NFPA NEWS
Up to date codes and standards information
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INSIDE NFPA *NEWS*

The NFPA *News* is a compilation of NFPA's standards information and activities. We attempt to cover all important details during the standards development process so that the public is aware of what is available and what is needed. We want to make the NFPA *News* an even more valuable tool for you. Please forward your ideas to nfpa_@nfpa.org or contact Standards Administration at 617-984-7286.

Standards Council Launches Projects for Review and Public Input.

The Standards Council voted to approve the request of three committees to enter new documents NFPA 855, NFPA 1700 and NFPA 2400 into their respective, initial cycle for development. For two standards, NFPA 855 *Standard for the Installation of Stationary Energy Storage Systems* and NFPA 2400 *Standard for Small Unmanned Aircraft Systems (sUAS) used for Public Safety Operations* that meant the establishment of tailored revision cycles in response to stakeholders expressing an immediate need for standards. The anticipated result is that the inaugural editions may be available for use and adoption before the conclusion of 2018. The Council's action is yet another way that NFPA and the Standards Council are responding to those in need of information and knowledge.

Standards Council Considers Request for Standards to Merge

At the recent August meeting of the Standards Council, members considered a proposal to merge NFPA 16, *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems* into NFPA 11, *Standard for Low-Medium-, and High-Expansion Foam* during the next revision cycle for NFPA 11. As consideration of action continues on this request, the Council is seeking comments from the public and interested stakeholders affected by the possible merger of NFPA 16 into NFPA 11. If you would like to submit comments on this proposal, please do so at stds_admin@nfpa.org before October 13th.

NFPA Standards to Return to Technical Committees for Further Processing

NFPA 285: After reviewing the entire record and hearing testimony regarding the proposed 2018 Edition of NFPA 285, *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components*, in an abundance of caution, the Standards Council voted to return the standard to the responsible Technical Committee for further processing. NFPA 285 will re-enter the standards development process with a call for Public Comments based upon the existing First Draft. The schedule for processing of NFPA 285 will be posted on NFPA's website and submissions for Public Comment will open on September 30th.

NFPA 1951: Upholding the successful follow-up motion at the NFPA Technical Meeting to return NFPA 1951, *Standard on Protective Ensembles for Technical Rescue Incidents*, the Standards Council has directed that that Special Operations Protective Clothing and Equipment Technical Committee process NFPA 1951 through the Annual 2019 Revision Cycle without a call for new Public Inputs. The Technical Committee is to reconsider all Public Input previously filed, generate any new First Revisions, and publish an amended First Draft Report. The standard will then continue through the remaining stages of the standards development process.

Special Notice Regarding NFPA 350

Due to an unanticipated delay of the posting of the First Draft Report for NFPA 350, *Guide for Safe Confined Space Entry and Work*, the deadline for submission of Public Comments for this standard is being extended to December 8, 2017. Please anticipate the posting and availability of the First Draft Report for NFPA 350 by September 27th. Should you have question, please contact Standards Administration at stds_admin@nfpa.org or 617-984-7246.

New Project on Fire Investigation Units (FIUs)

The National Fire Protection Association (NFPA) Standards Council is in receipt of a New Project Initiation Request for the development of an ANSI Accredited Standard addressing ***Fire Investigation Units (FIUs)*** from the National Institute of Standards and Technology (NIST), specifically the Organization of Scientific Area Committees (OSAC) Fire and Explosion Investigation Subcommittee.

The request defines an FIU as any public or private sector organizations performing fire and explosion investigations. This applies to any public agencies i.e. fire departments, law enforcement agencies involved in fire investigation, fire marshal offices, and private agencies such as consulting firms and insurance investigation units. The project as proposed will include individuals operating as part of a task force for specialized incidents, although the requester identifies that the proposed project is not intended to prescribe any requirements relating to the formation of a task force.

If the New Project Initiation is ultimately approved by the Standards Council, a new Technical Committee may be established and charged with the development of appropriate requirements related to ***Fire Investigation Units (FIUs)***. Activities within the scope of the Technical Committee are anticipated to focus minimum requirements for fire and explosion investigation relating to:

Organization;

- Facilities and equipment;
- Compliance with safety procedures;
- Training;
- Certification and education;
- Document retention;
- Review and approvals of investigation reports; and
- Processes/management systems

NFPA is currently soliciting comments from interested organizations and individuals to gauge whether support exists for standards development addressing ***Fire Investigation Units (FIUs).*** The request comes in response to the NIST/OSAC initiative to develop and identify standards and guides that will support professional quality investigations within the forensic community, in this instance specifically on the topic of fire and explosion investigation. The requester proposes that such a project will link naturally to the existing NFPA 921 and 1033, which provide guidance on how to complete a fire or explosion investigation and the qualifications (job performance requirements) of the individual.

NFPA specifically seeks input on the following:

1. Are you, or your organization, in favor of the development of an NFPA Standard pertaining to ***Fire Investigation Unites (FIUs)***?
2. Please state your reason(s) for supporting or opposing such standards development.
3. Are you or your organization interested in applying for membership on the Technical Committee if established by the Standards Council? If yes, please submit an application, in addition to your comments in support of the project, online at: Submit online application

Note: Applications being accepted for purposes of documenting applicant interest in committee participation. Acceptance of applications by NFPA does not guaranty or imply the Standards Council will ultimately approve standards development activity on this subject matter.

Please submit all comments, in support or opposition by October 13, 2017 to ***Fire Investigation Units (FIUs)*** standards development at: stds_admin@nfpa.org.

New Project on Service Support Personnel

The National Fire Protection Association (NFPA) Standards Council is in receipt of a New Project Initiation Request for the development of an ANSI Accredited Standard addressing ***Professional Qualifications for Fire Service Support Personnel.*** The submitter has indicated the need for a recognized universal standard ***establishing professional qualifications to operate as a support member for the fire service.***

There are currently no known standards that address the role of individuals operating in the role of support member in the fire service.

If standards development is approved, the development of appropriate documents will necessitate the establishment of a new NFPA Technical Committee comprised of technical experts from within the field, including the public and private sectors
Standard development based upon this request, if approved, will focus on:

- ***Developing a scope for personnel supporting active fire service operations not subject to Immediate Dangerous to Life or Health (IDLH) environments;***
- ***Performing a Job Task Analysis related to the proposed support position; and***
- ***Identifying Job Performance Requirements (JPRs) to established professional qualifications for the position of support member.***

NFPA is currently soliciting comments from interested organizations and individuals to gauge whether support exists for standards development addressing the scope of this project ***in relation to existing professional qualification documents and assigning this project to the appropriate technical committee***. NFPA specifically seeks input on the following:

1. Are you, or your organization, in favor of the development of an NFPA Standard pertaining to minimum standards for fire service support personnel?
2. Please state your reason(s) for supporting or opposing such standards development.
3. Are you, or your organization, in favor of the development of the NFPA Standard to establish Professional Qualifications for Fire Service Support Personnel
4. Are you or your organization interested in applying for membership on the Technical Committee if established by the Standards Council? If yes, please submit an application, in addition to your comments in support of the project, online at: Submit online application*

**Note:* Applications being accepted for purposes of documenting applicant interest in committee participation. Acceptance of applications by NFPA does not guaranty or imply the Standards Council will ultimately approve standards development activity on this subject matter.

Please submit all comments, in support or opposition by October 13, 2017 to Professional Qualifications for Fire Service Support Personnel to standards development at: stds_admin@nfpa.org.

New Project on Fire Test for Wall Panels

The National Fire Protection Association (NFPA) is considering the development of an ANSI Accredited Standard addressing the

combustibility of exterior and interior wall panels. This test method would be based on the existing 16 ft. Parallel Panel Test from the FM Approvals Standard 4880, involving two facing vertical wall panels exposed to a 360 kW propane gas ignition source, representing a direct adjacent exposure. The parallel panel placement creates a re-radiation effect, representing severe exposures. The pass/fail criteria would be based on heat release rates measured under a calorimeter (1.5 MW minimum). This test would provide a cost effective solution to the other larger full-scale tests, such as the 25 to 50 ft high corner tests.

NFPA is seeking comments from all interested organizations and individuals to gauge whether support exists for standards development on a new wall panel fire test. Specifically, please submit your comments to the following:

1. Are you, or your organization, in favor of the development of an NFPA Standard pertaining to a fire test for wall panels?
2. Please state your reason(s) for supporting or opposing such standards development.
3. Are you, or your organization, in favor of the development of an NFPA Standard to establish a new fire test for wall panels?
4. Are you or your organization interested in applying for membership on the Technical Committee if the Standards Council initiates development activities on the proposed project? If yes, please submit an application, in addition to your comments in support of the project, online at: Submit online application*

Please submit all comments, in support or opposition, by October 13, 2017 to address the combustibility of exterior and interior wall panels to standards development at: stds_admin@nfpa.org.

New Change Indicators 2018 Editions (Annual 2017 Cycle)

At NFPA we take very seriously the feedback we receive and value the opinions of those who use and rely on our information. Since the implementation of our new publishing platform, we have been working on improving our process for including change indicators in all of our codes and standards. A solution that will meet the needs of our code users and provide better service for our stakeholders is now being launched in our 2018 editions of our codes and standards.

In the past, NFPA used vertical rules and bullets to indicate changes. If a section had a change to the text, a vertical rule would appear in the left margin of that section. In addition, if there was a deletion, a bullet would appear in the left margin of that line. This process was done manually by the production staff, and the reader had no information in terms of what that change may have been (added text, replaced text, modified text). It simply flagged the reader that there was a change, and the reader would have to go to the previous edition to determine the nature of that change.

