination of this entire section would leave us with much more lacking, if we were to eliminate. So I'm am in favor of retaining the existing text and voting against the resolution before us.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one.

MR. BACLAWSKI: Thank you, Mr. Chairman.

Vince Baclawski, National Electrical Manufacturers Association, and NEMA speaks in support of the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number six.

MR. HUNTER: Yes, I'm Randy Hunter, and I'm speaking for myself against the motion.

Let me give you a little history here. I spent over 30 years in and around swimming pools. I built swimming pools. I've done electrical work there, and I've inspected. And the issue here is you go into a lot of electrical equipment rooms, and we have serious corrosion that deteriorates the wiring in those areas, conduit, boxes, etc.

Now the language in part A was mainly formed from the swimming pool people that work on our
committee. They identified the issues there. There are
no new requirements there. It simply describes the
exposures that are there.

Part B has asked for two things. It
basically says that if someone makes or creates a listed
and identified product, that's great. The second
sentence there contains the items that were common
between Articles 680.21, 23 and 25. So those common
wiring methods were moved up into part B here, and
references were made to them in 680.21, 23 and 25.

Now, the other wiring methods that were
specifically approved in 680.21, 23, and 25 that were
unique to those articles still remain.

So there are no new requirements, nothing
was lost. There are still the same wiring methods that
were allowed before. It's simply been reorganized, and
this presents an invitation to any manufacturer who
would like to make products that are specifically made
for installations in and around pool equipment.

Thank you. Please vote against this motion.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number two, please.

MR. COOK: Thank you, Mr. Chair.

My name is Donny Cook. I'm the chair of
panel 17 and speaking against the motion.
As Randy just mentioned, the wiring methods in part B are not new. If you look at the 2014 NEC, you'll find those methods already there. We didn't pull those out of the sky.

The information in part A -- I have to admit I don't have a pool. I've never been around a pool, and I don't know what chemicals we use in the pool. I know they have chlorine at the pools we inspect. So the pool folks on the committee came up with the chemical list. And I think if you go to Google and Google pool chemicals, those are not new. Those are the ones that are in the mix.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three. Microphone number three, I think you were next.

MR. SIMMONS: I think the person on one was there before me, but I can go if you want.

CHAIRMAN GOLINVEAUX: Microphone number three.

MR. SIMMONS: Yeah. I do want to make it clear for all of us.

CHAIRMAN OWEN: I need your name, affiliation and supporter or --

MR. SIMMONS: My name is Phil Simmons, speaking for myself and speaking for the motion.
CHAIRMAN GOLINVEAUX: Thank you.

MR. SIMMONS: Yeah.

So I want us all to know -- and this is just kind of a reminder -- there was no public comment to generate this work from. It was done strictly on old cloth without a public comment. It's a violation of the regs and several places in the regs. You can't just do that because of the doctrine of fairness. People have to have an idea, be informed of what it is you're thinking about doing. The new material, number one, is acid with no specific type; so there's probably a few hundred, maybe, that are affected. Bromine is -- the word has never been in Article 680. Bromine vapors, never been in Article 680. Hearing such areas be laden with acids, chlorine, and bromine vapors or any beginnings thereof. I'm really thinking, folks, might be an invitation to the attorneys. Want to get sued? Yeah. It says those areas are laden with those vapors. Any liquids then are going to be laden with the vapors. I mean, this section really is not ready for prime time. There's a lot of us that say if this is passed, we really kind of pity the authority having jurisdiction that has to interpret it and inspect installations according to this new rule.

It's not ready for prime time and needs to
go back to the committee. Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one, please.

MR. ABERNATHY: Hi, my name is Paul Abernathy with Encore Wire Corporation, and I am in support of this motion.

I think one of the things -- and I attended that meeting and I sit on that panel and I heard a lot of the discussion. I did not hear any statements from anyone on that committee that would identify themselves as an expert on the opinion of a corrosive environment or these chemicals that were in questions after repeatedly asking for that information to be presented.

I think what needs to be looked at, very important here, is what the committee commitment or the statement that was made resulting in this change, and it was, and I quote, "wiring methods that have been specifically evaluated for the types of corrosive environments around swimming pool pumps and sanitation chemicals are not as of yet readily available." They went on to say, a new Section 680.14 should be credited to detail the corrosion resistance necessary of wiring methods needed in swimming pool installations.

Now nothing within that work in 680.14(A) attempts to detail, define or determine what is
considered a corrosive environment or what actual air or vapor make-up quantities constitutes air or vapor concentrations that quantify being laden with acid, chlorine, or bromine.

Our industry has experienced experts in this area of study that didn't get an opportunity to respond nor contribute via public input or public comments.

Again, I urge you to support this CAM and allow Code Making Panel 17 to get it right in the next process.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number two, please.

MR. DOLLARD: Thank you, Mr. Chairman.

Jim Dollard, IBEW Local 98 from Philadelphia, and I can tell you that the body of work in the first revision stage sets the table for what you see on the screen. You need to go through all of it. It's a lot of work. The correlating committee is very good at identifying what is and what is not new material.

You heard before there are no new requirements. I'm going to repeat that. No new requirements. Because you got to go into five other sections to get your arms around this.
Panel comments, comments developed by the committee are permitted. Read the rules. Panel proposals are permitted. Panel comments are permitted. There were no rules that were violated. Good code is practical, easy to read, and enforceable. And this language on the screen is practical, easy to read, and enforceable.

If we accept this, we're going to have at least five or six motions to fix it, and that's not going to fix it. We will still have a major compatibility problem, and this whole area in Article 680 will be broken in 2017.

I urge you to vote no against a motion on the floor.

CHAIRMAN GOLINVEAUX: And for the record, before you leave on, microphone two, when you opened up, you didn't state whether you were for or against the motion.

MR. DOLLARD: I apologize. I am against the motion.

CHAIRMAN GOLINVEAUX: Thank you very much.

By order of what I have here, microphone number one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH Internation, speaking for NFPA and in support of the
The -- I -- I'm not going to be bothered with the process. Other people have discussed processes. I'm worried about the completely in-applicability of part A. We're talking about an area of pool sanitation chemicals are stored. So if I have a pool sanitation chemicals, and they are completely sealed but they're stored there, then it's corrosive environment. That's nonsense. How much chemical is allowed to be in the atmosphere because -- for it to become a corrosive environment? This -- there's nothing in there that tells me how much it is. Zero is -- gives me a corrosive environment because everything can't be completely sealed. I've heard people say that chlorine and bromine vapors are common in pools. As I explained before, no; vapors that contain chlorinated materials such as hydrogen chloride or hydrochloride, those are a present in pool areas, but not necessary in area pool sanitation chemicals stored. Because generally the area where pool sanitation chemical is stored is an area where the chemicals are sealed in their containers. If you're talking about the pool itself, you can have -- get chlorinated materials such as hydrochloride, so on, and so forth, but not generally the area of where sanitation chemicals are stored. And there's nothing in
here that gives me any indication of how much material needs to be in the atmosphere. Some kind of a measurement so that I can decide whether this is an area where there is a corrosive environment or not.

This -- this entire section A is completely impossible to comply with, and it is technically incorrect.

Please approve the motion. Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number five.

MR. HICKMAN: Palmer Hickman with the IBEW. I would like to call the question.

(Audience applause.)

CHAIRMAN GOLINVEAUX: There's a motion on the floor to call the question.

Is there a second? Okay.

I also notice that there are a number of people that were still remaining on the microphones for your information.

We do have a second.

In order to vote on the motion, please scroll down to the bottom of the tablet to vote. If you wish to vote in favor of the motion, touch yes. If you wish to vote against the motion, vote or touch no.

Please record your vote.
Five seconds.

The balloting is closed.

The results of the vote are 277 in favor of the motion to call the question; 10 against.

The motion passes.

Before we vote let me restate the motion.

The motion on the floor is to Reject the Second Correlating Revision No. 43.

To vote touch the vote button. If you wish to vote in favor of the motion and recommend the screen on text 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 balloting will close in five seconds.

The balloting is closed.

The result on the vote are 101 in favor of the motion; 155 against the motion.

The motion fails.

(Motion 70-28 to Reject Second Correlating Revision No. 43 failed with a vote of 101 in favor; 155 against.)

CERTIFIED AMENDING MOTION 70-29:

CHAIRMAN GOLINVEAUX: We will now proceed to the discussion on Certified Amending Motion 70-29.
Mr. McDaniels? Okay. Motion 70-29.

Microphone number 3, please.

MR. McDANIEL: Mr. Chairman, I'm Roger McDaniel, chairman of the Electric Lights and Power Task Force of Edison Electrical Institute, and I'm in support of this motion, but first, before I make the motion, I request permission to provide a pool of information related to this motion and some subsequent motions that I've addressed with Mr. Urly.

CHAIRMAN GOLINVEAUX: Okay. Hold on one second for me. You're going to need to get this motion on the floor and you can discuss the follow up or whatever you intend to do with other motions beyond that in your statement. But I have to have a motion on the floor to continue the discussion.

MR. McDANIEL: Okay, Mr. Chairman, I make a motion to Accept an Identifiable Part of Public Comment 1711.

CHAIRMAN GOLINVEAUX: Thank you very much. There's a motion on the floor to Accept an Identifiable Part of Public Comment No. 1711.

I have a second.

Please proceed with the discussion on the motion.

MR. McDANIEL: Okay. Thank you, sir.
There's a series of motions here that were submitted, all related with the same intent, which is to provide concise language and prevent confusion. With that the subsequent motions 30, 31, 32 and 33 we will look to withdraw, and we'll address that in a few moments.

However, with the -- with these nine CAMs that I've submitted, again, they all had the same intent, of preventing confusion between premises wiring systems and utility transmission distribution systems.

The electrical section voted to -- excuse me -- the EI supports the concepts technology and advancements in the electrical industry; however, there are several terms used in the Article 691 taken from different code, different standards, which provide requirements for generating transmission distribution of assets to electric utilities. One such term is supply station. For this article the best replaced with our production facility because this was the terminology found in the National Electrical Code associated with premises wiring found in Article 705.

The electrical section voted to support CAM 34, which we'll get to shortly. We couldn't get all those before the electrical session on Tuesday; however, the similar intent.
With that I would point out that it's been stated that this is a tough issue, which will be a personal matter, but I assure you this is not a personal matter but a business matter, the business of safety, the business of protecting persons and property from the hazards arousing from the use of electricity. By asserting clear, concise and distinct and consistent language in NEC, we will maintain the highest level of safety to the users of NEC.

An example of keeping clear and concise language different from other codes; we've worked towards that for several years in NEC. A few code cycles ago we created new definitions for overhead surface conductors and underground surface conductors and clearly made the definitions of circus drop and circus lateral, conductors that are part of the utilities system.

The surface point is defined in NEC. However, in most cases the utility determines the location of the surface point, which NEC governs the installations on the customer side of this surface point, which is the premises wiring. And if you will, think of the surface point as the fence that sometimes -- the fence that separates transmission and distribution systems from the premises wiring system.
With that, I'm sure you've heard that good fences make good neighbors. So it's our intent to make sure everyone works in harmony together and we provide a safe work environment regardless of which side of the surface point they're working on, especially on the NEC side.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. McDaniel, before I ask for the Chair's comment on this, I just want to clarify something I think you said, and I want to make it a little clearer to the floor.

Did you intend not to pursue 70-30, 31, 32 and 33?

MR. McDANIEL: That is correct. If this motion should pass, then those would be addressed by the correlating committee.

CHAIRMAN GOLINVEAUX: Okay. And if this motion fails, you intend to pursue 30, 31, 32 and 33?

MR. McDANIEL: No, sir.

CHAIRMAN GOLINVEAUX: So you're making the statement not to pursue those regardless of the outcome of this vote?

MR. McDANIEL: That's correct.

CHAIRMAN GOLINVEAUX: Just wanted to classify so that the Body had that in mind.
Thank you very much for your comment.

Mr. Johnston, do you wish to state the Panel's Position?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

Sequence 29 is code panel 4's responsibility. So I'd like to defer to Ron Toomer, chair of Code Making Panel 4 for position and response, please.

CHAIRMAN GOLINVEAUX: And I'm going assume microphone number four, please.

MR. TOOMER: Number four. Speaking against the motion. I'd like to say --

CHAIRMAN GOLINVEAUX: Can you get a little closer to the microphone, please?

MR. TOOMER: Yes, okay.