Our new and improved change indicators capture text revisions, text deletions, figure/table revisions, section deletions, and new content. These are auto-generated in the XMS publishing system by simply running a differentiation tool against the previous edition. The roll out of our new change indicators will start our first 2018 editions in our Annual 2017 Cycle.

The following explanatory text that will appear in all 2018 editions on the disclaimer page:

REVISION SYMBOLS IDENTIFYING CHANGES FROM THE PREVIOUS EDITION

Text revisions are shaded. A **Δ** before a section number indicates that words within that section were deleted and a **Δ** to the left of a table or figure number indicates a revision to an existing table or figure. When a chapter was heavily revised, the entire chapter is marked throughout with the **Δ** symbol. Where one or more sections were deleted, a • is placed between the remaining sections. Chapters, annexes, sections, figures, and tables that are new are indicated with an ***N***.

Note that these indicators are a guide. Rearrangement of sections may not be captured in the markup, but users can view complete revision details in the First and Second Draft Reports located in the archived revision information section of each code at www.nfpa.org/docinfo. Any subsequent changes from the NFPA Technical Meeting, Tentative Interim Amendments, and Errata are also located there.

In addition, the following footer key will appear at the bottom of each page for quick reference:

Shaded text = Revisions. **Δ** = Text deletions and figure/table revisions. • = Section deletions. ***N*** = New material.

News in Brief

Call for presentations for NFPA's 2018 Conference & Expo in Las Vegas. Deadline: September 25. More information at www.nfpa.org/training-and-events

Hot Work. Safe Work.

Key lessons from the U.S. Chemical Safety and Hazard Investigation Board reports of hot works incidents. Read more at www.nfpa.org

Fire Prevention Week is October 8-14, 2017. Every Second Counts.

The 2017 NFPA campaign emphasizes the potentially life-saving importance of having a home escape plan. Get more information at www.nfpa.org/fpw

Proposed Tentative Interim Amendments Seeking Comments

The following proposed tentative interim amendments (TIAs) are being published for public review and comment. Anyone may submit a comment on these proposed TIAs by the respective closing dates. Along with your comment, please include the number of the TIA and forward to the Secretary of the Standards Council.

TIAs are amendments to an NFPA standard that are processed in accordance with Section 5 of the *Regulations Governing the Development of NFPA Standards*. If issued, TIAs are effective only between editions of a standard. A TIA automatically becomes a Public Input for the next edition of the standard, and is then subject to all of the procedures of the NFPA standards development process.

NFPA 25 – 2017 Edition
Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
TIA Log No.: 1287
Reference: Various sections
Comment Closing Date: October 19, 2017
Submitter: Tracey Bellamy, Telgian Corporation
www.nfpa.org/25

1. Add NFPA 70E®, Standard for Electrical Safety in the Workplace®, 2015 edition to section 2.2.

2. Revise 4.9.6 and associated Annex A material to read as follows:

4.9.6* Electrical Safety.

4.9.6.1 Legally required precautions shall be taken when testing and maintaining electric controllers for motor-driven fire pumps**.**

4.9.6.2 At a minimum, the provisions of NFPA 70E shall be applied.

A.4.9.6 WARNING: NFPA 20 includes electrical requirements that discourage the installation of a disconnect means and limit overcurrent protection in the power supply to electric motor–driven fire pumps. This is intended to ensure the availability of power to the fire pumps. Where equipment connected to those circuits is serviced or maintained, the service person could be subject to unusual exposure to electrical and other hazards. It could be necessary to establish special safe work practices and to use safeguards or personal protective clothing, or both. The required category of personal protective equipment will vary dependent upon the specific installation details and associated incident energy levels. The determination of such incident energy levels can be established by conducting an incident energy level analysis as provided in Annex D of NFPA 70E or by utilization of the PPE Category Method provided by NFPA 70E, Table 130.7(C)(15)(A)(b), where applicable. Use of the PPE Category Method requires that the maximum available short-circuit current and maximum fault clearing time for the actual installation do not exceed those indicated in NFPA 70E, Table 130.7(C)(15)(A)(b). See ~~also~~ NFPA 70E for ~~additional safety~~ guidance regarding the determination of the incident energy and the required level of personal protective equipment. The provisions of NFPA 70E require that the owner label the equipment with information regarding the electrical hazards associated with the installation. Where such labeling is not present, the technician cannot make a determination for safe work practice on the equipment without further assessment of the incident energy associated with the installation.

3. Revise sections in 8.1.1.2 to read as follows:

8.1.1.2.2 Electrical connections shall be checked annually and repaired as necessary to the extent that such work can be completed without opening an energized electric motor–driven fire pump controller.

8.1.1.2.4 Printed circuit boards (PCBs) shall be checked annually for corrosion to the extent that such work can be completed without opening an energized electric motor–driven fire pump controller.

8.1.1.2.5 Cable and/or wire insulation shall be checked annually for cracking to the extent that such work can be completed without opening an energized electric motor–driven fire pump controller.

8.1.1.2.6 Plumbing parts, both inside and outside of electrical panels, shall be checked annually for any leaks to the extent that such work can be completed without opening an energized electric motor–driven fire pump controller.

8.1.1.2.12 Engine crankcase breathers shall be checked ~~quarterly~~ annually.

8.1.1.2.16 All controls and power wiring connections shall be checked annually and repaired as necessary to the extent that such work can be completed without opening an energized electric motor–driven fire pump controller.

8.1.1.2.21 The accuracy of pressure gauges and sensors shall be inspected annually and replaced or recalibrated when more than 5 percent out of calibration to the extent that such work can be completed without opening an energized electric motor–driven fire pump controller.

4. Revise Table 8.1.1.2 to read as follows:

Table 8.1.1.2 Summary of Fire Pump Inspection, Testing, and Maintenance

Item	Frequency	Reference
Inspection		
Alignment	Annually	8.3.6.4
Cable/wire insulation	Annually	8.1.1.2.5
Diesel pump system	Weekly	8.2.2(4)
Electric pump system	Weekly	8.2.2(3)
Engine crankcase breather	Annually	8.1.1.2.12
Exhaust system and drain condensate trap	Annually	8.1.1.2.13
Flexible hoses and connections	Annually	8.1.1.2.11
Fuel tank vents and overflow	Annually	8.1.1.2.10
Plumbing parts – inside and outside of panels	Annually	8.1.1.2.6
Printed circuit board corrosion (PCBs)	Annually	8.1.1.2.4
Pump	Weekly	8.2.2(2)
Pump house/room	Weekly	8.2.2(1)
Shaft movement or endplay while running	Annually	8.1.1.2.1
Steam pump system	Weekly	8.2.2(5)
Suction screens	Annually	8.3.3.~~7~~12
Test		
Automatic transfer switch and emergency/standby generators	Per NFPA 110	8.3.6.1 and 8.3.6.2
Diesel engine–driven fire pump	Weekly	8.3.1.1
Diesel fuel testing	Annually/ Semiannually	8.3.4
Electric motor–driven fire pump	Weekly/monthly	8.3.1.2
Electronic control module (ECM)	Annually	8.3.3.13
Fire pump alarm signals	Annually	8.3.3.~~5~~10
Fuel tank, float switch, and supervisory signal for interstitial space	Quarterly	8.1.1.2.7

Main relief valve	Annually	8.3.3.3~~7~~8
Power transfer switch	Annually	8.3.3.4~~8~~9
Pump houseroom environmental conditions		8.3.6.3
Pump operation (no flow)	Weekly/monthly	8.3.1
Pump performance (flow)	Annually	8.3.3
Supervisory signal for high cooling water temperature	Annually	8.1.1.2.8
Maintenance		
Batteries	Annually	8.1.1.2.15
Circulating water filter	Annually	8.1.1.2.20
Control and power wiring connections	Annually	8.1.1.2 16
Controller	Per manufacturer	8.5
Diesel active fuel maintenance system	Annually or per manufacturer recommendation	8.3.4.3
Diesel engine system	Per manufacturer	8.5
Electric motor and power system	Per manufacturer	8.5
Electrical connections	Annually	8.1.1.2.2
Engine lubricating oil	Annually or 50 operating hours	8.1.1.2.17
Engine oil filter	Annually or 50 operating hours	8.1.1.2.18
Fuel tank – check for water and foreign materials	Annually	8.1.1.2.9
Measure back pressure on engine turbo	Annually	8.1.1.2.14
Pressure gauges and sensors	Annually	8.1.1.2.21
Pump and motor bearings and coupling	Annually or as required	8.~~5~~1.1.2.3
Sacrificial anode	Annually	8.1.1.2.19

5. Revise the Electrical System section of Table A.8.1.1.2 for the following line items to read as follows:

~~Tighten electrical connections as necessary~~	~~X~~	~~Annually~~
Calibrate pressure switch settings*	X	Annually
~~Voltmeter and ammeter for accuracy (5%)~~	~~X~~	~~Annually~~
Any corrosion on printed circuit boards (PCBs)*	X	Annually
Any cracked cable/wire insulation*	X	Annually
Any leaks in plumbing parts*	X	Annually
Any signs of water on electrical parts*	X	Annually

* Required only where the extent of such work can be completed without the opening of an energized electric motor–driven fire pump controller.

6. Revise 8.3.2.8(2) to read as follows:

8.3.2.8 The pertinent visual observations or adjustments specified in the following checklists shall be conducted while the pump is idle:

(1) Record the system suction and discharge pressure gauge readings.

(2) For pumps that use electronic pressure sensors to control the fire pump operation, record the current pressure and the highest and the lowest pressure shown on the fire pump controller event log where such information is available without having to open an energized electric motor–driven fire pump controller.

(3) If the highest or lowest pressure is outside of the expected range, record all information from the event log that helps identify the abnormality.

7. Delete 8.3.3.2.1 in its entirety, and revise 8.3.3.2.2, and renumber subsequent paragraphs to read as follows:

~~**8.3.3.2.1** Voltage and amperage readings on fire pump controllers that meet the following criteria shall be permitted in lieu of calibrated voltage and / or amperage meters:~~

~~(1) The fire pump controller shall have been factory calibrated and adjusted to ±3 percent.~~

~~(2) The voltage reading shall be within 5 percent of the rated voltage~~.

8.3.3.2.~~2~~1 ~~Except as permitted in 8.3.3.2.1, c~~Calibrated test equipment shall be provided to determine net pump pressures, rate of flow through the pump, ~~volts and ampere,~~ and speed.

8.3.3.2.~~2~~1.1 Calibrated …

8.3.3.2.~~2~~1.2 Gauges …

8.3.3.2.~~2~~1.3 Flow …

8. Revise 8.3.3.7(2)(a) to read as follows:

8.3.3.7 The pertinent visual observations, measurements, and adjustments specified in the following checklists shall be conducted annually while the pump is running and flowing water under the specified output condition:

(2) At each flow condition, the procedure is as follows:

(a) Where an external means is provided on the controller, r~~R~~ecord the electric motor voltage and current (all lines).

(b) Record the pump speed in rpm.

(c) Record the simultaneous (approximately) readings of pump suction and discharge pressures and pump discharge flow.

9. Revise 8.3.3.9(3) to read as follows:

8.3.3.9 For installations having an automatic transfer switch, the following test shall be performed to ensure that the overcurrent protective devices (i.e., fuses or circuit breakers) do not open:

(3) While the pump is operating at peak load and alternate power, record the following to ~~voltage, amperage, rpm, suction pressure, discharge pressure, and flow rate and~~ include in the pump test results:

(a) The voltage where an external means is provided on the controller

(b) The amperage where an external means is provided on the controller

(c) The rpm

(d) Suction pressure

(e) Discharge pressure

10. Revise 8.3.3.10.1 and add new Annex A material to read as follows:

8.3.3.10.1* Alarm conditions that require the controller to be opened in order to create or simulate the condition shall be tested by qualified personnel wearing appropriate protective equipment. Alarm sensors located within electric motor–driven fire pump controllers that cannot be accessed without opening an energized electric motor–driven fire pump controller shall be tested at an alternative location outside of the controller.

A.8.3.3.10.1 Testing at an alternative location can include completion of a test at an external fire alarm monitor module used to monitor the sensors within the fire pump controller.

11. Revise 8.3.3.11 and associated Annex A material to read as follows:

8.3.3.11* Safety.

8.3.3.11.1 Section 4.9 shall be followed for safety requirements while working near electric motor–driven fire pumps.

8.3.3.11.2 At a minimum, the provisions of NFPA 70E shall be applied.

A.8.3.3.11 See ~~also NFPA 70E for additional safety guidance~~ A.4.9.6.

12. Revise 8.3.7.2.5 through 8.3.7.2.9 to read as follows:

8.3.7.2.5 For electric motor–driven fire pumps operating at constant speed with an external means for reading the voltage and amperage on the controller, the current at each flow rate test point and at each phase shall not exceed the product of the electric motor service factor and the full-load amperage rating of the motor.

8.3.7.2.6 Where the measured current at each flow rate test point and at each phase exceeds the product of the electric motor service factor and the full-load amperage rating of the motor, the source of the problem shall be identified and corrected.

8.3.7.2.7 For electric motor–driven fire pumps operating at varying voltage with an external means for reading the voltage and amperage on the controller, the product of the test voltage and the current at each test point and on each phase shall not exceed the product of the voltage and the full-load current times the motor service factor.

8.3.7.2.8 Where the product of the measured test voltage and the measured current at each test point and at each phase exceeds the product of the voltage and the full-load current times the motor service factor, the source of the problem shall be identified and corrected.

8.3.7.2.9 Where measured, v~~V~~oltage readings at the motor within 5 percent below or 10 percent above the rated (i.e., nameplate) voltage shall be considered acceptable

Substantiation:

Item 2: The proposed change to the body of the standard sets a minimum requirement to utilize the provisions of NFPA 70E as a baseline for protective measures required when working on electric controllers for motor-driven fire pumps. The additional language added to the Annex provides reinforcing directive that every electric motor-driven fire pump controller installation is different and that the calculation of incident energy, the resultant labeling and the required PPE for such will be different for each.

Item 3: The proposed changes to the body of the standard provides exception to requirements to activities that require access to an energized electric fire pump controller based on safety concerns with completing such. Additionally, Section 8.1.1.2.12 was correct to match the required annual frequency as included in Table 8.1.1.2.

Item 4: The referenced sections of the Table have been corrected as needed and additional references added for completeness.

Item 5: The provisions of the recommended Table have been modified to eliminate requirements to tighten electrical connections and check accuracy of voltmeters/ammeters installed on electric fire pump controllers.

Items 6: The proposed change limits the need to take voltage and amperage readings to those conditions where the readings can be taken without opening the electric fire pump controller. Additionally, reading on the event log are limited to conditions where such work can be completed without opening and energized electric fire pump controller.

Item 7: With the removal of a requirement to take voltage and amperage readings as included in this TIA, the need for the use of calibrated equipment is eliminated.

Items 8: The proposed change limits the need to take voltage and amperage readings to those conditions where the readings can be taken without opening the electric fire pump controller. Additionally, reading on the event log are limited to conditions where such work can be completed without opening and energized electric fire pump controller.

Item 9: The proposed change limits the taking of voltage and amperage readings to those conditions where an external means is provided on the electric fire pump controller.

Item 10: The change provides that the alarm sensors that require access to an energized electric fire pump controller are to be checked at an alternate location outside the controller.

Item 11: The proposed change to the body of the standard sets a minimum requirement to utilize the provisions of NFPA 70E as a baseline for protective measures required when working on electric controllers for motor-driven fire pumps. The additional language added to the Annex A.4.9.6 provides reinforcing directive that every electric motor-driven fire pump controller installation is different and that the calculation of incident energy, the resultant labeling and the required PPE for such will be different for each and is referenced here for clarity.

Item 12: Language is added to indicate that voltage and amperage readings are only taken where an external means is provided on the electric fire pump controller to take such readings and that the evaluation of such readings is only required where conditions allow them to be taken

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

See attached Electric Fire Pump Controller Arc Flash Hazard White Paper

NFPA 30A - 2018 Edition
Code for Motor Fuel Dispensing Facilities and Repair Garages
TIA Log No.: 1295
Reference: 14.2.4 and 14.2.6
Comment Closing Date: October 19, 2017
Submitter: Scott Hempy, Filld, Inc.
www.nfpa.org/30A

1. Revise 14.2.4 to read as follows:

14.2.4 Mobile fueling shall not take place within 7.6 m (25 ft) of buildings, property lines, or combustible storage. For vehicles complying with 14.3.1(2) or (3), mobile fueling shall not take place within 3.1 m (10 ft) of buildings, property lines, or

combustible storage. The authority having jurisdiction is authorized to decrease separation distances for mobile fueling from metal safety cans.

2. *Revise 14.2.6 to read as follows:*

14.2.6 Mobile fueling and delivery vehicle parking shall be prohibited in buildings, in covered parking structures, on public streets, and on public ways. With the approval of the authority having jurisdiction, vehicles complying with 14.3.1(2) or (3) shall be permitted to conduct mobile fueling operations on public streets or public ways if members of the public are not present and the mobile fueling vehicle does not block or otherwise interfere with vehicle traffic.

Substantiation: 14.2.4 The recently adopted setback distances from property lines and buildings provided in Section 14.2.4 of NFPA 30A do not differentiate setback requirements based on mobile fueling vehicle tank size and the setback distances are also somewhat contradictory with requirements that currently exist in this and other codes. In the recently added Chapter 14 of NFPA 30A mobile fueling vehicles meeting the definition of Section 14.3.1(b) and having tanks that do not exceed 110 gallons are subject to the same setback requirements as 1200 gallon tank vehicles that meet the definition of Section 14.3.1(a). Other codes, such as NFPA 30, provide setback requirements for fuel storage tanks that differentiate based on tank size. In addition, permissible locations for motor fuel dispensing devices are provided in the International Fire Code (IFC) and NFPA 30A. The requirements for setback distances from 110 gallon fuel tanks and dispensing devices to property lines and buildings provided in these codes range from 5 to 10 feet (except for Section 5706.5.4.5 from the IFC, which specifies a setback of 15 feet from tanks that are larger than 110 gallons), which is less than the current 25 foot setback distance in Section 14.2.4 of NFPA 30A. Specific references from relevant codes are as follows (bold and italic font has been added for emphasis):

International Fire Code.

- Section 2303.1 of the 2015 IFC requires that dispensing devices be located 10 feet or more from lot lines and buildings having combustible exterior wall surfaces or buildings having non-combustible exterior wall surfaces that are not part of a 1-hour fire resistance-rated assembly or buildings having combustible overhangs.
- Table 5705.3.4(1) and Table 5705.3.4(2) of the 2015 IFC require that processing vessels with emergency relief venting and containing of 275 gallons or less of flammable or combustible liquids be located ***five feet from property lines and important buildings.***

Section 5706.5.4.5 of the 2015 IFC permits dispensing of Class II and III fuels from tank vehicles at construction sites as long as it is not within ***15 feet of buildings, property lines, and combustible storage.*** (Filld note - this applies to tank vehicles which are significantly larger than the 110 gallon tanks addressed by this proposed change).

NFPA 30

- Table 22.4.1.1(a) and Table 22.4.1.1(b) of NFPA 30-2015 require that unprotected above ground storage tanks of 275 gallons or less be located ten feet from property lines and five feet from important buildings.