CHAIRMAN GOLINVEAUX: Thank you.

MR. TOOMER: This motion and the four that were withdrawn, it all has to do with the new article that we developed in panel 4, which is 691 large PVC system. Now I will speak specifically about the motion 70-29. But first I'd like to make one comment. Is that the -- these four motions have to do with 691, which is large PVC. Now these large PVC systems are -- most of them are being developed by private investors, and then they're either selling to the utility or they're selling...
the power that are generating to the utility.

But to get on this specific motion, which is 70-29, the panel chose supply system to avoid confusion with PVC systems that power to premises wire. The supply station produces energy that is delivered consistent and operated by utility not premise wiring.

Thank you, Mr. Chairman.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

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 number one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH Internation, speaking for myself. I'm not speaking for or against the motion, but I just heard the gentleman talking about PVCs. I think this motion deals only with PVs, photovoltaic systems. I would like some clarification. This doesn't seem to me to have anything to do with PVC.

CHAIRMAN JOHNSTON: Correct.

MR. HIRSCHLER: Thank you.

CHAIRMAN GOLINVEAUX: The motion, as far as I can tell you, is declared on the screen. The text, the revision editorial text that you see on screen one
is the proposal.

So that's as much as I can clarify for you, for the record.

Microphone number four was next.

MR. WELLS: Mr. Chair, I'm Robert Wells. I sit on CMP 4 representing the American Wind & Energy Association. I'm speaking for myself here. I'm speaking against the motion.

I point out that big solar is similar to big wind. In the wind energy association, we have often multi megawatt wind installations. And so the issues we face now for large solar will probably result in similar language coming into the 2020 code for the big wind. We face the same issues. The issue here is terminology. And the request is that we change the word supply station in 691, as voted and approved so far, to power production facility. CMP 4 in its deliberations and final vote explicitly chose supply station in this case as the system feeds the grid, not premises wiring. And I would like to point out that there is no issue in using language from other codes such as the National Electric Safety Code if the terms are appropriate. In fact, it's desirable. The same language is best between codes rather than having our own secret language or private language for NEC and NESC. The point here is
that these are essentially large generating stations, and the accepted term in industry is supply station.

If you take this to the limit, we would not allow things like wiring or outlet to be used in both NESC and NEC, and that's clearly absurd.

A larger issue that we have to address in the next code cycle and it was brought up by CMP member Jim Sealdia is the scope of the NEC is currently open to interpretation, and it excludes utility owned, but it doesn't exclude utility-like generating systems.

So I think for next cycle we really got look at the scope. We've got to look at whether we want local inspectors looking at large solar and large wind.

For now I urge you to vote no on this proposal.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. CROUSHORE: Thank you, Mr. Chairman.

My name is Timothy Croushore. I work for First Energy and the Technologies Group. I'm a representative of the Electrical Light & Power Group of the utilities through the Edison Electric Institute. I stand in support of the motion.

The electric utility industry is not against large scale photovoltaic systems. These proposals and
the other ones that were withdrawn go about the
terminology that is appropriate for the National
Electrical Code. I would reference for everyone the
very last sentence of informational note two.

I had a long conversation one time with
Donny Cook. Donny Cook says I can't inspect for the
National Electrical Safety Code because I don't have a
copy of one. I remember at one of these meetings I gave
him one of my spare copies. If you want to know what an
electric supply station is, inspectors, you need to have
the National Electrical Safety Code. Because that's
where the information lies. What we in the utility
industry were trying to do is make NEC appropriate
language in new Article 691, and that's essentially what
we're trying to do. There's not a technology. There's
not a turf issue. We just wanted to make sure that
there were common terminology understood by the code
that could be enforceable by inspectors of the code.

So I would urge the support of this
statement and this certified amending motion as it
appears.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please. I'm sorry.

Microphone number two.
MR. HOTEY: My name is Mark Hotey, and I work for Underwriters Laboratories, and I'm speaking against the motion.

To provide various kinds of terminology between the National Electrical Safety Code and the National Electrical Code is almost impossible. For example, if I have a substation, is a substation owned by the utility company or is it owned by the facility? We still call it a substation. We have to make a determination, is it owned by the utility company? And if it is, then the NEC doesn't apply. If it's owned by the facility, then the National Electrical Code applies.

So when I look at a large scale photovoltaic electrical supply station, I have to make a determination is that owned by the utility company or is that owned by the facility? Is it owned by somebody who comes under the jurisdiction of the National Electrical Safety Code or is it a private substation or a private supply station that comes under the National Electrical Code?

I believe that if we start restricting the type of names that we call these, we're going to have to go back into the NEC and start renaming things like substations.

So I'm definitely against this motion.
CHAIRMAN GOLINVEAUX: Thank you.

Microphone number five, please.

MR. DOLLARD: Thank you, Mr. Chairman.

Jim Dollard, IBEW Philadelphia, and I stand in support of the motion on the floor.

And I'm just going to recap a few points that have already been thrown out there. This is about terminology. But you know what? That's basically what we're doing here. We're working with words. And we got to get it right. We have to get it right. Previous speakers have stated that this Article 691 isn't directed towards utilities. That's correct. Which means why use supply station? It's been stated that these are generating stations. That's correct. They're power producers. This does not change anything. It just aligns the title of Article 691 to differentiate itself from a supply station that is a utility-owned installation. There is a solid reason to differentiate. The submitter of the motion on the floor isn't trying to upset the apple cart and turn over Article 691. They're just trying to get the terminology right.

And as Roger pointed out, good fences make good neighbors. I was involved many cycles back where we went head to head over informational notes that look just like the one here in informational note number two.
I support the motion on the floor and the need to get the language right. I urge you to vote yes.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you. Is there any further discussion on motion 70-29 to Accept an Identifiable Part of Public Comment No. 1711?

Mr. Johnston, do you have any final comments from the --

CHAIRMAN JOHNSTON: I have nothing further to add, Mr. Chair. Thank you.

CHAIRMAN GOLINVEAUX: 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. 1711.

To vote touch the vote button. If you wish to vote in favor 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 balloting will close in five seconds.

The balloting is closed.

The results of the ballot are 154 in favor of the motion; 97 against the motion.

The motion passes.

(Motion 70-29 to Accept and Identifiable Part

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866.256.1799
of Public Comment No. 1711 passed with a vote of 154 in favor; 97 against.)

CERTIFIED AMENDING MOTIONS 70-30; 70-31; 70-32; 70-33:

CHAIRMAN GOLINVEAUX: The next four motions on NFPA 70-30, 70-31, 70-32 and 70-33, appeared on our agenda; however, the authorized maker of the motion or their designated representative has notified the NFPA that they no longer wish to pursue these motions. 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.

Before we move to the next agenda item, which will be 70-34, we're going to take a ten-minute break to give a little bit of a break. We did real well there pretty quickly. So thank you for that. Ten minutes, and we'll be back at it.

(A break was taken from 6:58 p.m. through 7:10 p.m.)

CERTIFIED AMENDING MOTION 70-34:

CHAIRMAN OWEN: We're going to get started again here, and we are going to proceed with the discussion on Certified Amending Motion 70-34.

Microphone number 3, please.

MR. McDANIEL: Thank you, Mr. Chairman.

I'm Roger McDaniel, chairman of the Electric

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866.256.1799
Lights and Power Task Force of Edison Electrical Institute, and I make a motion that we reject second revision 988 for CAM 34.

CHAIRMAN GOLINVEAUX: Thank you.

There's a motion on the floor to Reject Second Revision No. 988.

Is there a second? We do have a second.

Please proceed -- please proceed with the discussion on the motion.

MR. McDaniel: Thank you, Mr. Chairman.

This is related to Article 705, interconnected systems. Edison Electrical Institute supports the concepts, technology and advancements in the electrical industry; however, we disagree with using the term microgrid in this article. The term microgrid is jargon, a non-specific term. It needs to be consistently encouraging the use of terminology that provides clarity, and this term intentionally out of its system provides this clarity. To ensure that we maintain fundamental separation between utility wiring and premises wiring, we need to use terminology that provides clear separation between the two systems. The electric utility type microgrid systems are still in the R & B phase and still being discussed in the standards committees that are outside the NFPA.
Therefore, as this technology continues to emerge, we need to ensure that there's no confusion between the two systems. We're mixing two different systems; therefore, keeping different terms in the NEC will both serve the industry. Using the term intentionally out of the system is consistent with the IEEE 1547 series of standards, recommended practices and guides which is currently published.

With that this is similar to the concept behind CAM 29 that we previously addressed, and I respectfully request and urge everyone to support this motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

This is again under code panel 4's responsibility. I would like to request that panel 4 chair Ron Toomer provide a position in response, please.

CHAIRMAN GOLINVEAUX: Mr. Toomer, I assume you're on mic four?

MR. TOOMER: Yes. I'm on mic four.

CHAIRMAN GOLINVEAUX: Okay. Microphone number four, please.
MR. TOOMER: Ronald Toomer, chairman of CMP 4 representing the National Electrical Contractors Association. I stand up against the motion.

The new line provides clarity and incorporates the request of the correlating committee to remove and/are. The informational note was added to clarify that 90.2(B)(5) included electric utility.

That's my statement.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

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 number one, please.

MR. HILBERT: Thank you, Mr. Chairman.

Mark Hilbert on behalf the electrical section, and the section members voted to support the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. KAVOTCHIC: John Kavotchic, Underwriters Laboratories, and I rise in opposition to this motion.

I feel compelled to speak on it not because I have a vested interest in Article 705, but the term
microgrid is going to be heavily discussed when the CAM on new Article 712 is debated later on. And that new article is proposed to go into the 2017 code, and it has the type of DC microgrids. You will probably hear that this is the same issue that we just discussed, and that's absolutely not true.

The term microgrids has been used by facility owners for quite some time. It's not a term that belongs to the utility. It's a term that's going to continue to be used by facilities owners, and regardless of what we do here and regardless of what the utilities do, they're not going to control it. It's like trying to legislate morality.

Now the end of PA and the NEC folks have a very close relationship, and we certainly wouldn't want to do anything to jeopardize that. And so when we were in the process of creating the new Article 712, NFPA reached out to the NESC folks and asked them straight point-blank, do you have any problems with the NEC using the term microgrid? And their response was no. And I say that again, no. So there must be a disconnect between the Edison Electric Institute and the folks that write the NESC. I can assure, as chairman of the task group that put together the proposed new Article 712, we have no intention of trending on the turf of the
utilities. We heard input from many different sources including the utilities. When we discussed the proposed new article in the context of the panel, Mr. Tim Croushore brought changes to the panel to change the terminology to do away with the term microgrid. The panel rejected those. So the process was followed.

I take note of Mr. McDaniel's comment that good fences make good neighbors. Well, it sounds like what he's saying is that I'm going to build a wall. You stay on your side, and we'll stay on ours. And to me that's protecting turf. We never had that intention. We want to work together, but we're talking about terms here that are not under the exclusive use of the utilities. Regardless of what they do or what this body does, microgrid is going to be a term that's getting used by many people installing equipment that's currently covered by the NEC.

Thank you very much.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. CROUSHORE: Thank you very much, Mr. Chairman.

Timothy Croushore. I work in First Energy Technologies. I'm a representative of the Electric Utility Industry, and I stand in support of the motion.
Let me explain a little bit about how this material ended up in CMP 4. Originally during the first draft process, I was part of the group, actually the one that John Kavotchic who just spoke, chaired. And we worked on that issue of microgrids, and he is correct. In the task group I was outvoted.

Unfortunately, that article CMP -- went to CMP 13, it was originally entitled microgrids. CMP rejected that. CPP 13 rejected that. Now there was material that was in there that was very valuable. The whole crux of Article 705 was originally designed so that an unintentional island would not be created. IEEE 1547, UL 1741, and Article 705 all work in concert up until this cycle to prevent an unintentional island.

Unfortunately, what went into Article 705 is for individuals who want to create an intentional island which is covered in the guide of 1547.4 on islanded electrical systems.

What we're trying to do here is put that same material that would have prevented an unintentional island for those folks who wish to design an intentional island. Something for resiliency for which my industry supports the decision to be able to survive in the loss of a primary source. A grid interconnected system or utility system. We completely support that thought. We
completely support where those items and where those facilities are, and our whole intent was to make sure that the NEC was in concert with IEEE 1547 and the concept of an intentional island was intact.