NFPA 30A

- Section 6.2.1 of the NFPA 30A-2015 requires that dispensing devices be located **10 feet or more from property lines and buildings** having combustible exterior wall surfaces or buildings having non-combustible exterior wall surfaces that are not part of a 1-hour fire resistance-rated assembly or buildings having combustible overhangs.

The proposed modification to Section 14.2.4 is consistent with other published requirements for similar storage and dispensing activities and will meet the safety intent of the code in regards to protecting adjacent buildings or properties from fire.

14.2.6 The recently added requirements on mobile fueling on public streets and public ways in Chapter 14.2.6 are motivated by concerns over potential scenarios such as a vehicle collision with a mobile fueling vehicle or the ignition of gasoline vapors from a nearby ignition source. The proposed modification to the requirements for mobile fueling on public streets and public ways will address these concerns by giving the AHJ more authority to authorize mobile fueling operations in areas. This will provide for the public safety while at the same time not severely limiting mobile fueling operations.

Parking mobile fueling vehicles on streets and in the path of traffic will present an increased risk of a motor vehicle collision involving the mobile fueling vehicle. Certain mobile fueling companies are currently in the practice of parking mobile fueling vehicles in parking spaces on public streets while fueling a vehicle that is also parked on the same public street or is parked in a private driveway. If the mobile fueling vehicle does not obstruct the flow of traffic, this practice poses a reduced risk of a vehicle collision and it is recommended that this type of mobile fueling activity be allowed to continue.

The potential for ignition of gasoline vapor will always exist whenever fueling of gasoline vehicles occurs, whether at traditional gas stations or through mobile fueling operations. Potential ignition sources on public streets can include pedestrians smoking cigarettes, hot work activities, open flames, outdoor cooking fires, and barbeques. These types of ignition sources can be identified by mobile fueling operators and?. The potential for ignition can be reduced if fuel is dispensed by trained operators (training is required per section 14.2.3 NFPA 30A-2018) who only perform mobile fueling operations when members of the public are not present and no identifiable ignition sources are present. Mobile fueling operations involving gasoline are currently occurring in many US states with no reported fire incidents to date. In addition, Section 5706.5.4.4 and Section 5706.5.4.5 of the 2015 IFC permit the dispensing of diesel fuel from tank vehicles at construction sites, commercial, industrial, and manufacturing sites, including areas that are publicly accessible but limited to times when the public is not present. Some states have adopted the IFC but modified Section 5706.5.4.5 to allow dispensing of Class 1 fuels, including gasoline. These dispensing operations have been estimated to deliver 500 million gallons of fuel annually with no known adverse fire incident history (2015 IFC Code and Commentary, Section 5706.5.4.5).

The proposed modification to Section 14.2.6 will provide protection against vehicle collisions involving a mobile fueling vehicle and limit the possibility of an ignition event involving gasoline vapors during mobile fueling activities.

Emergency Nature: The proposed TIA intends to correct a circumstance in which the revised NFPA Standard has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process or was without adequate technical (safety) justification for the action.

There are currently multiple companies across multiple states that are engaged in mobile fueling operations. Chapter 14 was introduced into the 2018 edition of NFPA 30A in an attempt to provide some appropriate regulations to an industry that is largely

self-regulated. The requirements outlined in Sections 14.2.4 and 14.2.6 do not have adequate technical justification will result in an adverse impact on this industry. . These requirements will prohibit several companies from providing service to their customers going forward and will cause several mobile fueling companies to be forced to go out of business. The requirements seek to address a potential threat that has not resulted in any adverse fire incidents to date and the proposed requirements are in excess of what is required for similar fueling and storage operations in other relevant codes.

NFPA 1221 - 2016 Edition
Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems
TIA Log No.: 1302
Reference: 9.6.2.1.1.1 and 9.6.2.1.4
Comment Closing Date: October 19, 2017
Submitter: Thomas J. DiBernardo, Davie, FL
www.nfpa.org/1221

1. *Revise 9.6.2.1.1.1 to read as follows:*

   9.6.2.1.1.1 The feeder and riser coaxial cables shall be rated as plenum cables that match the building's fire rating and pathway survivability. ~~[72:24.3.13.8.1.1]~~

2. *Revise 9.6.2.1.4 to read as follows:*

   9.6.2.1.4 The connection between the riser and feeder coaxial cables shall be made within an ~~the 2 hour rated~~ enclosure matching the building's fire rating and pathway survivability, and passage of the feeder cable in and out of the ~~2 hour rated~~ enclosure shall be fire-stopped ~~to 2-hour rating~~ the building's fire rating and pathway survivability. ~~[72:24.3.13.8.4]~~

Substantiation. During the transition of two-way radio enhancement systems from NFPA 72 to NFPA 1221, the text regarding pathway survivability does not apply as the same prior fashion. Therefore, the Technical Committee for 1221 presented clarifying language for the next proposed edition. The technical committee voted in favor of including this change in the 1st draft, and public input was sought. The technical committee believes that this language needs immediate attention until the next edition is to assist AHJs and contractors in understanding the pathway survivability as it pertains to two-way radio enhancement systems.

Emergency Nature. The proposed TIA intends to correct a circumstance in which the revised NFPA Standard has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process or was without adequate technical (safety) justification for the action.

Due to dramatic increase of modern construction to include all weather strength and LEED certification, there is a sharp increase in the use of two-way radio enhancement systems. These systems allow for emergency responders to maintain emergency radio communication. The conflict is with available products and the standard as it pertains to pathway survivability. Radio Frequency (RF) coax and fiber optic cable is not readily available in fire resistive material. Additionally the system themselves are not rated by manufacturers and the pathway survivability is determined by the presence of fire protection systems. Therefore the proposed language allows the materials of the system to match the rating of the building.

NFPA 1006 - 2017 Edition
Standard for Technical Rescue Personnel Professional Qualifications
TIA Log No.: 1303
Reference: 4.2 and 4.2.10(A) and (B)
Comment Closing Date: October 19, 2017
Submitter: Peter M. Schecter, Oakland Park, FL
www.nfpa.org/1006

1. *Revise 4.2 to read as follows:*

   4.2 Operations Level. The job performance requirements defined in Section 5.2, Section 4.1, and 4.2.1 through ~~4.2.10~~ 4.2.11 shall be met prior to operations-level qualification in tower rescue.

2. *Revise 4.2.10(A) and (B) to read as follows:*

   4.2.10 Develop and adhere to contingency plans for when inclement weather or other factors make operations-level response ineffective or dangerous to rescuers, given an incident so that a risk/benefit decision can be made.

   (A) Requisite Knowledge. ~~(Reserved)~~ AHJ policies and procedures, risk versus benefit analysis application, site safety and hazard control techniques, and pre-incident rescue action planning.

   (B) Requisite Skills. ~~(Reserved)~~ Apply policies and protocols, apply risk versus benefit analysis information, apply pre-incident planning data, risk management, and site safety control techniques.

   Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

   Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

NFPA 1006 - 2017 Edition
Standard for Technical Rescue Personnel Professional Qualifications
TIA Log No.: 1304
Reference: 5.3
Comment Closing Date: October 19, 2017
Submitter: Peter M. Schecter, Oakland Park, FL
www.nfpa.org/1006

1. *Revise 5.3 to read as follows:*

   5.3 Technician Level. The job performance requirements defined in Section 5.2 and 5.3.1 through ~~5.3.6~~ 5.3.8 shall be met prior to technician-level qualification in rope rescue.

Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

The existing document contains incorrect references to pre-requisite skills required for technician level rope rescue. The proposed TIA corrects this error and points users to the actual pre-requisites required.

NFPA 1006 - 2017 Edition
Standard for Technical Rescue Personnel Professional Qualifications
TIA Log No.: 1305
Reference: 8.2
Comment Closing Date: October 19, 2017
Submitter: Peter M. Schecter, Oakland Park, FL
www.nfpa.org/1006

1. *Revise 8.2 to read as follows:*

   8.2 Operations Level. The job performance requirements defined in ~~Section 5.2,~~ 5.2.5, 5.2.7, 5.2.9, 5.2.10, 5.2.16, 5.2.18, Section 8.1, and 8.2.1 through 8.2.9 shall be met prior to operations-level qualification in vehicle rescue.

Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product

of the committee. It clarifies the specific rope skills required for vehicle and machinery rescue operations level certification.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

The current published version of NFPA 1006 (2017) incorrectly lists rope skill pre-requisites for Chapter 8. The proposed TIA corrects this error.

NFPA 1006- 2017 Edition
Standard for Technical Rescue Personnel Professional Qualifications
TIA Log No.: 1306
Reference: 10.2 and 10.3
Comment Closing Date: October 19, 2017
Submitter: Peter M. Schecter, Oakland Park, FL
www.nfpa.org/1006

1. *Revise 10.2 to read as follows:*

   10.3 Technician Level. The job performance requirements defined in Section 5.2, ~~9.2~~, Section 10.2, ~~and 15.2,~~ and 10.3.1 through ~~10.3.8~~ 10.3.11 shall be met prior to technician-level qualification in wilderness search and rescue.

Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

The existing document contains incorrect references to pre-requisite skills required for technician level wilderness rescue. The proposed TIA corrects this error and points users to the actual pre-requisites required.

NFPA 1006 - 2017 Edition
Standard for Technical Rescue Personnel Professional Qualifications
TIA Log No.: 1307
Reference: Chapter 14 various sections
Comment Closing Date: October 19, 2017
Submitter: Peter M. Schecter, Oakland Park, FL
www.nfpa.org/1006

1. *Delete the asterisk in 14.2.6 as follows:*

   14.2.6* Establish dewatering operations, given a mine and tunnel collapse incident, dewatering pumps, hose, and appliances, so that water is removed and directed away from the affected area, atmospheric conditions are not affected by the pumping equipment, and there are no power or flow interruptions during the operation.