So when you look at these and the next three that we're going to be looking at, all it does, it changes the term so that no matter what we're looking at, we understand the terms and the concepts.

As Roger mentioned before, the term microgrid means many things to many different people. If I asked you what you would define as the term grid, you would probably say the interconnected transmission and distribution system regardless of the owner, and you know it can be a government owner, an investor on utility, a municipal, a rural electric co-op or even a private owner that owns the grid.

CHAIRMAN GOLINVEAUX: Thank you. Your time has expired.

Microphone number four, please.

MR. WELLS: Thank you, Mr. Chair.

I'm Robert Wells. I represent the American Wind Energy Association on CMP 4. I'm a 20-year veteran working on renewal and distributive energy on the NEC. I started on the '99 cycle. And I also helped chair the NEC working group on microgrids. I speak for myself...
here, and I speak in opposition to the motion.

My first question is, I said I speak for myself, and I would ask whether Mr. McDaniel and Mr. Croushore are speaking for EEI or speaking for themselves? And as I go on, the reason for that may be clear.

First off, for those of you who don't know, a microgrid is generally defined as a collection of electrical sources, loads, and control that can operate independent of an electric grid and it may interconnect.

The new sections on microgrids in the NEC in Article 705 and 710 were developed with input from something like 65 industry members in the working group. There is a real necessity for the National Electric Code to retain this language in its current form for the NEC to be relevant in the future.

This is a debate about terminology, intentional island versus microgrid. To practitioners microgrid is a noun, and island is the verb or state. Now I'm a member of IEEE 1547, and I also am a member of the 2030.7 IEEE committee, which is meeting in Montreal in a week or, so which is titled microgrid control. And in that standard we have determined that there is a value in distinguishing between the noun microgrid and the verb or the state islanded. Some utility
representees have been lobbying very strongly against
the use of the term microgrid, but this is not the EEI's
official position. In an email from November last year
upon my question when we were discussing this in the
CMP, the EEI has no objection to the term microgrid, and
I certainly have no alternative to it that I would or
could recommend since this is my personal term of choice
as well. Signed Dr. John Caldwell, Director of
Economics, Edison Electric Institute.

It's also the preferred term for the federal
government. If you look at the recent bipartisan center
energy bill S2012, for improving the resiliency of the
electric infrastructure, microgrid systems and hybrid
microgrid systems for isolated communities key points.

Microgrids equal resiliency. My time's up.

I please ask you to vote no.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. Mc DANIEL: Thank you, Mr. Chairman.

I'm Roger McDaniel, chairman of Edison
Electric Institute's Electrical Light & Power Task
Force, and I speak in support of the motion.

First of all, let me say that I have the
utmost respect for NFPA UL Mr. Kavotchic, all parties
involved in the NEC process. This is not a personal
issue. Everything that I've learned since being involved with the NEC process since 1999 has taught me that I want to try to create good language. I want to work with a team to create good language that is enforceable, that's concise, and that's warranted to be in the National Electrical Code.

With that, there's no turf issue involved in this. I just want to make sure that safety is top of our list. Just as a firefighter, it's imperative of a firefighter to get concise information to have the right address, where he's going, know what he's doing before he gets there, I believe that by having distinct terms that are identifiable with the representative codes provides that safety.

We've already set a precedent in the past by trying to make the code more user friendly and also trying to harmonize. I wasn't going to mention the term NEC in anything I had to say; however, that is the code that governs our installations.

In respect to NESC personnel making their statement, I respect what was said in previous meetings; however, in our position, we are the representatives related to NEC, and we have been part of no meetings or any discussion or have received no direction to change the position that we have maintained for the last
several decades.

In respect to Mr. Well's comments, you can pick up a telephone and call customer service at most any organization, get someone on the phone to give you answer, with all do respect to EEI, I mean that's who we represent, even since that phone conversation EEI represents or supports the term microgrid. Me, as chairman, and I don't believe anyone else in our organization has received a phone call or any directive to change the position that we have maintained for the last several decades.

I urge you to support for this motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number five, please.

MR. DOLLARD: Thank you, Mr. Chairman.

Jim Dollard, IBEW 98. I rise in support of the motion on the floor.

As you have heard, there are strong feelings on this issue, and that's a good thing. That's a really, really good thing because we care about the National Electrical Code and we get it right. And I have the utmost respect for everybody that gets involved and shares their opinions. It's important. It's how we get things right.
I have multiple concerns if we leave this as microgrid system. Other areas in the NEC we're going to use microgrid. Well, what's a microgrid versus a microgrid system? If you take a look at two, that's the language that, you know, would be there if this fails, it says, "A premises wiring system that has generation, energy storage, and load(s), or any combination thereof, that includes the ability to disconnect from and parallel with the primary source."

The last few words are key. That's what this is about, and that's intentionally islanded system is the correct term.

I urge you to vote yes on the motion on the floor.

Thank you, Mr. Chairman.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. WELLS: Thank you.

In response to Mr. McDaniel, he said that intentional island was the preferred term for --

CHAIRMAN GOLINVEAUX: I need your name, affiliation, and for or against, please.

MR. WELLS: I apologize.

Dr. Robert Wells, CMP 4, and representing self, and I speak in opposition to the motion.
CHAIRMAN GOLINVEAUX: Okay.

MR. WELLS: The history was that the utility industry did strongly oppose the use of the word microgrid in the 2003 era. In 2011, 1547.4 was introduced, and the term then was distributed resource island system. If we want to be fully consistent with IEEE, then we should use DR island system, not intentional island. Intentional island is a term, apparently, that these guys have pulled out of the air.

And I would like to say also they're in a time warp. This ship has sailed. Not only are microgrids in the current energy bill. They're on the front page of Calgary International, April issue. Utilities funded for microgrid research, not for intentional island research.

This is not jargon. The term is defined by IEEE and POE. IEEE 1547 met last week in Oregon. There is a working group on microgrids. They have a new definition there of microgrids, and they also define microgrid interconnection devices, which is our next topic.

If we move ahead in this way, we're going to diverge from IEEE, rather than heading towards them.

So to echo Mr. Dollard's statement, the code language is clear and consistent with other standards in
the organizations.

Intentional islands, to me, means wanting to go on vacation to the Caribbean.

So please vote no.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. PARRISH: Tom Parrish, Putnam County Fire.

I like to call the question.

CHAIRMAN GOLINVEAUX: There's a motion on the floor to call the question. I notice that there still were a number of people at microphones to speak just for your information, but I'll proceed with the vote on the motion.

I heard a second.

So in order to vote on this motion, please scroll down to the bottom of the tablet to vote. If you wish to vote in favor of the motion, touch yes. If you wish to vote against the motion, touch no.

Please record your vote.

The balloting will close in five seconds.

The balloting is closed.

The results on calling the question are 255 in favor; 19 against.

The motion passes.
We will move to the vote. So before we move to the vote, let me restate the motion. The motion on the floor is to Reject the Second Revision No. 988.

To vote touch the vote button. If you wish to vote in favor 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.

Balloting will close in five seconds.

The balloting is closed.

The results on the motion are 94 in favor of Motion 70-34 and 152 against.

The motion fails.

(Motion 70-34 to Reject Second Revision No. 988 failed with a vote of 94 in favor; 152 against.)

CERTIFIED AMENDING MOTION 70-35; 70-36:

CHAIRMAN GOLINVEAUX: Let's now proceed with the discussion on Certifying Amending Motion on 70-35.

Microphone three, I believe. Mr. McDaniel.

Microphone number three.

MR. McDANIEL: Thank you, Mr. Chairman. I'm Roger McDaniel representing Edison Electric Institute Electric Lights and Power Task Force.

In light of the last action taken on CAM 34,
at this time I would like to withdraw CAM 35, 36.

(Audience applause.)

CHAIRMAN GOLINVEAUX: So instead of the term of withdraw, we're going to -- we're going to move this to not pursuing the motion at this point.

Is that -- that would be more appropriate for you?

So the next motions of NFPA 70-35 and 70-36 appear on our agenda; however, the authorized maker of the motion or their designated representative has notified NFPA that they no longer wish 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.

CERTIFIED AMENDING MOTION 70-37:

CHAIRMAN GOLINVEAUX: Now let's proceed with the discussion on Certified Amending Motion 70-37.

Microphone number three, please.

MR. CROUSHORE: Hello, my name is Tim Croushore. I work for FirstEnergy in the technologies area. I move certifying amending motion 70-37, which is up on the board, and it rejects second revision No. 987, including any relation -- related portions of first
CHAIRMAN GOLINVEAUX: Thank you.

There's a motion on the floor to Reject
Second Revision No. 987, Including any Related Portions
of First Revision No. 1045.

Is there a second? We do have a second.

Please proceed with the discussion on the
motion.

MR. CROUSHORE: Thank you.

The statements I'm about to make are
supported by the Electric Utility Industry. You might
wonder why my name appears here first. Like many of the
industry organizations, we have a way to determine
consensus on these particular issues must like NEMA
does, IAEI or the IBEW. I did not gain consensus on
this until this meeting time. So I could not represent
the utility industry, and I did do this on my own.

So -- but now I have that background. So
let me proceed with where we are. The result of CAM
2037 will delete the newly created Article 710 on
stand-alone systems. Now, Article 710 is a very small
article with just three sections. It consists of texts
extracted from Article 690 on solar photovoltaic, PV
systems. The text of Article 710 comes from Section
690.10 from the 2014 NEC. The section currently covers
off-grid solar powered electrical installations, and there are quite a few of off-grid solar powered electrical installations. Article 710 on stand-alone systems as it currently appears was crafted during the second draft revision process by CMP 4. It did not have the opportunity to have external public comments to address the safety issue it creates.

The main safety issue created by Article 710 is found in 710.15(A), supply output. This section allows the power supply to have less capacity than the calculated load. It has to be sufficient to supply only the single -- the largest single piece of utilization equipment but does not have to even supply all of the lighting load on the system.

That's a strange provision of a current NEC, but this strange provision probably is appropriate for off-grid solar uses as the capacity of the system would vary dependent on the amount of sunshine. However two other code changes by CMP 4 and CMP 1 occurred during the 2017 cycle.

In short, CMP 4 created a new definition in Article 100 for separately derived systems. Now note in the 2014 NEC there is two different definitions in Article 690 and 692 for the same term and Article 694 uses the term but does not define it.
Further, to solve this issue, they created this single broad issue. Now this is a board issue, so let me read it to you. Stand-alone systems, a system that supplies power independent of electric power production and distribution networks.

In essence, the change that CMP 1 made to Chapters 5, 6, and 7 to modify Chapters 5, 6, and 7...

CHAIRMAN GOLINVEAUX: I'm sorry. You've exceeded your time.

MR. CROUSHORE: Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

I'd like to defer to code panel 4 chair Mr. Ron Toomer for a position and response, please.

MR. TOOMER: I'm at microphone --

CHAIRMAN GOLINVEAUX: Microphone number four.

MR. TOOMER: -- 4.

CHAIRMAN GOLINVEAUX: Thank you.

MR. TOOMER: I'm speaking against the motion.

This panel action addressed operating perimeters for electric power production source and
stand-alone mode. The requirement to stand-alone systems do not fit well in 705 interconnect systems. For stand-alone systems to remain at the end of 705, the scope and tile of 705 have to be changed to accomplish both interconnect and non-interconnect systems. Creating a new article makes sense. It's opposed by the original proposer and the correlating committee, correlating committee. An NEC article, same old system, is important is why this requirement exists in Article 69, 692, 694 of the 2014 code. They both apply to other power sources such as engine generator. The hazard of feeding multiwire branch circuits with single phase 120 volt is the same whether the source is a generator or an inverter.

    Thank you, Mr. Chair.

    CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

    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 number six, please.

    MR. FISHER: Thank you, Mr. Chairman.

    My name is Jason Fisher. I work for Solar City. I'm representing the Solar Energy Industries and Association today. Speaking against the motion. I sit
on Code Making Panel 4, and while I admit that the new
Article 710 language may have room for improvement,
which is a phrase that I've heard from several teachers
of mine in the past, this motion is not the right
approach to improving that language. I'll admit the
stand-alone systems may be relatively rare, and the term
may be blurred in the future with the continuing
development of microgrids, etc.; however, there are
several critical provisions in this article that were
pulled from previous sections in the code or that have
been removed.

Trying to reincorporate this language back
into this article where they originated from will undo a
lot of good work that the technical committee did.
These provisions must remain in the code and must be
easy to locate for electricians and enforcement, if we
are to adequately cover these electrical installations
that will continue to be installed.

I would respectively suggest that the
submitter use the public input process to express their
recommended improvements for the future code language.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. WELLS: Yes. This is Robert Wells. I
represent the Wind Energy Association on CMP 4, and I'm speaking for myself. I also helped chair the working group on microgrids. I'm speaking in opposition to the motion.

Initially, this is about common sense. And I do thank Tim Croushore and Roger for helping to save the effort on microgrids and the effort on stand-alone systems and tack them on to the end of 705 at the first revision, and then in the second revision we're able to use common sense and put stand-alone systems where they really belong. They're logically inconsistent in 705 because 705 is interconnected, and stand-alone are by definition not connected. That's the VINN diagram, the areas don't overlap. Also stand-alone system requirements, which are now in 17, many of that utilization, while 705 is about sources. So again, there's another inconsistency.

These stand-alone requirements were originally duplicated in 690, 692 and 694, and I've been working diligently to bring them out into one common article so that we didn't have divergence and so that we could make the NEC maybe a page or two thinner.

Also, there's a lot of value in having this be a general requirement for stand-alone systems. Many of you probably haven't analyzed, but there is a hole in
the electrical code. We have optional standby systems; we have critical power systems, but there's nothing for prime power. If you're running a diesel 24/7, there's no specific area that addresses that. And there's safety issues.

There are more than 100,000 stand-alone systems in the United States now, whether they're running from photovoltaics or engine generators, and the safety issues especially of feeding multiwire branch circuits there's 120 volt generators are key.

Finally, regarding the question about capacity, for the majority of these stand-alone systems, they're somewhat self-governing. If you exceed the consumption that the source can provide, whether it's an engine generator with an outpoint breaker or an inverter, the power simply turns off. And so there's no safety issue involved here. I think we're talking a little bit about a sacred power of design. And certainly your remote cabin doesn't need an inverter capable of supplying 200 amps to a panel or 40 kilowatts.

This is a critical fire safety issue, and putting it back in 705 is like filing a book in a library in the wrong place. It's absurd.

So I ask you to vote no. Thank you.
CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. CROUSHORE: Thank you, Mr. Chairman.

Timothy Croushore. I work for FirstEnergy in the technologies group, represent the electric utility industry. I'm speaking for the motion.

I apologize that I ran out of time, but let me continue a little bit more why this is a safety issue.

The new definition in Article 100 can be broadly applied to any system that's no longer connected to the utility system. Now we have lots of names for these. We have essential electrical systems in hospitals. We have legally required stand-by systems. We have emergency systems, etc.

So the way the changes appear is the emergency generator under the broad definition of a stand-alone system could apply the provisions of Article 710, have the load exceed the capacity of the generator, which in turn creates the safety issue. I believe that we would all want the back-up emergency system to be able to supply the electrical load on these systems. Let me say this another way. When I'm on the phone with a 9-1-1 center with a critical operations power supply or hospital operating feeder on the table or a fireman
depending on an electrically driven fire pump to keep the sprinklers operational, I certainly want the emergency system to be able to supply the load on that system and keep these systems operational.

What we need to do here at this time in the process is a do-over on the text. Please support the CAM that would delete Article 710, with a capacity safety issue, and let the text go back to Section 690.10. Let's let the panel have a chance to properly fix the text as appropriate for the next edition of the NEC.

Please support the CAM and do not leave this critical safety situation in the 2017 NEC.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. KAVOTCHIC: Thank you Mr. Chairman.

John Kavotchic, Underwriters Laboratories, and I rise in opposition to the motion.

When I was at this microphone the last time, I mentioned I was chair of a task group appointed by the correlating committee to fill voids in the National Electrical Code relative to direct current equipment systems and circuits, and one of the challenges that our task group took on for the 2017 code, which -- the work
actually began for the 2014 edition where we were not successful, but the work that we took on for this code cycle was to put together three new articles, 706 on energy storage, 710 on stand-alone systems, and 712 on DC microgrids. These three new articles need to go together in the code as a package. They all have a relationship to one another. They're all regarding the installation of multiple power sources, either connected to the grid or stand-alone.

One of the previous speakers mentioned that article is far from perfect. I agree. However, no new article is ever far from perfect. But we need to get something in the code. We can't wait three years and lose an opportunity. The technology is simply moving too fast. And I would hate to see energy storage in DC microgrids have requirements in the code and there be no requirements for stand-alone systems.

I just want to make sure the Body understands what the focus of this motion is, and that is to prevent Article 710 as it is being proposed from appearing in the 2017 code. And again, I would say that would be a huge mistake. We need to have it go in with the articles on energy storage and DC microgrids as a package, and I ask this Body not to support this motion.

Thank you.
CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four.

MR. WELLS: Okay. And I'll be quick. It's getting late.

I think Mr. Croushore's argument that --

CHAIRMAN GOLINVEAUX: I need your name, affiliation, and --

MR. WELLS: Sorry. I apologize.

CHAIRMAN GOLINVEAUX: -- statement for against, please.

MR. WELLS: Dr. Robert Wells, member of CMP 4, speaking for myself, and I'm against the motion.

I believe Mr. Croushore's argument with the stand-alone system article is flawed and would be dangerous. I think his argument is flawed. There is no professional engineer, no inspector who would ever look at a hospital safety system and say that it didn't have to meet the requirement of essential standby systems.

I'm currently working on an a megawatt generator back-up system for the FBI building in Honolulu, and I know what part of the code relates.

So I think it's a false argument, and I ask you to vote no on this proposal.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.
Microphone number two, please.

MR. BOYCE: Thank you very much.

I'm Ken Boyce, representing UL, and I speak in opposition to this motion.

As the chairman of Code Making Panel 1, I spend a lot of time looking at the purpose of the National Electrical Code, the practical safeguarding of persons and property from hazards arising from the use of electricity. And certainly those things apply to stand-alone electrical systems. Absolutely, absolutely applicable. But we've seen repetitive efforts in the past by certain parties to indicate that stand-alone systems of different types of generation are exempt from the rules of the NEC, things like portable generators with some distributed energy systems, and that's just wrong.

So this a really important effort that fills a very practical gap in the NEC, and it makes sense. It's been developed by an expert task group that worked extremely hard. It has gone through the due process of the technical committee that has fully supported it. It's relevant for the National Electrical Code, and we need this.

So I'll just ask everybody, please oppose this motion and let this new text on the next edition be
the next electrical code.

   Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Is there any further discussion on Motion 70-37 to reject second revision -- I'm sorry. I didn't see you stand up. There is apparently discussion.

Microphone number three, please. I apologize.

MR. Mc DANIEL: It's okay. Thank you, Mr. Chairman.

I'm Roger McDaniel, chairman of Electric Lights & Power Task Force of Edison Electric Institute, and just to be clear, I won't take up much time other than to say the Edison Electric Institute's Electric Lights & Power Task Force supports this motion.

CHAIRMAN GOLINVEAUX: Okay. Thank you.

Is there any further discussion on Motion 70-37 to Reject Second Revision No. 987, Including any Related Portions of First Revision No. 1045?

Mr. Johnston, do you have any final comments?

CHAIRMAN JOHNSTON: I have nothing further to add. Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Before we vote let me restate the motion.
The motion on the floor is to Reject Second Revision No. 987, Including any Related Portions of First Revision No. 1045.

To vote touch the vote button. If you wish to vote in favor of the motion and recommend the text on screen one, touch yes. If you wish to reject the motion and recommend the text on screen two, touch no.

Please record your vote.

The balloting will close in five seconds.

The balloting has closed.

Results of the balloting are 55 in favor of the motion and 200 against the motion.

The motion fails.

(Motion 70-37 to Reject Second Revision 987, Including any Related Portions of First Revision No. 1045 failed with a vote of 55 in favor; 200 against.)

CERTIFIED AMENDING MOTION 70-38:

CHAIRMAN GOLINVEAUX: Let's now proceed with the discussion on Certified Amending Motion 70-38.

70-38, I'm looking for Mr. McDaniel again.

Microphone number three, please.

MR. McDaniel: Thank you, Mr. Chairman.

I'm Roger McDaniel, chairman of the Electrical Light & Power Task Force at Edison Electric
Institute.

At this time in light of the results of CAM 34 and the action on 35, we choose not to pursue CAM 38.

CHAIRMAN GOLINVEAUX: Okay.

(Audience applause.)

CHAIRMAN GOLINVEAUX: So the next motion on NFPA 70-38 appeared on our agenda; however, the authorized maker of the motion or their designated representative has notified the NFPA that they no longer wish to pursue this motion. Therefore, in accordance with the NFPA Rules (Conventions Rules at Section 2.7), the motion may be not be considered by the assembly and is removed from the agenda.

We will now move to the next motion.

CERTIFIED AMENDING MOTION 70-39:

CHAIRMAN GOLINVEAUX: Now let's proceed with the discussion on Certified Amending Motion 70-39.

Microphone number one.

MR. SILVEIRA: Thank you. Oh, cool. Been a very long day.

Good evening. My name is Jeff Silveira, and I'm here to make a motion to approve CAM 39 as written. The motion is to reject second revision 611, including and related portions of first revision and the first correlating revision.
CHAIRMAN GOLINVEAUX: Thank you.

There's a motion on the floor to Reject Second Revision 611.

Is there a second? We do have a second.

Please proceed with the discussion on the motion.

MR. SILVEIRA: Basically it's one of the oldest associations in design, installation and integration of phone, data, and other ICT building leads within the building and the premises. We reach over 25,000 professionals performing this work inside the United States, but today the issue is about power.

First, I believe, we can all agree that we're here in the spirit of safety. I also believe that we can agree that more traits in this electrical data com are affected by Article 725. Now while the intent and the work that went into 725.144 is admirable, the inclusion of this text, we believe, will actually increase the use -- sorry -- the number of unsafe installations. Yes, this is electrical code. Novices may use a steep learning curve, and there's nothing wrong with that. I'm one of those myself. However, the audience of 725 spans far more than our electrical brothers and our data com friends. And as we've seen with other Chapter 7 articles where the audience is
diverse, efforts are made from clarity and brevity. Two
examples include, class one circuits in 725 as well as
both non-power, non-limited power, and power limited
fire alarm systems.

Unfortunately, as written, 725.144 is
anything but clear. Rather than seeing text, for
example, for pairs of cables supporting up to .3 amps
for conductor, conductor size shall be not smaller than
24 AWG with a cable jacket with a minimum temperature
rating 60 degrees Celsius or for four paired cables
supporting more than .3 amps but not exceeding .5,
conductors shall not be smaller than 23 AWG, and the
cable jacket shall at minimum stay at 75 degrees.
Instead the reader has presented a cable that combines
various cables sizes, temperature ratings, bundled
sizes, and ampacity.

Given the current text can be considered
difficult or complex to those who are not initiated,
someone or someone will invariably find a shorter path
to compliance. In this case simply unbundling the
cables will do that. The simple act of unbundling the
cables provides code compliance but increase the number
of unsafe installations.

Picture the following: A conduit containing
192 23 AWG cables lying loose in a conduit or raceway,
all running one amp per conductor, will be safe per the
table; however, this is a perfectly safe (inaudible)
table. Testing will prove otherwise. So while we agree
the intent to torque on this topic --

CHAIRMAN GOLINVEAUX: Thank you. Your time
is expired.

MR. SILVEIRA: Yep.

CHAIRMAN GOLINVEAUX: Mr. Johnston, would
you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Yes. Thank you, Mr.
Chair.

Sequence 39 is panel 3's responsibility, and
our chair, the actual chair is not present. The
designated representative is Palmer Hickman, and I'd
like to refer to Palmer Hickman for response and a
position. Thank you.

CHAIRMAN GOLINVEAUX: Thank you. Mr.
Hickman, where are you? Okay. Thank you. On
microphone number two. Thank you.

MR. HICKMAN: Thank you, Mr. Chairman.

Palmer Hickman with the IBEW representing
Paul Casparro in his absence. Paul would like the
record to speak for itself.

CHAIRMAN GOLINVEAUX: Thank you very much,
gentlemen.
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'm going to go to microphone four first.

Four, please.

MR. HOTEY: My name is Mark Hotey, and I'm a member of panel 3 representing Underwriters Laboratories, and I speak against the motion.