2. *Renumber A.14.2.6 to read as follows:*

   A.14.2.68 Tunnels under construction and former mines pose unique hazards and challenging working conditions …

3. *Delete A.14.2.8 in its entirety as follows:*

   ~~**A.14.2.8** The technician should have thorough knowledge of the components necessary to assemble an incident action plan (IAP) for the incident. Working under the Incident Commander (IC) or Planning Section Chief, the rescuer must assemble the information that is available from the size-up and anticipate additional needs of the incident.~~

4. *Add the asterisk to 14.2.10 as follows:*

   14.2.10* Enter a mine and tunnel for rescue as a member of a team, given PPE, identified access/egress routes ...

5. *Renumber A.14.2.11 to read as follows:*

   A.14.2.~~11~~10 Many state and federal regulations require teams performing tunnel and mine rescue operations …

6. *Delete the asterisk to 14.2.11 as follows:*

   14.2.11* Determine potential victim locations, given size-up information, witness reports, a mine and tunnel rescue tool kit…

7. *Delete 14.2.14 in its entirety as follows:*

   ~~**14.2.14** Terminate the mine and tunnel rescue incident, given isolation barriers, documentation forms, and a mine and tunnel rescue tool kit, so that all personnel are accounted for and removed from the space; injuries are avoided; further entry into the space is denied; and the scene is secured.~~

   ~~**(A) Requisite Knowledge**. Methods to secure a scene, forms for documentation, tools for securing space access points, accountability protocols, and methods for denying further entry.~~

   ~~**(B) Requisite Skills**. The ability to apply regulations as needed, use tools, complete documentation of the incident, and apply protocols.~~

8. *Renumber 14.2.15 to read as follows:*

   14.2.15~~1~~4* Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers …

9. *Renumber A.14.2.15 to read as follows:*

   A.14.2.~~1~~514 The committee recognizes that technical rescue incidents pose unique challenges in terms of safely concluding …

10. *Add new 14.2.15 and 14.2.16 to read as follows:*

    14.2.15 Identify situations that exceed or violate the conditions that permit entry to perform rescue operations as defined in the site-specific rescue plan, given a mine and tunnel rescue incident, a site-specific rescue plan, and mine and tunnel rescue toolbox.

    (A) Requisite Knowledge. Contents of the site-specific rescue plan, limits of the team, and available resources.

    (B) Requisite Skills. The ability to interpret the rescue plan, assess on-site conditions, and measure factors that impact the implementation of the plan.

    14.2.16 Implement emergency procedures to provide respiratory protection and self-rescue, given a mine and tunnel rescue incident, a device to provide emergency respiratory protection, and conditions that require self-rescue, so that the device is properly donned, respiratory protection is maintained, and emergency egress is accomplished.

    (A) Requisite Knowledge. Conditions requiring egress, conditions requiring donning respiratory protection, methods for implementing emergency egress and donning self-rescue devices.

    (B) Requisite Skills. The ability to recognize conditions that require self-rescue, don an emergency egress self-rescue device, and accomplish self-rescue.

Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

The proposed TIA corrects work product published in the 2017 version of the standard that is not reflective of the committee's final work product. The proposed TIA corrects this discrepancy and clarifies and corrects JPR content and annex materials, so that they properly correspond and include all of the committee final work product that was omitted. These are mission and safety critical corrections that include entire JPR's that were omitted in the editing process.

NFPA 1006 - 2017 Edition
Standard for Technical Rescue Personnel Professional Qualifications
TIA Log No.: 1308
Reference: 17.2 and 17.3
Comment Closing Date: October 19, 2017
Submitter: Peter M. Schecter, Oakland Park, FL
www.nfpa.org/1006

1. Revise 17.2 and 17.3 to read as follows:

17.2 Operations Level. The job performance requirements defined in Section 16.1, 16.2.1 through 16.2.14, Section 17.1, and ~~10.1 10.2.1~~ 17.2.1 through 17.2.5 ~~10.2.5 Section 16.1 and 16.2.1 through 16.2.13~~ shall be met prior to operations-level qualification in swiftwater rescue.

17.3 Technician Level. The job performance requirements defined in 16.3.1 through 16.3.4, Section 17.2, and ~~10.2 10.3.1~~ 17.3.1 through 17.3.3 ~~10.3.3 and 16.3.1 through 16.3.4~~ shall be met prior to technician-level qualification in swiftwater rescue.

Substantiation. This change is being made based on language submitted as final work product that never made it into the 2017 version of the document.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

The proposed TIA corrects errors in the current published version of the document, which incorrectly refers to or identifies pre-requisites for this chapter. The TIA corrects these errors, and points the user to the correct pre-requisite and location.

NFPA 1006 - 2017 Edition
Standard for Technical Rescue Personnel Professional Qualifications
TIA Log No.: 1309
Reference: 22.2
Comment Closing Date: October 19, 2017
Submitter: Peter M. Schecter, Oakland Park, FL
www.nfpa.org/1006

1. Revise 22.2 to read as follows:

22.2* Operations Level. The job performance requirements defined in Sections ~~16.1~~ 16.2, ~~17.1~~, 17.2, and 22.1 and 22.2.1 through 22.2.11 ~~22.2.5~~ shall be met prior to operations-level qualification in floodwater rescue.

Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

The current version of the standard incorrectly identifies and references pre-requisites for this chapter. The proposed TIA corrects this error by referring users to the correct pre-requisites.

NFPA 1126 - 2016 Edition
Standard for the Use of Pyrotechnics Before a Proximate Audience
TIA Log No.: 1317
Reference: 3.3.40 and 3.3.41 (new)
Comment Closing Date: October 19, 2017
Submitter: Joshua Lazarus, J. Lazarus Consulting & Training, LLC
www.nfpa.org/1126

1. Revise 3.3.40 to read as follows:

3.3.40 Pyrotechnic Device. Any device containing pyrotechnic material or pyrotechnic effect simulation equipment and capable of producing a special effect as defined in this standard.

2. Add a new definition to read as follows; and renumber subsequent definitions accordingly:

3.3.41 Pyrotechnic Effect Simulation Equipment. Equipment that uses a chemical mixture, heat source, and the introduction of oxygen to initiate or maintain combustion and is used to produce visible or audible effects by combustion, deflagration, or detonation.

Substantiation. New equipment that produces a column of sparks similar to a gerb are being used in this country and around the world. They are being advertised as producing a "cold spark", which is not true; the discharge from these units is hot. These devices are similar to devices regulated under NFPA 160, with the exception being instead of producing a flame, these devices produce hot sparks that could cause burns or ignite nearby combustibles if proper precautions are not taken. Besides being marketed to industry professionals, they are being sold to catering halls, bars/nightclubs, disc jockeys and other people who are not familiar with the safety requirements of using such a device. In addition, authorities having jurisdiction are not sure how to classify these machines; some treat them like a proximate pyrotechnic device and require full permitting and having a licensed operator present, while other jurisdictions consider them to be non-pyrotechnic and require no permits, separation or licensed operator to be present. As such, there is inconsistent enforcement of safety requirements with these devices. An additional concern being overlooked is that one of components of the fuel source for the device is titanium; which requires a special class of fire extinguishing agent not typically found in most venues. The proposed TIA would address these issues by classifying these machines as a pyrotechnic device, thus allowing for all of the applicable provisions of 1126 to be enforced when these devices are used and minimizing the risk of an accident or injury.

Emergency Nature. The proposed TIA intends to correct a previously unknown existing hazard.

When the current version of 1126 was drafted these devices were not on the market, as such the hazard they currently present was not known to the technical committee at that time. The TIA would provide for the proper use, inspection and operation of these devices ensuring public safety. Waiting to process this during the normal code cycle would allow a hazard to exist and possibly lead to an incident with serious loss of life or property damage.

NFPA 101 - 2016 Edition
Life Safety Code®
TIA Log No.: 1318
Reference: 12.7.14, 13.7.14, 13.7.14.1 and 13.7.14.2 (new)
Comment Closing Date: October 19,333 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. Revise 12.7.14 to read as follows:

12.7.14 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

2. Revise 13.7.14, 13.7.14.1 and 13.7.14.2(new) to read as follows:

13.7.14 Integrated Fire Protection and Life Safety Systems.

13.7.14.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

13.7.14.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.

2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

5. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
6. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
7. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two…

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1319
Reference: 16.3.7
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Revise 16.3.7 to read as follows:

16.3.7 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with ~~Section~~ 55.1.4.2.1~~13~~.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 Standard for Integrated Fire Protection and Life Safety Systems Testing was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101® - 2018 Edition
Life Safety Code®
TIA Log No.: 1320
Reference: 32.7.8(new), 33.7.8(new), 33.7.8.1(new) and 33.7.8.2(new)
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. Add new section 32.7.8 to read as follows:

32.7.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

2. Add new section 33.7.8 and 33.7.8.1 and 33.7.8.2 to read as follows:

33.7.8 Integrated Fire Protection and Life Safety Systems.
33.7.8.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.
33.7.8.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 Standard for Integrated Fire Protection and Life Safety Systems Testing was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.

2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1321
Reference: 26.3.6(new)
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Add new section 26.3.6 to read as follows:

26.3.6 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 Standard for Integrated Fire Protection and Life Safety Systems Testing was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

4. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated

testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.

5. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101® - 2018 Edition
Life Safety Code®
TIA Log No.: 1322
Reference: 9.3.5(new), 9.11.4, A.9.11.4 and A.9.11.4.2 (new)
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. Add new 9.3.5 to read as follows:

9.3.5 Integrated System Testing. Smoke control systems that are integrated with other fire protection or life safety systems shall be tested in accordance with 9.11.4.2.

2. Revise 9.11.4 to read as follows:

9.11.4* Integrated Fire Protection and Life Safety System Tests.

9.11.4.1 Basic Testing. Where required by Chapters 11 through 43, installations involving ~~and where~~ two or more integrated fire protection or life safety systems ~~are integrated, the integrated system~~ shall be tested to verify the proper operation and function of such systems in accordance with 9.11.4.1.1 and 9.11.4.1.2 ~~NFPA 4~~.

9.11.4.1.1 When a fire protection or life safety system is tested, the response of integrated fire protection and life safety systems shall be verified.

9.11.4.1.2 After repair or replacement of equipment, required retesting of integrated systems shall be limited to verifying the response of fire protection or life safety functions initiated by repaired or replaced equipment.

9.11.4.2* NFPA 4 Testing. Where required by 9.3.5 or Chapters 11 through 43, the following integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1 and 9.11.4.2.1 through 9.11.4.2.2:

(1) Integrated fire protection and life safety systems in high-rise buildings

2. Integrated fire protection and life safety systems that include a smoke control system

9.11.4.2.1 For new buildings, integrated testing in accordance with NFPA 4 shall be conducted prior to the issuance of a certificate of occupancy.

9.11.4.2.2 For existing buildings, integrated testing in accordance with NFPA 4 shall be conducted at intervals not exceeding 10 years unless otherwise specified by an integrated system test plan prepared in accordance with NFPA 4.

3. Delete A.9.11.4 and add new A.9.11.4.2 to read as follows:

~~**A.9.11.4** NFPA 4 requires that integrated fire protection and life safety systems be periodically retested as specified in the integrated system test plan. In addition, for existing systems, an integrated system test plan must be developed within 5 years of adoption of NFPA 4~~.

A.9.11.4.2 It is intended that the requirements in 9.11.4.1.2 be applied to retesting of any integrated systems following repair or replacement of equipment in lieu of applying retesting provisions in NFPA 4.

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to

support an alternate path of using TIAs to repair issues with the code text instead of deleting it

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1323
Reference: 55.1.4.2(new), 55.7.3
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Replace 55.1.4.2 and associated Annex A material with new 55.1.4.2 and new associated Annex A material to read as follows:

~~**55.1.4.2 Integrated Testing**~~

~~Where required by another section of this Code, and where two or more fire protection or life safety systems are integrated the integrated system shall be tested to verify the proper operation and function of such systems in accordance with NFPA 4.~~

~~**A.55.1.4.2**~~

~~NFPA 4 requires that integrated fire protection and life safety systems be periodically retested as specified in the integrated system test plan. In addition, for existing systems, an integrated system test plan must be developed within 5 years of adoption of NFPA 4.~~

55.1.4.2 Integrated Fire Protection and Life Safety System Tests.

55.1.4.2.1 Basic Testing. Where required by Chapters 16 through 34, installations involving two or more integrated fire protection or life safety systems shall be tested to verify the proper operation and function of such systems in accordance with 55.1.4.2.1.1 and 55.1.4.2.1.2.

55.1.4.2.1.1 When a fire protection or life safety system is tested, the response of integrated fire protection and life safety systems shall be verified

55.1.4.2.1.2 After repair or replacement of equipment, required retesting of integrated systems shall be limited to verifying the response of fire protection or life safety functions initiated by repaired or replaced equipment.

55.1.4.2.2* NFPA 4 Testing. Where required by 33.3.9 or 55.7.3.2, the following integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1 and NFPA 4 prior to the issuance of a certificate of occupancy:

(1) Integrated fire protection and life safety systems in high-rise buildings

(2) Integrated fire protection and life safety systems that include a smoke control system

A.55.1.4.2.2 It is intended that the requirements in 55.1.4.2.1.2 be applied to retesting of any integrated systems following repair or replacement of equipment in lieu of applying retesting provisions in NFPA 4.

2. Revise 55.7.3 to read as follows:

55.7.3 Acceptance Testing.

55.7.3.1 Acceptance testing shall be performed by a special inspector in accordance with Section 55.12.

55.7.3.2 Smoke control systems that are integrated with other fire protection or life safety systems shall be tested in accordance with 55.1.4.2.2.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 S*tandard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101® - 2018 Edition
Life Safety Code®
TIA Log No.: 1324

Reference: 22.7.8, 23.7.8
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. *Revise 22.7.8 to read as follows:*

   22.7.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

2. *Revise 23.7.8 to read as follows:*

   23.7.8 Integrated Fire Protection and Life Safety Systems.

   23.7.8.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

   23.7.8.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 Standard for Integrated Fire Protection and Life Safety Systems Testing was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system

interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1325
Reference: 21.3.9
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000
1. Revise 21.3.9 to read as follows:

21.3.9 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system

interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101® - 2018 Edition
Life Safety Code®
TIA Log No.: 1326
Reference: 14.7.6, 15.7.6(new), 16.7.6 and 17.7.6(new)
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. Revise 14.7.6 to read as follows:

14.7.6 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

2. Add a new 15.7.6 to read as follows:

15.7.6 Integrated Fire Protection and Life Safety Systems.
15.7.6.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.
15.7.6.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

3. Revise 16.7.6 to read as follows:

16.7.6 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

4. Add a new 17.7.6 to read as follows:

17.7.6 Integrated Fire Protection and Life Safety Systems.
17.7.6.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.
17.7.6.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen

a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1327
Reference: 17.3.8 and 18.3.8
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Revise 17.3.8 to read as follows:

17.3.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

2. Revise 18.3.8 to read as follows:

18.3.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of

the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101® - 2018 Edition
Life Safety Code®
TIA Log No.: 1328
Reference: 11.8.9
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. Revise 11.8.9 to read as follows:

11.8.9 Integrated Fire Protection and Life Safety System Testing.

~~**11.8.9.1** For high-rise buildings, integrated fire protection and life safety system testing shall be in accordance with 9.11.4.2.~~

~~**11.8.9.2** The integrated fire protection and life safety system test shall be performed prior to issuance of a certificate of occupancy and at intervals not exceeding 10 years, unless otherwise specified by the integrated system test plan in accordance with NFPA 4.~~

~~**11.8.9.3** Where an equipment failure is detected during integrated testing, either a full integrated test shall be executed following the repair or replacement of equipment, or a limited integrated test(s) shall be executed to address only that equipment which was either repaired or replaced.~~

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1329
Reference: 33.3.9
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Add new 33.3.9 to read as follows:

33.3.9 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life systems shall be tested in accordance with 55.1.4.2.2.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101®- 2018 Edition
Life Safety Code®
TIA Log No.: 1330
Reference: 18.7.10, 19.7.10, 20.7.10 and 21.7.109
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. *Revise 18.7.10 to read as follows:*

   18.7.10 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

2. *Revise 19.7.10 to read as follows:*

   19.7.10 Integrated Fire Protection and Life Safety Systems.
   19.7.10.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.
   19.7.10.2 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.2.

3. *Revise 20.7.10 to read as follows:*

   20.7.10 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1

4. *Revise 21.7.10 to read as follows:*

   21.7.10 Integrated Fire Protection and Life Safety Systems.
   21.7.10.1 Integrated fire protection and life safety systems ~~in existing high-rise buildings~~ shall be tested in accordance with 9.11.4.1.
   21.7.10.2 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.2.

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team

and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1331
Reference: 19.3.4.6 and 20.3.4.5
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Revise 19.3.4.6 to read as follows:

19.3.4.6 Integrated Fire Protection and Life Safety Systems. The commissioning of ~~i~~Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

2. Revise 20.3.4.5 to read as follows:

20.3.4.5 Integrated Fire Protection and Life Safety Systems. ~~The commissioning of i~~Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101® - 2018 Edition
Life Safety Code®
TIA Log No.: 1332
Reference: 40.7.4 and 42.9.4
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. Revise 40.7.4 to read as follows:

40.7.4 Integrated Fire Protection and Life Safety Systems.
40.7.4.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.
40.7.4.2 Integrated fie protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously

established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1333
Reference: 29.3.7, 30.3.7 and 34.2.7(new)
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Revise 29.3.7 to read as follows:

29.3.7 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

2. Revise 30.3.7 to read as follows:

30.3.7 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

3. Add new 34.2.7 to read as follows:

34.2.7 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101® - 2018 Edition
Life Safety Code®
TIA Log No.: 1334
Reference: 36.7.8, 37.7.8, 38.7.8(new) 39.7.8 and 39.4.2.4
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. *Revise 36.7.8 to read as follows:*

   36.7.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

2. *Revise 37.7.8 to read as follows:*

   37.7.8 Integrated Fire Protection and Life Safety Systems.
   37.7.8.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.
   37.7.8.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

3. *Add new 38.7.8 to read as follows:*

   38.7.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

4. *Revise 39.7.8 to read as follows:*

   39.7.8 Integrated Fire Protection and Life Safety Systems.

   39.7.8.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

   39.7.8.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

5. *Delete 39.4.2.4 in its entirety as follows:*

   39.4.2.4 High-rise buildings shall comply with 11.8.9 for integrated fire protection and life safety system testing.

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 Standard for Integrated Fire Protection and Life Safety Systems Testing was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify

cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.

2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000®- 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1335
Reference: 27.3.8 and 28.3.8
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Revise 27.3.8 to read as follows:

27.3.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

2. Revise 28.3.8 to read as follows:

28.3.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some

occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.