Panel 3 had considerable questions about this application at the public input stage of the process that were more than adequately answered in the comments stage. A number of the questions that panel 3 raised during the public input stage were, for example, technical substantiation was not provided in the public input for a new limited power cable. The original proposed text required the table -- the cable to be listed, but failed to provide any of the listing requirements. And the public input maintaining spacing was not explained. Not maintaining spacing was not defined or explained for LP cables. Where these LP cables are not spaced properly, the temperature rating of the cables and the rating terminations cannot be exceeded without providing the technical documentation on the minimum and maximum rating of the cable or
terminations. Panel 3 received the technical date on LP, limited power, cable on power over Ethernet and an explanation of the pertinent issues involved with the Ethernet system in the public comment stage of the process.

During the approximate six months between the public input and the comments stage, the cable industry provided a 165 page fact-finding report that answered all the questions raised by panel 3 about power over Ethernet.

This fact-finding report documented the thermal response to current in the cables, specific conductor ampacities for cables in a bungle, the effects of current on the cables, both single and bundled, and different installation methods for these cables such as different configurations where only half the cables were energize, cables enclosed in raceways and within open or enclosed cable trays. The study provided the environments for the new LP cable with temperature test data from cable heating and pertinent data for the new tables to be inserted into Article 725.

This is probably the most thorough fact-finding report that I have seen in the last probably 40 years, and I've been involved in the code process. It's 165 pages long and answers all the
questions, like I said before, that panel 3 was
interested in. And I urge you to support the panel's
action and go against the motion on the floor.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one, please.

MR. KEEGAN: Good evening. My name is Ray
Keegan, and I represent myself. I speak in favor of CAM
70-39. I have been a principal member of panel 3 for
the past 15 years, and I have been working in the
electrical and telecommunication industry for the past
53 years, participating in standardization nationally
and internationally for close to 40 years.

I'm proposing that voting yes on CAM 70-39
prevents us from writing a piece of real bad code.
Never in the past five code cycles have I seen a
substantial code change approved in panel 3 based solely
on one fact-finding study with no input from standards
making groups and no recorded life safety or property
loss issues over the past ten plus years.

This one study fails to investigate all
possible aspects and recommends but one; that nicely
aligns with a business interest of the report sponsor.

I urge you to vote in favor of CAM 70-39 and
provide an opportunity to assess all available test
results and present good code language in the 2020
cycle.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. IVANS: Randy Ivans of UL and a member of panel 16. I'm against this motion for safety reasons.

I was one of the engineers responsible for the fact-finding investigation studying powering over land cable. The scope of the fact-finding investigation included generating data through testing that could be used for the development of the ampacity tables supported by both panels 3 and 16. Another aspect of the project was to study the effects of cable construction and installation scenarios on cable heating. Test methods were consistent with industry methods and the results reported in a fact-finding report.

A fact-finding report has one purpose, to report the facts. The facts show that the cable and bundles carry current will overheat if the current is not suitably limited. The facts also show that existing limits in the NEC class 2 tables are not sufficient to prevent cables from overheating. We recorded temperatures over 180 degrees C in bundles handling have
half the current permitted by the class 2 cables.

Clearly limits are appropriate for land cables used in powering applications are needed.

The study shows that 15 and 30 watt systems representing the vast majority of the millions of current installations are not a safety concern. This is not the case for new systems operating above 60 watts.

There has been concerns expressed that the new tables ampacity tables do not reflect realistic conditions; that powering all conductors and all cables is not normal nor is installing cables and conduit.

For higher powering, seems IEEE 802.3 specifies four pair powering, all conductors are carrying current.

As this technology continues to be adopted by the LED lighting systems, AV systems and the like, every cable of the system is powered. All these systems need to be considered by 725, not just POE, and any of these cables may be installed in conduit or closed cable rather (inaudible). It's understandable that there are those in the industry that would prefer not to have any requirements or limits; however, this has led to a study increase in power levels from 15 watts to 30 watts, from 60 watts, 100watts, and now even 200 watts with little regard to potential safety issues.
Once the industry decided to add power over cables originally designed for signal only, they entered a new realm where volts, amps and safety matter, where limits are important, as the NEC states, to ensure the practical safeguarding of persons, property from hazards arising from the use of electricity.

I urge you to vote no on this motion for safety's sake. We cannot wait three years or more to include these much needed requirements.

Thank you, Mr. Chairman.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one again.

MR. ANDERSON: My name is Richard Anderson, representing myself, and I speak in favor of this motion.

Several things have been stated here about the amount of power that's going to be on these cables and that not all cables will be powered. It is true. I designed these systems as a professional designer, an IBEW journeyman electrician and certified technician. I've been involved in every part of these systems, designing them, installing them, and I can tell you the facts are that 95 percent of these systems, if not 100, will never see the amount of power that this study
looked at. We do not power every single cable in a
system. Yes, each conductor in a cable maybe, but not
every cable in the system. And that's the way their
study looked at it, was looking at if you took a bundle
of 96 cables or 192 cables and put full power on every
single cable, yeah, you're going to have a problem, but
we don't design systems that way. We want to make sure
that we have some separation in these. We design the
smaller bundles in mind. In fact, since the advent of
cat six and the higher frequencies that we're pushing on
these cables, the preference is to let cables lay
naturally as much as possible so not bundling them at
all in order to prevent alien cross-talk, which can have
detrimental effects on the data being transmitted.

So, you know, bottom line is even if you had
a network land that had 100 percent of the cables
running POE, more than likely 50 percent of more of
those will be void phones. A void phone runs at eight
or 15 watts, and as stated, that is not a safety issue.
So you've already taken half your cables out of the
equation. You're not going to get that full 100 or 200
watts on every single cable in any bundle.

So I would recommend that we pass this
motion, and I wholeheartedly support it for the future
of the industry.
CHAIRMAN GOLINVEAUX: Thank you.

And from microphone two, I'm going to apologize. I had three and three before you stood up. So I'm going back to microphone number four, please.

MR. FOSTER: Thank you, Mr. Chairman.

My name is Rick Foster of Innovative Engineering Services opposing this motion.

As a design/build contractor, I've been installing low voltage cable systems for over 30 years. You will hear a lot of technical debate on this issue. For the undecided, this is simple. The proposed ampacity table plugs a hole in the code. It does not address current on small wire gauge sizes, 26 to 22. The thresholds and benchmarks in this table provide critical guidance for installing low voltage cable systems.

We need this in the code now. We cannot wait any longer.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one, please.

MR. SHAIKH: Hello. Good evening. My name is Masood Shaikh. I'm employed by Comscot (phonetic), and I speak for this motion.

I've been in the cable industry for a long
time. In fact, I was the chair of TR 42.7 that generated structure requirements back in 1991.

Not sure what's happening.

Since then, I've been involved heavily in the development of remote powering in the international standards 29.1.25 and also DS 184-A in telecommunications industry association. And I should say that the comment was made that this was industry input that came into NFPA 70. I believe that's not a correct statement. BMT telecommunications industrial associate tried to get input into this committee, but it was not timely and not delivered.

So we have a system that communication was broken and the information was not brought in from the industry. What was brought in instead was a particular individual-funded study by the SPI organization, which I believe has their own interests at heart, not necessarily the safety of cable installations.

So what I'd like to say is that over the last 20 years, 144 billion meters of cabling have been installed. That is enough to go to the moon and back 187 times. And not a single instance has been reported that caused any kind of safety situation to people or property over those time periods over that many meters of cable.
So we have a situation where there is no record of loss.

So in summary I'd like to say that TR 42 conducted a poll within its membership to see if this regulation is timely, necessary and accurate, and the result was 84.6 percent of TR 42 respondents said that they think this is not accurate, not necessary and not timely, and they basically said this is because it's premature because the expertise and experience of TR 42 was not consulted. There is no record of loss.

And finally, the tables do not match up with the tables that we have in the industry. So they're inaccurate.

So for that reason, I would strongly urge and request NFPA to support this.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Moving to microphone number two, please.

MR. DOLLARD: Thank you, Mr. Chairman.

My name is Jim DOLLARD, IBEW 98, and I speak in opposition to the motion on the floor.

It's unfortunate that it's a big piece and, you can't see it on your screen. But if you look at this on the little iPads that they gave you or on your notes that you brought or your computer, you'll see that
this is Section 725.144. The title of the section is transmission of power and data. And POE is growing. It's growing rapidly. The power demands are getting bigger and bigger and bigger. We're hearing about people that want to now do lighting, and that's okay. What do we need to do? We need to make sure that it's installed safely. There was significant comments from the UL representative on the fact-finding report. We need to get this right. It's significant. You heard earlier that this table, that this section is somehow confusing. This isn't confusing at all. This is very similar to other requirements and tables that we have. It very clearly lays out the size of the conductor, the number of conductors in or cables in a bundle, the temperature rating of the individual cables and the allowable ampacity. This is good code. This isn't bad code. This is good code. And the maker of the motion said that we should do this because untrained people that don't even know the National Electrical Code exists are going to make a mistake. They're going to make a mistake anyway. And you know what? We can't fix that. We have to do what's right for safety. I urge you to vote no on the motion on the floor.

Thank you, Mr. Chairman.
CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. PERRY: Thank you, Mr. Chairman.

Excuse me. My name is Frank Perry, and I'm with Communications Design Corporation. I speak against the motion.

I want to talk to those of you in the room who are undecided. You may not be familiar with all the issues and all the technical material. You may be unsure how to vote. You may not even want to vote. I don't know. But I want to address the fact that everybody, whether you're on this side or that side of the motion, agrees that there needs to be a special safety focus for these type of cables and the installation methods. And the reason for that is that these cables were never designed to carry both power and data over the same conductor. So the safety focus is agreed to by all of us who are dealing with the issue.

The question is: Where are the thresholds? Where are the crossovers when the cable and the installation methods go from unsafe to safe or safe to unsafe? Where are those requirements?

Now the UL independent fact-finding report, those results were taken by the panel, and as you can see on your iPad, the panel did a heck of a job in
assimilating all that information and boiling it down
into the code that's in front of you.

Now page down and take a look at the motion
that is made. Every single word; every single line is
stricken through. You are looking at a blank page.
There is nothing there. How do you inspect nothing?
That is a huge hole in the 2017 code, if we allow this
motion to succeed.

I urge you to not allow that to happen. It
would result in a free-for-all condition. If we wait
until the 2020 code, not only is it a three-year gap of
no information, but jurisdictions adopt codes one or
possibly two cycles after they're issued by the NFPA.
So we're looking at six to eight years perhaps of no
information in a market that is growing exponentially,
where power is being increased day after day, zero
information.

We absolutely need what the panel has
developed. I urge you defeat this motion.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number six, please.

MS. HUNTER: Good evening, Mr. Chair.

I'm Chris Hunter with General Cable, and I'm
speaking against the motion.

I served on Code Making Panel 6. We're
responsible for the ampacity tables for conductors of general wiring, and to the comment earlier that this would be difficult to enforce or difficult to understand, I don't find that to be true at all. This table and the language that is associated with it is extremely clear, easy to enforce and gives everyone in the industry clear direction on how to safely install these cables and prepare for the higher wattage equipment that is coming out and that will be installed in our buildings.

I'm speaking against the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one, please.

MR. GOERGEN: Thank you, Mr. Chairman.

Joel Goergen with Cisco Systems. I'm also a principal member on CMP 12. I have over 30 U.S. patents and power delivery and data communication systems. I'm speaking for this motion.

I wasn't going to really stand up until a bunch of -- a bunch of those against brought up data.

So I want to be really clear here, guys. When we put data on a cable along with power, data is the primary focus here, okay. It's not power. It's not power delivery. It's data. And you guys all remember
about five -- okay, maybe it was eight hours ago, because it's been a really long day. Remember when none of us good vote; right? The whole network went down; right? That was a problem; right? Now imagine you're in the middle of surgery and the data goes down; right, how would you like that? Not a good thing; right? Data is the most important thing here. And I want to be really clear. I design these systems. My primary focus is router and data switching control -- not controls, but data and router switches. Okay. I move a lot of data. I route a lot of data. Your phone systems right now, you do Google searches. You go through equipment I designed. This data you can't run more than .5 amps per conductor with this data, particularly on a cat five, cat six, cat seven, cat 8 cable. It shouldn't be done. It can't be done.

So I agree with some of the stuff that Randy Ivans said, power and current, but I look at that table, and I see number that is are over .5 amps. You can't run that on my stuff. You can't. It won't work. And that's the key here. It won't work.