2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 101® - 2018 Edition
Life Safety Code®
TIA Log No.: 1336
Reference: 26.7.2(new), 28.7.8, 29.7.8(new), 30.7.4 and 31.7.4(new)
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/101

1. Add new 26.7.2 to read as follows:

26.7.2 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

2. Revise 28.7.8 to read as follows:

28.7.8 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

3. Add new 29.7.8 to read as follows:

29.7.8 Integrated Fire Protection and Life Safety Systems.
29.7.8.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.
29.7.8.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

4. Revise 30.7.4 to read as follows:

30.7.4 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems ~~in high rise buildings~~ shall be tested in accordance with 9.11.4.1.

5. Add new 31.7.4 to read as follows:

31.7.4 Integrated Fire Protection and Life Safety Systems.
31.7.4.1 Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.
31.7.4.2 Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

Substantiation. Often, in order for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all of the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new and existing buildings with

smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 9.

2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new and existing high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 11. However, existing high-rise buildings had to be individually addressed in existing occupancy chapters since there is no central location in the codes where regulations are established for existing high-rise buildings.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4. However, such other buildings and occupancies WILL be required to comply with a simple, prescriptive requirement ensuring that cause-effect relationships of integrated systems are verified when testing is conducted.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 (Chapters 15, 17, 29, 31, 32, 33, 38 and 39) omitted references to Chapter 9 for integrated testing and others did not, NFPA 101 and 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 9 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 9 reference for integrated testing did so for the purpose of rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others conveys that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 9. However, some technical committees reportedly rejected referencing Chapter 9 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 5000® - 2018 Edition
Building Construction and Safety Code®
TIA Log No.: 1337
Reference: 23.6(new), 24.5.5 and 25.5.5
Comment Closing Date: October 19, 2017
Submitter: Jason Webb, Automatic Fire Alarm Association
www.nfpa.org/5000

1. Add new 23.6 to read as follows:

23.6 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

2. Revise 24.5.5 to read as follows:

24.5.5 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems shall be tested in accordance with 55.1.4.2.1.

3. Revise 25.5.5 to read as follows:

25.5.5 Integrated Fire Protection and Life Safety Systems. Integrated fire protection and life safety systems ~~in high-rise buildings~~ shall be tested in accordance with 55.1.4.2.1.

Substantiation. Often, for fire and life safety objectives to be met, interdependence on two or more fire protection and life safety systems is required. When that occurs, there is a fundamental expectation for integrated features to remain functional. Common sense has always dictated a need to verify the response of integrated features when individual systems are tested, but standards historically lacked guidance for such testing.

To fill that gap, NFPA 4 *Standard for Integrated Fire Protection and Life Safety Systems Testing* was developed and published in 2015 as an outgrowth of recommended practices that were previously established by NFPA 3. As a new standard that was derived from a recommended practice, the requirements of NFPA 4 have not yet been widely adopted and remain somewhat untested.

Nevertheless, in the just-completed cycle for the 2018 editions of NFPA 101 and NFPA 5000, NFPA 4 was proposed for adoption by reference in nearly all occupancy chapters with inconsistent results that can be attributed to at least two factors:

1. The content of NFPA 4 was not consistently and adequately explained to all the NFPA 101 and NFPA 5000 technical committees that were asked to review these proposals and comments.
2. The "one size fits all" approach to integrated testing currently used by NFPA 4 is well suited for complex systems, but it is unnecessarily burdensome for testing of simple integrations, such as a sprinkler waterflow switch connecting to a fire alarm system for alarm initiation and monitoring. For example, NFPA 4 always requires an integrated test team and development of an integrated test plan that is carried out by an integrated test team, unless waived by the AHJ. It is understandable that some technical committees viewed mandatory references to NFPA 4 as excessive and rejected proposals that would have mandated compliance.

As the 2018 editions of NFPA 101 and NFPA 5000 currently stand, some occupancy chapters broadly reference NFPA 4 for all integrated systems. Others contain no reference to NFPA 4 at all, and still others reference NFPA 4 but modify how it is to be applied. These inconsistencies will lead to confusion among code users and

code enforcers and could result in unsafe conditions. For example, omission of requirements for integrated testing in some 2018 edition chapters will essentially convey that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of making sure that even simple integrations must be tested to verify cause-effect functionality.

To deal with this issue, multiple NITMAMs to delete all references to integrated testing requirements and NFPA 4 were submitted and certified for consideration at the annual conference in Boston. However, rather than advancing these motions, the proponents agreed to support an alternate path of using TIAs to repair issues with the code text instead of deleting it.

The TIAs are the result of a collaborative effort that included fire alarm and fire sprinkler industry participation, among others. The approach in NFPA 5000 can be summarized as follows:

1. Because of the complex interaction of systems needed to accomplish smoke control, new buildings with smoke control systems will be required to comply with NFPA 4. This is entirely handled in Chapter 55.
2. Because of the complex interaction of systems needed to accomplish safety objectives in high-rise buildings, new high-rise buildings will be required to comply with NFPA 4. Note that new high-rise buildings are handled by Chapter 33.
3. All other buildings and occupancies WILL NOT be required to follow NFPA 4.

It is important to note that the approach suggested by this TIA correlates with code provisions that were adopted in the 2018 edition of the International Fire Code. Therefore, acceptance of this TIA will ensure that provisions in the 2018 editions of NFPA and ICC codes will be consistent with respect to integrated test requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

Although it is only necessary to satisfy one of the six possible TIA emergency nature criteria, this TIA satisfies two.

1. The standard contains an error or an omission that was overlooked during the regular revision process. Because some occupancy chapters in the 2018 omitted references to Chapter 55 for integrated testing and others did not, NFPA 5000 will essentially be conveying that it is unnecessary to test ANY integrated functions in new or existing occupancies regulated by the chapters that do not contain such a requirement. This undermines the traditional common-sense minimum of ensuring that simple integrations must be tested to verify cause-effect functionality. Although each technical committee is certainly authorized to oversee requirements for occupancies under its authority, it was probably unrecognized or overlooked that omitting a reference to Chapter 55 in some chapters, when such references appear in other chapters, conveys a message that testing of integrated features can be entirely ignored in some cases. Rather, it is believed that committees that chose to reject inclusion of a Chapter 55 reference for integrated testing did so for rejecting NFPA 4, not basic common-sense tests to verify functionality of connected systems.
2. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. It is essential to safety for fire protection and life safety systems, including integrated features, to function as designed. Should system interactions fail, dangerous conditions can certainly result. As indicated in Item 1 above, the inclusion of integrated test requirements for some occupancies but not others convey that integrated testing is NEVER required in occupancies that don't include a reference to Chapter 55. However, some technical committees reportedly rejected referencing Chapter 55 for integrated testing because of the connection to NFPA 4, not because they opposed the concept of verifying basic functionality of integrated features. The proposed TIA resolves this issue by establishing a minimum requirement for ensuring basic functionality of integrated features and only referencing NFPA 4 for complex systems associated with high-rise buildings and buildings with smoke-control systems.

NFPA 407- 2017 Edition
Standard for Aircraft Fuel Servicing
TIA Log No.: 1339
Reference: 5.1.10, 6.1.10.1, 6.1.10.2, 8.1.10.1 and 8.1.10.2
Comment Closing Date: October 19, 2017
Submitter: J.R. Nerat, Badger/Kidde Fire Protection
www.nfpa.org/407

1. *Revise 5.1.10 to read as follows:*

   5.1.10 Fire Protection. At least one fire extinguisher, with a minimum rating of ~~80~~ 40-B:C, and a minimum capacity of 9.0 kg (20 lb) of dry chemical agent shall be provided at each fueling vehicle loading position or rack.

2. *Revise 6.1.10.1 and 6.1.10.2 to read as follows:*

   6.1.10 Fire Protection.
   6.1.10.1 Each aircraft fuel servicing tank vehicle shall have two listed fire extinguishers, each having a rating of at least of ~~80~~ 40-B:C and a minimum capacity of 9.0 kg (20 lb) of dry chemical agent, with one extinguisher mounted on each side of the vehicle.
   6.1.10.2 One listed fire extinguisher having a rating of at least ~~80~~ 40-B:C and a minimum capacity of 9.0 kg (20 lb) of dry chemical agent shall be installed on each hydrant fuel servicing vehicle or cart.

3. *Revise 8.1.10.1 and 8.1.10.2 to read as follows:*

   8.1.10 Fire Protection.

   8.1.10.1 Each facility shall have a minimum of one fire extinguisher with a rating of at least ~~80~~ 40-B:C and a minimum capacity of 9.0 kg (20 lb) of dry chemical agent located at the dispenser.

   8.1.10.2 At least one fire extinguisher with a rating of at least ~~80~~ 40-B:C and a minimum capacity of 9.0 kg (20 lb) of dry chemical agent shall be provided at each emergency fuel shutoff control.

Substantiation. The recent 2017 editions minimum numerical extinguisher rating change from 20B to 80B is currently generating the replacement of existing fire extinguisher models installed at airport sites from 20 pound to 30 pound sizes to comply with NFPA-10 requirements. Because I don't believe this was the intent of the technical committee, have respectfully submitted a TIA to help avoid the unnecessary/costly replacement of many suitable 20 pound fire extinguisher models and mounting brackets from airport fueling applications.

Since 2007 the NFPA-10 portable fire extinguisher standard has specifically required the use of dry chemical fire extinguisher models having minimum agent discharge rates of at least 1 pound per second for properly addressing potential class "B" Obstacle, 3-Dimensional and Pressure fire situations. *(Reference section 5.5)* These are

the specific types of anticipated class "B" fire situations typically presented during aircraft fueling releases. Other NFPA standards addressing similar fire hazard concerns such as NFPA-385 *(Transportation of Flammable and Combustible Liquids)* and NFPA-410 *(Aircraft Maintenance)* specifically also identify and require similar types and sizes of hand portable fire extinguisher models.