So I think the miscommunication is between those of us on the communication side of this and those on the power side, particularly here in the NEC, is this was sort of done without the rest of us being involved.
I would have rather had all of the industries come together so we could share right from the beginning, right, well over a year, year of and a half ago, we could share the prospective on the sanctity of the data; right? And that's the most important thing here when we're putting power over data communications cables.

So from my viewpoint, and you will hear this over and over, again, Joel Goergen, Cisco Systems; right, I don't want to see more that .5 amps per conductor period. If we go over that, then you call an electrician and you install 12.2 wiring, or you install 14.2 wiring and you put in an outlet and then plug the device in.

But seriously, once you get over .5 amps, let it go. Call an electrician, put in an outlet.

Thank you, Mr. Chairman.

CHAIRMAN GOLINVEAUX: Thank you very much.

Microphone number two, please.

MR. HICKMAN: Thank you, Mr. Chairman.

Palmer Hickman for the IBEW again.

We started this conversation some time ago with me reporting on behalf of code panel 3 chairman Paul Casparro, member of local 81 in Pennsylvania, where he supported the action on screen number two, the actions of code panel 3, based on the fact-finding
report from UL. I think that's really what we want to remember and note. There really hasn't been an argument here that hasn't been heard by code panel 3. They looked at the evidence. They came up with the conclusion; it's on screen number two.

I speak against this motion on behalf of the work of code panel 3 and the fact-finding report.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one, please.

MR. DOMINICO: Yeah. My name is Chris Dominico. I speak in favor of this motion. I'm affiliated with Gandlewood (phonetic).

The issue I have primarily with the tables and in part the values with themselves, in fact, we did make an attempt to contribute and have contributed and continue to contribute to tables such as the current code has included in it.

In part, the data and the power integrated together has not been considered fully. If we consider the temperature dependencies of some of the materials we use, operating at 90 degrees C will basically drop above 50 percent or more of the links that we talk about servicing.

So although the tables I think are a good
start, they're insufficient in terms of the current values themselves. And no consideration has been given for the data operation of those.

Regarding inputs into the process, we had many presentations and committees that provided the details for these types of informations and an opportunity for those to be accepted as inputs into the process and gave values that would have corrected the tables that we thought were corrected values that could be used in the tables.

So although I think it's a good start, I think the implication of the tables themselves as they apply to the data portion of it are insufficiently characterized, and I'm really concerned about operating beyond 60 degrees C. These operating environments for structured cables links are bounded by the current cable ratings of 60 degrees C. Equipment that has been designed are designed within that operating temperature.

So having an implication of operating equipment including cable and beyond the operating temperatures that are consistent with these power over Ethernet circuits worry me, and I'm concerned about the implication of that on both the data portion as well as the safety aspects.

Thank you.
CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. PARRISH: Tom Parrish, Putnam Fire. I make a motion to call the question.

(Audience applause.)

CHAIRMAN GOLINVEAUX: There's a motion from the floor to call the question. I noticed that there were a number of people remaining at the microphone waiting to speak just for your information, but we will proceed with the vote to call the question.

I heard the 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 favor of this motion, touch yes. If you wish to vote against this motion, touch no.

Please record your vote.

Five seconds.

The balloting is closed.

The results of the ballot are 318 in favor of the motion to call the question; 15 against.

The motion passes.

Before we vote let me restate the motion. The motion on the floor is to Reject Second Revision No. 611.

To vote touch the vote button. If you wish
to vote in favor of the motion and recommend the text on screen one, touch yes. If you wish to vote against the motion and the recommend the text on screen two, touch no.

Please record your vote.

The balloting will close in five seconds.

The balloting is closed.

The results of the vote are 141 in favor of the motion; 177 against the motion.

The motion has failed.

(Motion 70-39 to Reject Second Revision No. 611, Including any Related Portions of First Revision and First Correlating Revisions failed with a vote of 141 in favor; 177 against.)

CERTIFIED AMENDING MOTION 70-40:

CHAIRMAN GOLINVEAUX: Now let's proceed with the discussion on Certified Amending Motion 70-40.

Mr. Silveira, microphone number one, please.

MR. SILVEIRA: Jeff Silveira, BICSI.

At this time BICSI will not pursue this motion.

(Audience applause.)

CHAIRMAN GOLINVEAUX: The next motion on NFPA 70-40 appeared on our agenda; however, the
authorized maker of the motion or their designated representative has notified NFPA that they no longer wish 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.

CERTIFIED AMENDING MOTION 70-41:

CHAIRMAN GOLINVEAUX: Now let's proceed to the discussion on Certified Amending Motion 70-41.

Microphone number one, please.

MR. KIDDOO: Yes, I'm Dave Kiddoo. I'm with the Communications Cable and Conductivity Association, and I move to Certify Amending Motion 70-41 which seeks to accept public comment 73.

CHAIRMAN GOLINVEAUX: Thank you.

There is an is motion on the floor to Accept Public Comment No. 73.

Is there a second? We do have a second.

Please proceed with the discussion on the motion.

MR. KIDDOO: Yeah, I feel like I'm Mr. Fix-it here, and hopefully this is a pretty simple one. It's again correcting the process and hopefully enacting what code panel 16 intended to do originally.
Code panel 16 adopted or tried to adopt informational notes dealing with the contamination of cables in the mechanical execution of work sections in Article 770, 800 and 820 and accepted through the process in Article 820.24 as well as Article 800.24. The first one being for coaxial cable and the second one for communications wiring cable. The informational note reads: Paint, plaster, cleaners, abrasives, corrosive residues or other contaminants may result in an undetermined alteration of the cables' properties. It was also intended to be consistent throughout the code, so there's no confusion that this only applies to one type of cable design; it was also intended to put in Article 770.24.

Although the panel clearly intended to deal with the contamination of cables in a new informational note number 3, the panel process public comment 73, which I submitted, which only addressed an informational note in Section 770.24 along with all the other comments in 770.24. At the meeting in San Diego, the panel acted affirmatively on my comment. However, the changes provisionally adopted to the mandatory text not the informational note of 770.24 were controversial, and the entire second draft text of 770.24 failed the ballot.

We must have this consistency in the code.
for all types of communication cables. It would be poor judgment and provide confusion if this informational note is provided for coaxial cable and communications wiring cable yet not for fiberoptic cable.

Please vote yes on this motion to fix this issue and meet the intent of code panel 16 actions.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's Position, please?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

70-41 is the responsibility of code panel 16. So I'd like to defer to the chair Tom Moore for a position response, please.

CHAIRMAN GOLINVEAUX: Microphone number four, please.

MR. MOORE: Thank you.

My name is Tom Moore, and I represent the International Association of Electrical Inspectors as chair of code panel 16.

CMP 16 is in opposition of CAM 70-41.

Public comment 16-73 was one of five public comments as part of second revision 4509, which failed a ballot with a ten affirmative to six negative vote.

During the second revision technical
meeting, all members were aware final voting results
would include all five public comments. Of the six
negative votes, only one negative vote comment addressed
PC 16-73. Therefore, CMP 16 supports the committee's
actions.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

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 number one, please.

MR. HILBERT: Thank you, Mr. Chairman.

Mark Hilbert representing the electrical
section. This section has voted to support the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Returning to malpractice number one, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH
International, speaking for NFPA in support of the
motion.

I just want to point out that if this
section does not go in, and the sections -- the
corresponding Section 800.24 and 820.424 went in, you
get the impression from users of the code that because
this didn't go in, there's a reason that this paint,
plaster, etc., will not affect the properties of these
cables while it will affect the properties of other
cables. That's of course never the intent. And as you
heard from the chairman, the vote here was six to four.
So they -- it's not that the committee didn't support
it. The committee didn't support it with enough
majority.

I urge you to vote in favor of the motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. KAUFMAN: I'm Dr. Stanley Kaufman from
Cable Safe. I represent -- I'm the author and
representative of the Insulated Cable Engineer
Association on panel 16.

One of our members put forth this issue --

CHAIRMAN GOLINVEAUX: Are you in favor or --

MR. KAUFMAN: I'm in favor of the motion.

CHAIRMAN GOLINVEAUX: Thank you.

MR. KAUFMAN: One of our members put forth
this issue for Article 770 for fiberoptics 800 for
communications and 820 for coaxial. There was a lot
of -- and what happened in the final stage was the panel
passed the information it looking for, but it was
attached to a controversial mandatory text. So in a
sense, our baby got thrown out with the bath water. I'm asking to you save our baby. Bring this initial note back.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, I don't -- is there any further discussion on Motion 70-41 to Accept Public Comment NO. 73?

CHAIRMAN JOHNSTON: Mr. Chair, I have nothing to add. Thank you.

CHAIRMAN GOLINVEAUX: Yeah, I was going to refer to now for any final comment.

CHAIRMAN JOHNSTON: Oh.

CHAIRMAN GOLINVEAUX: Wait for it.

Mr. Johnston, you have nothing? I'm sorry; I was still reading while you were talking. You have no further comment?

CHAIRMAN JOHNSTON: No.

CHAIRMAN GOLINVEAUX: Okay. I apologize.

CHAIRMAN JOHNSTON: Sorry, Mr. Chair.

CHAIRMAN GOLINVEAUX: So before we vote, let me restate the motion. The motion on the floor is to Accept Public Comment No. 73.

To vote touch the vote button. If you wish to vote in favor 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 balloting will close in five seconds.

The balloting has closed.

The results of the vote of the motion is 159
in favor of the motion; 61 against.

The motion passes.

(Motion 70-41 to Accept Public Comment No. 73
passed with a vote of 159 in favor; 61
against.)

CERTIFIED AMENDING MOTION 70-42:

CHAIRMAN GOLINVEAUX: Now let's proceed to
the discussion on Certified Amending Motion 70-42.

Microphone number one, please.

MR. GOERGEN: Mr. Chairman, my name is Joel
Goergen with Cisco Systems, a principal member of CMP
12.

I move Certified Amending Motion 70-42 to
support an identifiable part of Public Comment No. 1262.

CHAIRMAN GOLINVEAUX: Thank you.

There's a motion on the floor to Accept an
Identifiable Part of Public comment No. 1262.

Is there a second? We do have a second.

Please proceed with the discussion on the
MR. GOERGEN: Thank you, Mr. Chairman.

The current draft has got great intentions, but it's also got several flaws including degrading safety, and it's also open to interpretation. This change that we're proposing would fix that. Let's talk about ampacity. Randy Evans a couple of motions ago made this case basically. It's not about wattage. It's about voltage and ampacity. Ampacity. None are listed without ampacity there's a major safety issue. A major interpretation issue. I can have 12 volts at five amps and that capitalizes on watts that's 1.25 amps for conductor. 0.5 amps per conductor so -- so this is -- this is supported by the data shown in TR 42, IEEE 802 and UL, all right. And it's introduced in this motion. It's not a 1.25 amp thing, as you heard me talk about before. It's .5 amps per conductor.

So wattage. Wattage isn't the issue. Again, I got to stress it's the 0.5 amps per conductor. That's the issue. Safety record. Over 200 million ports of POE have been shipped, no reported issues. If more than .5 amps per conductor is required, especially for cat 5, cat 6, cat 7 cable, like I told you the last time, this is about data. It's not about power. It's the sanctity of the data, not power delivery. You want
to put more than 100 watts in .5 amps per conductor on this cable and put communications on it, don't do it. Put in 14.2, call your electrician and install an outlet. That's the mantra here.

Labeling, okay. We left out labeling, and this motion addresses that. The cable plant is often installed two to three years before the equipment. Yes, two to threes before the equipment. So when you bring in this equipment, and it's powering more than 0.5 amps per conductor, how do you identify it? You have to be able to easily identify the installation and know that, hey, this equipment has more than this amount of ampacity. It can't go on this cable. It's a safety issue. You have to know that. Labeling is a key thing. This motion addresses it.

Follow the money; right. It's really about selling LP marked cables at 90 degree C. You heard Chris Dominico a couple motions back say our cable communications ends at 60 degrees C. It's not 90. It's 60. You go over 60, there's going to be data failure. And the issue here is the sanctity of the data.

We're adding costs as well; right, adding cabling and installation costs for no reason, and this motion will address that.

Thank you, Mr. Chairman.
CHAIRMAN GOLINVEAUX: Thank you.

Mr. Johnston, would you like to offer the Panel's Position?

CHAIRMAN JOHNSTON: Thank you, Mr. Chair.

Again, panel 16 issue I'd like to defer to the chair of panel 16 Tom Moore for a response and a position. Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. MOORE: I'm Tom Moore representing the International Association of Electrical Inspectors as chair of CMP 16, and we're voting against the motion on the floor.

During the second draft meeting, CMP 16 heard four hours of testimony on the issue of POE. A task group was formed that studied all testimonies, considered 19 public comments including public comment 1262 and consulted with CMP 3 for uniform actions and coalition. CMP 16 supports the panel's actions on second revision 4564 including public comment 1262.

Thank you, Mr. Chairman.

CHAIRMAN GOLINVEAUX: Thank you, gentlemen.

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 number five, please.

MS. CRONIN: Thank you, Mr. Chair.

My name is Amy Cronin, Strategic Code Solutions, representing Cisco and I'm speaking in support of the motion.

Let's talk about the data that you've heard in the previous motions. You have heard that it's an independent report by one person. This data in the report was commissioned by SPI. They keep calling it a UL fact-finding report, well, it is, but you have to figure out why was it done. The plastics Industry Trade Association Incorporated paid for this study.

When you look at the SPI website, you see that there -- one of the things it says is to promote growth in the 427 billion, with a B, plastics industry. It also says, and I quote: "To protect the plastics industry wherever legislation, regulations and public policy matters are being debated that could impact plastics bottom line." I'm seeing a theme here. Profit.

So you always have to look at the backstory. You know, we've always heard follow the money. What is the backstory? It's a commercial issue, not a safety issue with the numbers they chose. So this CAM
is just seeking to tweak those numbers.

    So when you look at the members of SPI.
Some of them make compounds for jackets for the cables
and the insulation for the conductors, and they have a
lot to gain financially. So SPI is doing a great job
for their member companies, but what about for us? So
SPI doesn't develop any consensus documents. Their SOPs
don't include opening fairness and balance. Their
financial interest of their member companies they can
absolutely pursue that.

    When you look at how ideally you want data
to make a code change, you think of studies like with
the Fire Protection Research Foundation where a project
is guided by a balanced panel, you've got expertise,
sponsors, fire service and other stake holders. With
this particular report, there was no diverse panel. SPI
was the only one that oversaw the scope, test perimeters
and the test methods along with UL. SPI commissioned
it. They created a listing also. They requested to
create a listing for a new cable type. Again they
financially gain.

    So if you look at some panel comments, the
IEC originally voted negative on panel 16 citing that
there's no evidence of a safety hazard, and again,
there's no data to show that there is a hazard. On
panel 3 the rep from the lab Intertech voted negatively saying there wasn't enough testing. Another on panel 3 from IAEI said there were forceability concerns.

So lastly, the report was issued at the deadline of the comment submission. So basically the panels had the right idea to regulate these cables, but it needed a little bit of correction and safeguard, specifically adding an amperage and labeling, and that can be done by voting yes on this CAM.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one, please.

MR. FONTAINE: Thank you.

Michael David Fontaine, representing National Electrical Safety Group and Cisco.

The code text as written is broken, but before I start on that, I want to say I really respect the NFPA process.

CHAIRMAN GOLINVEAUX: Excuse me. Are you for or against it?

MR. FONTAINE: I am speaking for the motion.

CHAIRMAN GOLINVEAUX: Thank you.

MR. FONTAINE: I really respect the NFPA process and their position as administrators, and I certainly respect every single volunteer who spends
their time to draft the standards. They are the writer of the standards. But it's been said earlier, even the collective judgment of groups can be wrong, and that was said repeatedly today. Here the collective judgment was clearly wrong. The text as written is clearly not safe. Any competent electrician or even a competent engineer is going to see that that text in panel 2 is not going to protect anybody. That text is a fire hazard waiting for a fire to happen. It will not limit the current in the cable. And even when you're talking about Table 725.144, it only deals with bundles, which is not defined. And you will go look at the definition of bundled, which is a collection tied or wrapped up together. It doesn't address conduit or cable tray by the exact wording in the table.

This is a safety issue. When you got a current put in screen one, that's going to correct people. That's going to save lives. The text over here is not going to save lives. It's an issue of fire safety. That text is not fire safe. It will not limit the current, and I swear to God to say heating. That won't do it. When we get to bundle size and POE equipment, power sourcing equipment is limited by the magnetics and the size of the magnetics and the rack, you won't see over 91 cables. Because you won't see
over 91 cables, the SPI report clearly indicates that
100 watts and a half an amp is safe. You won't exceed
the 60 degree C rate of the cable. That report even
supports that.

In addition to this, it is special extra low
voltage limited power source. So it's limited to 60
volts, and it's limited to 100 V8 99.9 watts, and the
power sourcing equipment, I'm sure it's been shut down.
What's proposed here is safe. What's proposed there is
clearly not safe. And I ask for the support and
supporting the amending motion.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. IVANS: Randy Ivans with UL. I'm a
member of panel 16, and I'm against this motion for
safety reasons.

Within the powering over land cable
community. 60 watts is widely accepted as representing
0.3 amperes at a nominal 50 volts. This is what is
being widely implemented by POE, HTHD, POE Lighting,
etc.

Mr. Goergen from Cisco would have you
believe that what he is proposing is just adding a
current limit to the proposal panel 16 unanimously
accepted as a limit for exempting land powering systems.

In fact, what this motion does is raise the accepted
limits to .5 amperes, 100 watts. The data and I mean
actual temperature data, not models, not theories,
clearly shows that .5 amperes 100 watts will overheat
cables beyond their temperature ratings in a significant
number of installation scenarios.

This motion contains a labeling requirement
that only requires maximum watts, purport to be marked.

Didn't we just here that current is important? 840.160
references the requirements in Article 725. 725.124
already requires class two circuit boards to be labeled.

The second revision added a new section
725.121(C), requiring labeling of voltage and current
for limited power circuits. This new section has
already been approved. There's no need for this motion
if you are concerned about power cord markings because
it is already there.

I urge you to vote no on this motion for
safety's sake. Power level above 60 watts 0.3 amperes
need to have limits, and those limits are in 725.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number three, please.

MR. JONES: Hello. My name is Chad Jones.

I work for Cisco. I chair IEEE 802.30(B)(C), which the
next generation of power Ethernet. I have 15 years of --

CHAIRMAN GOLINVEAUX: Are you in favor or?

MR. JONES: I have 15 years of Ethernet POE standards experience, and I'm speaking in favor of the motion.

CHAIRMAN GOLINVEAUX: Thank you.

MR. JONES: Right.

So the IEEE operates as an open process. It's a coordinated effort of system vendors, IC vendors, and designers, cable manufacturers, and cable installers. We use liaison process to get the expertise from other groups that we don't have within ourselves. Along with that, we also use liaison process to try to let other people know that we have knowledge that should be shared. And to point, we sent a liaison letter to our MPA, coming out of May meeting. I'm not going to read it because it is already late, but I am going to summarize. The IEEE 02.3 is also concerned that there's no current limit in the text. And the current limit is a problem because cable heating is directly related to current, not the power of delivery.

Clause 33 of the POE standard in IEEE 02.3 limits conductor current to less than 0.5 amps. It's not even 0.5. It's less than. Well, we use UL 6950 as
our guiding safety factor -- I don't appreciate that noise there.

Specifically we use the SELV and LPS specifications in Section 269.50. SELV has taken low voltage. That means less than 60 volts. LPS is a limited power source, less than 100 VA.

So we are limited by a UL safety standard to be safe.

I listened a lot today to people quoting working with IEEE and working with external groups to get correlating information. IEEE was not consulted on this text. We were conspicuously left out of it, and there's a reason, I'm sure, and Amy pointed it out why. I'm running out of time.

So without any increase in safety, LP cables increase cost and may require replacement of existing cables. Now there's no cause for this.

So I urge you to fix this and harmonize IEEE 02.3 in NEC by voting for CAM 70-42.

Thank you.

CHAIRMAN GOLINVEAUX: Thank you, and I apologize for the background noise while you were speaking. I don't know where that came from.

Microphone number one, please.

MR. DOMINICO: My name is Chris Dominico,
and I'm affiliated with Gandlewood. I speak in favor of this motion.

CHAIRMAN GOLINVEAUX: Is that your final comment?

MR. DOMINICO: No, it isn't. I'm sorry, sir.

If you got to the specification at the end here, I've been listening in part to a lot of the discussions earlier, and they give me some confidence that in fact there is a recommendation that ampacity is the factor that is related to the temperature rising cable.

So we're clearly missing the ampacity here in the specification. And we've heard it in the other code discussions as it related to conduits and group talks and other areas and will themselves will clearly commit that ampacity is the element in which is related to the temperature rise in the cable. So we need to include that here.

Regarding the wattage that we've introduced here. The wattage limits are consistent with the power limited sources that we have developed and referred to, and that's the other piece that's being added to this. So one is a current limit that we need to integrate here into the specification to assure ourselves that we have
an associated perimeter that controls the temperature rising. Ampacity is what does that, and in fact if you go to 725.144, you find that that table is all about ampacity.

So here even though we are addressing the specifications for safety, we're not addressing the current ampacity. That's clearly missing.

Regarding the comments around the data collected, I appreciate the fact that -- and respect the work that UL has done and completed. In fact, we've been making measurements, and I personally have been doing this for over 16 years. So the notion of creating temperature tables similar to what's been reflected in 725 have already been introduced into TIA documents. In regard to those documents, there are measurements that have been made by a broad based industry who -- and as I said before, not only just measurements but modelling.

I've just recently in the past year or so been introduced to the notion that UL has in fact been interested in driving some of this through the study funded by the plastic industry, but before that and before this we have heard nothing regarding any issues around, concerns about temperature rising cabling for pewee applications. We've been working on this for 16 years. There's no incidents of safety issues or safety
related incidences over this period of time. And I'll
tell you why. We have been a very closely tight-knit
standards group working together. One in which the
equipment manufactures are tied together with the
cabling an implement this. The temperature test has
been done adequately, the guidelines have been created.
There's just been no safety issues.

UNIDENTIFIED AUDIENCE SPEAKER: Point of
order, Mr. Chairman.

CHAIRMAN GOLINVEAUX: I apologize. Your
time has expired.

MR. DOMENICO: Thank you very much, sir, for
recommending that. Thank you. And I do support you
supporting this motion. Thank you.

CHAIRMAN GOLINVEAUX: You cannot continue.

Microphone number four, please.

MR. HOTEY: Mark Hotey, Underwriters
Laboratories, member of panel 3, and I'm speaking
against the motion.

One of the things that we did in putting
725.144 into the code is that if you had bundling, then
we have the ampacity levels that you have to comply with
in that particular table. If you don't have those
bundling applications, you don't have to use LP cable.
You can use a regular class two or class three circuit
conductor with the insulation that we've been using before. And we hear the whole three minutes about the fact that this is all about money for the plastics association. It's not. This is a safety issue. And this is something we need to make sure that we have covered. For such a long time, Article 725, part 3, dealing with class two and class three circuits, power limited applications, signally, and those kinds of things, you know, we were actually putting very little current over these conductors. But when you start putting power over the Ethernet along with this signalling, then you get into a different application. And Article 725 needed to change. And again, once we have this in the code, and we start using it, then we can start looking at other applications and how it's going to be affected. But we need to get this in now. Somebody said it's going to be six to eight years if we wait for the 2020 cycle. And we just can't wait that long for this kind of safety application.

Thank you. Please do not support this motion.

CHAIRMAN GOLINVEAUX: Thank you.

I'm going to move to microphone number two, please.

MR. McCOY: My name is Bill McCoy. I'm
speaking for myself as a consultant with the telecommunications industry. I am the external representative for IEEE, Code Making Panel 16 as a principal member. So the statement of saying that IEEE wasn't consulted is incorrect.

CHAIRMAN GOLINVEAUX: Excuse me. Are you in favor or opposed?

MR. McCoy: I'm saying I'm against the motion --

CHAIRMAN GOLINVEAUX: Thank you.

MR. McCoy: -- that's been posed.

I think a lot of what I was going to say earlier has already been said. So I won't belabor the deal, but I really want to point out the fact that Chapter 8 is a stand-alone chapter. And the reference is made to Chapter 1 and 7, then Chapter 1 and 7 doesn't apply. This is a chapter that the time limit is communications systems. What is written by the panel and approved unanimously by the panel on affirmative vote applies to communication systems. Now increasing the change in productivity here is allowing for power delivery systems to be placed on communications cables, which should be covered under Article 725. This is a reference that's being made to that.

So as a conclusion, I would highly recommend
that you vote against the motion.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number one, please.

MS. CRONIN: Point of order, Mr. Chair.

CHAIRMAN GOLINVEAUX: Yes.

MS. CRONIN: There were two against motions in a row, so I simply request that maybe do two support motions.

CHAIRMAN GOLINVEAUX: I am following the best that I can that people got to a microphone. So if there were two in favor that were first at the microphone, I'm trying to go in curtesy of who stepped up first. So that's the way I've decided too it, and I'm trying to stick to it. I had 14 people up at the same time, and I apologize for those who are waiting at the microphone. I have you noted, and I will get to you, I promise, unless another motion is made.

Microphone number one, please.

MR. BULLOCK: Thank you, Mr. Chair.

My name is Chris Bullock. I'm with Cisco systems, and I speak in favor of this motion.

So my concern is for the language that's in 840.160, and it has several deficiencies. I think several people have already pointed out the lack of a current limit. And it's beyond me why the panel chose
to use a wattage threshold to then point to an ampacity table. I can't figure that one out.

The second deficiency that I see is no mention on number of conductors. These communication tables, some of them have two conductors, some have eight conductors, some have four conductors, and there's no reference to it at all. So 60 watts applies to the cable independent of the number of conductors. And this motion would rectify that would be .5 amps per conductor, per conductor is important.

And lastly, I just wanted to reference that Randy Ivans, when he spoke earlier and talked about 50 volts, I think that's the problem here. I think their study assumed 50 volts was going to be used, and if that's the case, I don't see it called out in 840.160. They should have worded that you must be above 50 volts. Because I know there's lots of instances in communications cables where people are putting 12 volts and 24 volts down these cables, and that case they're not going to exceed the 60 watts that would refer them to 725.144, and they're going to put excessive currents on these cables.

It's dangerous. And I urge you to support this motion for those reasons.

Thank you.
CHAIRMAN GOLINVEAUX: Thank you.

Microphone number four, please.

MR. LYONS: Yeah, this is Jack Lyons. I represent myself. I call the question.

(Audience applause.)

CHAIRMAN GOLINVEAUX: There's a motion from the floor to call the question. I have noticed that there were a number of people remaining at the microphone remaining to speak for your information, but we will proceed with the vote of call the question.

Do we have a second? We do have a second.

And an order to vote on this motion, please scroll down to the bottom of the tablet to vote. If you wish to vote in favor of the motion, touch yes. If you wish to vote in favor against -- excuse me. If you wish to vote against the motion, touch no.

Please record your vote.

Five seconds.

The balloting is closed.

(Audience applause.)

CHAIRMAN GOLINVEAUX: Vote on the motion to call the question is 320 in favor. It disappeared on me. Can you pull it back up, please.

320 in favor and 30 against.

The motion passes to call the question.
Before we vote let me restate the motion.

The motion on the floor is to Accept an Identifiable Part of the Public Comment No. 1262.

To vote touch the vote button. If you wish to vote in favor 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.

Balloting will close in five seconds.

Balloting is closed.

The results on the vote on the motion is 119 in favor; 165 against.

The motion fails.

(Audience applause.)

(Motion 70-42 to Accept an Identifiable Part of Public Comment No. 1262 failed with a vote of 119 in favor; 165 against.)

CERTIFIED AMENDING MOTION 70-43:

CHAIRMAN OWEN: Now let's move -- now let's proceed to the discussion on Certified Amending Motion 70-43.

Tony O'Brien or Silveira? I'm looking...

Microphone number two, please.

MR. O'BRIEN: Tony O'Brien, Cisco Systems.

I realize I'm of the wrong mic, but...
CHAIRMAN GOLINVEAUX: It's okay.

MR. O'BRIEN: At this time I would like to withdraw the motion.

(Audience applause.)

CHAIRMAN GOLINVEAUX: The next motion on NFPA 70-43 appeared on our agenda; however, the authorized maker of the motion or their designated representative have notified NFPA that they no longer wish to pursue this motion. Therefore, in accordance with NFPA Rules (Convention Rules at Section 2.7), the motion may not be considered by the assembly and is removed from the agenda.

Now is there any further discussion on NFPA 70?

MS. CRONIN: Yes.

CHAIRMAN GOLINVEAUX: Microphone number five.

MS. CRONIN: Okay. I was looking at the allowed motions, and I ask that the Body be allowed to vote on the following motion: In accordance with 3-5 of the convention rules, Item N, I move to reconsider CAM 70-1.

CHAIRMAN GOLINVEAUX: A motion has been made. A motion to reconsider has been made. In accordance with the rules to proceed, the maker of the
of the motion must confirm that she was on the winning side of the motion when first considered.

Can you please confirm that you voted in favor of motion 70-15 {sic}?

MS. CRONIN: The beauty of it is I anticipated this, and I voted on the winning side for that reason.

CHAIRMAN GOLINVEAUX: Did you vote in favor of the motion?

MS. CRONIN: I voted against the motion in anticipation of reconsideration.

CHAIRMAN GOLINVEAUX: I just need one minute, please.

MS. CRONIN: Thank you.

(A brief discussion was held off the record.)

CHAIRMAN GOLINVEAUX: Amy, could you please bring your tablet up, please?

MS. CRONIN: Yes.

(A brief discussion was held off the record.)

CHAIRMAN GOLINVEAUX: I apologize for the delay.

We have confirmed, and I had misstated earlier the -- we asked her to confirm, and I said 70-15. She made the motion on 70-1. And we have confirmed that she had voted against the motion, which
was the prevailing side. 70-1 failed.

So it's appropriate for her to make a motion for reconsideration based on that she was on the prevailing side of the issue.

MS. CRONIN: So do I get to make my argument?

CHAIRMAN GOLINVEAUX: I'm going to get there. You can return -- one more minute.

(A brief discussion was held off the record.)

CHAIRMAN GOLINVEAUX: So as the chair of this session I'm going to rule this motion in order. And I'm going to be looking for -- is there a second to support the motion to reconsider?

UNIDENTIFIED AUDIENCE MEMBER: I second it, Mr. Chairman.

CHAIRMAN GOLINVEAUX: Okay. And now that we have a second.

UNIDENTIFIED AUDIENCE MEMBER: Mr. Chair, a point of order. Does the second also have to have been on the winning side?

CHAIRMAN GOLINVEAUX: I don't have that as my requirement. I don't believe so.

UNIDENTIFIED AUDIENCE MEMBER: Thank you.

CHAIRMAN GOLINVEAUX: The floor will now entertain comments in support of -- the floor will now
entertain comments in support and opposition to the
matter of reconsideration and reconsideration only. We
are not going get into the technical debate. We're
going to discuss for and against the motion of
reconsideration.

MS. CRONIN: Would you like me to continue
my motion, Mr. Chair? Make my motion now?

CHAIRMAN GOLINVEAUX: I'm going to go
straight to -- I'm going to call on you first, but we're
going to do the -- take another minute.

(A brief discussion was held off the record.)

CHAIRMAN GOLINVEAUX: So I just want to
explain to you that this first part of this debate is
going to be just on the motion to reconsider. And then
if it passes, then we're going to go back and re-discuss
70-1.

So this is not the technical merits of 70-1.
This is the issue of the motion to reconsider. We're
going to have the for and against discussion on that.

If this motion passes, then we will go back
to 70-1 and revote that section. So...

This will be simple majority.
So microphone number two, I want you to
state your reason for the reconsideration and your for
or against reconsidering 70-1.
MS. CRONIN: Yes. Amy Cronin, Strategic Code Solutions, representing AFCI consortium. I'm speaking in favor of the motion to reconsider.

And the logic for why we think it should be reconsidered was the technology wasn't working. During the first part of the debate during 70-1, the question was called -- it's fair. The question was called, and it was a hand vote.

So it was a half-and-half kind of thing, and the first vote was 70-1. I heard from at least one person that their device wasn't working. I heard from others that they lacked confidence in the vote.

When you look at the voting totals of 70-1 versus 70-2, there was a difference of 148 votes. 548 and 409.

So I wondered were extra votes perhaps added? I just don't have a confidence in the vote, and I urge the body to reconsider to put this vote to rest once and for all.

CHAIRMAN GOLINVEAUX: Thank you.

Microphone number five, please.

MR. CAMPOLO: Thank you, Mr. Chairman.

Steve Campolo of Leviton, speaking in favor of the motion to reconsider.

I too don't know if my vote of counted. I
had to turn in and exchange my iPad five times. If you
want to check my records, there are a number of votes
that I was unable to vote on.

So I'm unsure, and I feel disenfranchised as
many others who whose iPads weren't working and whether
they voted or not.

So I speak in favor of the motion to
reconsider.

CHAIRMAN GOLINVEAUX: Thank you.

I also ask that we establish the time clock
just to make sure that I have that as a reference.

Microphone number four, please.

MR. HIRSCHLER: Marcelo Hirschler, GBH
International, speaking for myself. I am opposed to the
motion for reconsideration.

We had extensive debate on this item. The
motion failed by a very broad margin. A very large
proportion of the people who were interested in that
item are gone. We should not go on and extend --

(Audience applause.)

MR. HIRSCHLER: We should not go on and
extend the meeting just because someone lost a vote and
now with fewer people here, things that we can -- they
can win it now.

This is not my issue. I don't really care
about this issue. I just care about the process.

Please do not support the motion.

(Audience applause.)

CHAIRMAN GOLINVEAUX: Okay. Is there -- I'm seeing one other person.

Microphone number four, please.

Please let's get -- hold the applause.

MR. RAMOS: Yes. This is Mario Ramos, speaking for myself, and I do not support this motion.

I think it's clear that the person that is promoting this motion she vote on purpose on the opposite side just to try to play out at the end of the session a motion to reconsider the vote.

So I think this is not a serious motion to be reconsidered, and I really like everybody to vote against this.

(Audience applause.)

CHAIRMAN GOLINVEAUX: Okay. So I am not seeing any -- is there any further discussion on the motion to reconsider NFPA 70-1?

Seeing none, I'm going to move to the vote.

Let me restate that we are voting to --

UNIDENTIFIED AUDIENCE MEMBER: How are we going vote?

CHAIRMAN GOLINVEAUX: Okay. Before we vote
let me restate the motion. The motion is to reconsider
NFPA 70-1.

So we're going to use the call the question
voting procedure.

So I want you to scroll down to the bottom,
and we will touch yes to vote to reconsider NFPA 70-1,
and you will touch no if you do not want to reconsider
NFPA 70-1.

Please record your vote.

Hang on. I got a lot of people -- is it not
allowing you to vote?

(Unidentifiable audience chatter.)

CHAIRMAN GOLINVEAUX: Five seconds.

The balloting is closed.

(Audience applause.)

CHAIRMAN GOLINVEAUX: The results of the
ballot are 44 in favor; 332 against.

The motion has failed.

Are there any further comments on NFPA 70?

MS. CRONIN: Excuse me, Mr. Chair?

CHAIRMAN GOLINVEAUX: Yes.

MS. CRONIN: Could we ask just for a hand
vote just to confirm that is correct?

We don't want any -- I'm trying to make it
crystal clear to everybody.
CHAIRMAN GOLINVEAUX: I'm actually going to not allow that.

I think the voting is clear with the number of people in the room for the votes that I've seen, and I'm comfortable with the amount of votes that I just saw.

Is there any further discussion on NFPA 70?

Okay. Seeing none, this officially concludes the 2016 NFPA Technical Meeting.

I want to thank you for your participation, interest, and support.

I now declare this part of the meeting officially closed.

(The proceedings concluded at 9:22 p.m.)
STATE OF NEVADA )
 ) SS:
COUNTY OF CLARK )

CERTIFICATE OF REPORTER

I, Brittany J. Castrejon, a Certified Court Reporter licensed by the State of Nevada, do hereby certify that I took down in shorthand (Stenotype) all of the proceedings had in the before-entitled matter at the time and place indicated; and that thereafter said shorthand notes were transcribed into typewriting at and under my direction and supervision and the foregoing transcript constitutes a full, true, and accurate record of the proceedings had.

IN WITNESS WHEREOF, I have set my hand in my office in the County of Clark, State of Nevada, this 5th day of July, 2016.

_________________________________________________________________________

Brittany J. Castrejon, CCR NO. 926