Because each class "B" numerical fire rating has a minimum pre-established discharge time, the agent discharge rates from fire extinguishers are often significantly reduced to extended durations and obtain those higher ratings. This is why the "High-Flow" discharge models specifically designated for addressing special class "B" fire hazard situations, commonly carry reduced numerical ratings. Prior to 2007, the NFPA-10 standard simply stated that the class "B" fire extinguisher rating system was not applicable for properly addressing such fire situations and that the equipment manufacturers should be consulted. Other industry standards attempting to establish proper minimum hazard protection needs back then, simply identified minimum extinguisher sizes with lower ratings. The technical committee should note, that most of the large airport flight line wheeled fire extinguisher models having minimum 125 pound agent capacities currently only require and carry 80B ratings for this reason.

While there are number of ways the technical committee could address the current compliance issue, believe the quickest resolution is with a TIA that simply reduces the existing minimum 80B rating requirement to a minimum 40B rating and clarifies the minimum acceptable extinguisher size. This would continue to permit most existing minimum 20 pound dry chemical extinguishers to remain in service, as various models with lower ratings and agent flow rates exceeding 1 pound per second have commonly been installed and utilized at airport fueling sites for over 30 years.

Also attached is additional information for anyone who may want to see and better understand the various existing extinguisher hardware/rating limitations associated with NFPA 10 requirements.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The NFPA Standard contains a conflict within the NFPA Standard or within another NFPA Standard. The proposed TIA intends to correct a circumstance in which the revised NFPA Standard has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process or was without adequate technical (safety) justification for the action.

The recent numerical fire extinguisher rating changes within the 2017 edition is currently requiring the replacement of most equipment installed and utilized at airports around the world, to comply with NFPA-10 requirements for the proper protection of special class "B" hazard situations. The existing 20 pound fire extinguisher models would all need to be replaced with much larger 30 pound models for compliance. The proposed TIA language resolves compliance issues and clarifies the desired hazard coverage objectives previously established and utilized for many years.

NFPA 1982 - 2018 Edition
Standard on Personal Alert Safety Systems (PASS)
TIA Log No.: 1340
Reference: 4.3.14(new) and 4.3.14.1(new)
Comment Closing Date: October 19, 2017
Submitter: Steven Weinstein, Honeywell Safety Products
www.nfpa.org/1982

1. Add new 4.3.14 and 4.3.14.1 to read as follows:

4.3.14 Where a PASS submitted for certification to this standard is also submitted with an accessory that is built into or attached to the PASS, or sold for later attachment to the PASS, and an NFPA standard exists for the product performance associated with the accessory, the accessory shall be certified to the standard associated with the accessory.

4.3.14.1 In all cases, such accessories shall not degrade the performance of the PASS.

Substantiation. This TIA closes a loophole that has existed for decades in NFPA product performance standards. This loophole has threatened and continues to threaten the effectiveness of NFPA standards by providing a pathway to circumvent the minimum product performance requirements developed by consensus. TIAs are being proposed at this time for NFPA 1981 and NFPA 1982, but the logic behind the TIAs should apply to all NFPA product performance standards where accessory integration exists or potentially exists.

There are NFPA standards for SCBAs (NFPA 1981 and NFPA 1986), PASS devices (NFPA 1982), thermal imagers (NFPA 1801) and ladder and escape belts (NFPA 1983). The Technical Committees responsible for developing these standards spent many days researching, analyzing, discussing and debating the issues associated with those products, ultimately agreeing on what constitutes the minimum requirements necessary to meet the fire service's needs for safety and performance. As with all NFPA standards, these standards went through a process of public input and public comment before being published by the NFPA. Once published, the standards represent what the fire service wants and needs, at a minimum, from SCBAs, PASS devices, thermal imagers and ladder/escape belts. Performance less than the minimum is not considered acceptable for use by emergency services. While it is certainly possible for manufacturers to design and produce products that fall below the required NFPA performance levels, such products would not be able to be certified as compliant with their respective NFPA standards.

One would then think that a product's status should be very simple. It either meets the performance requirements of an NFPA standard or it does not, and thus is either certified or not. Unfortunately, one would be wrong in thinking so. All a manufacturer has to do is integrate Product A that does not meet the performance requirements of its associated NFPA standard into Product B that does meet the performance requirements of Product B's associated standard, and one has effectively skirted Product A's NFPA standard. Product B is now certified as compliant to Product B's associated NFPA standard incorporating an integrated Product A that is non-NFPA-compliant.

Why is this important? It goes to the heart of the NFPA standards-writing process. Let's take thermal imagers as an example. Why invest a lot of time and money into developing minimum performance requirements for thermal imagers if all a manufacturer has to do is slap one that falls short of those requirements on an NFPA-compliant SCBA, call it an "SCBA accessory" instead of a "thermal imager," and still be able to market the SCBA as being NFPA-compliant? If a fire department wants to purchase a non-NFPA-compliant product, that is certainly their prerogative. But if a fire department wants to purchase an NFPA-compliant product, such as an SCBA, then they should have the expectation that all of that product is NFPA-compliant with all associated NFPA standards.

The same reasoning applies to PASS devices and escape belts. While it is true that all SCBA-integrated PASS devices that are currently being offered have been certified as compliant to NFPA 1982, there is no language in NFPA 1981 requiring that. An SCBA manufacturer that also manufactures PASS devices could develop a "budget" version that perhaps isn't as loud, or utilizes a different sound pattern, or has a different frequency range—all to save manufacturing cost and lower the selling price—and there is nothing in NFPA 1981 to prevent them from getting that substandard, non-NFPA-compliant PASS device certified as an accessory in an NFPA-compliant SCBA.

"This isn't really a PASS device," the SCBA/PASS manufacturer says. "It's an SCBA accessory. It's just another useful tool for the firefighter to use. Why would anyone not want to give a firefighter all the tools possible? Not everyone wants to spend the money to get a real PASS device, so we're offering them a quasi-PASS device that almost does what a PASS device does."

Virtually everyone would agree that this is completely unacceptable, but it could happen today without the proposed TIA.

One could create the same scenario with SCBA-integrated ladder and escape belts. "So what if this SCBA-integrated ladder belt doesn't meet NFPA 1983?" the SCBA manufacturer says. "It's better than nothing. It's just another tool in the firefighter's arsenal." Once again, the firefighter is getting an NFPA-compliant SCBA with a substandard, non-NFPA-compliant integrated accessory—this time a ladder belt.

So what we're hypothetically hearing is:

> "This is just another tool for them to use."
>
> "Requiring this accessory to meet NFPA performance requirements is overkill. Firefighters don't need all that."
>
> "We're giving them what they want."
>
> "It's not really a thermal imager / PASS device / escape belt. It just looks and acts like one."
>
> "OK, so it doesn't meet NFPA performance requirements … but it's close."

Such dubious logic used by manufacturers to rationalize the integration of non-NFPA-compliant accessories for which NFPA standards exist undermines the entire NFPA standards development process. If an NFPA standard has minimum performance requirements, the intention should be that those minimum performance requirements apply to the product regardless of whether it is marketed as a standalone device or as part of another NFPA-compliant product. Accessory non-compliance with its associated NFPA standard should not be acceptable and should preclude NFPA compliance certification of the parent product.

The proposed TIA accomplishes such preclusion. It also sets a precedent for the future integration of other devices that either already have or will eventually have their own NFPA product performance standards.

Note: This TIA is co-submitted and endorsed by Robert J. Athanas, FDNY/SAFE-IR Incorporated (Chair of the TC on Electronic Safety Equipment), and it is endorsed by William E. Haskell, III, National Institute for Occupational Safety & Health (Chair of the Correlating Committee on Fire and Emergency Services Protective Clothing and Equipment).

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangers condition or situation.

Every day that passes without this TIA in place is a day where substandard, non-NFPA-compliant accessories could be certified, shipped and used in a certified NFPA-compliant product without affecting that parent product's certification, even though NFPA standards do exist for such accessories. The door must be closed immediately to stop this abuse of the NFPA process and subversion of the NFPA's mission.

NFPA 1981 - 2018 Edition
Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services
TIA Log No.: 1341
Reference: 4.3.23.1(new) and 4.3.23.1.1(new)

Comment Closing Date: October 19, 2017
Submitter: Steven Weinstein, Honeywell Safety Products
www.nfpa.org/1981

1. Add new 4.3 23.1 and 4.3.23.1.1 to read as follows:

4.3.23.1 Where an SCBA submitted for certification to this standard is also submitted with an accessory that is built into or attached to the SCBA, or sold for later attachment to the SCBA, and an NFPA standard exists for the product performance associated with the accessory, the accessory shall be certified to the standard associated with the accessory.

4.3.23.1.1 In all cases, such accessories shall not degrade the performance of the SCBA.

Substantiation. This TIA closes a loophole that has existed for decades in NFPA product performance standards. This loophole has threatened and continues to threaten the effectiveness of NFPA standards by providing a pathway to circumvent the minimum product performance requirements developed by consensus. TIAs are being proposed at this time for NFPA 1981 and NFPA 1982, but the logic behind the TIAs should apply to all NFPA product performance standards where accessory integration exists or potentially exists.

There are NFPA standards for SCBAs (NFPA 1981 and NFPA 1986), PASS devices (NFPA 1982), thermal imagers (NFPA 1801) and ladder and escape belts (NFPA 1983). The Technical Committees responsible for developing these standards spent many days researching, analyzing, discussing and debating the issues associated with those products, ultimately agreeing on what constitutes the minimum requirements necessary to meet the fire service's needs for safety and performance. As with all NFPA standards, these standards went through a process of public input and public comment before being published by the NFPA. Once published, the standards represent what the fire service wants and needs, at a minimum, from SCBAs, PASS devices, thermal imagers and ladder/escape belts. Performance less than the minimum is not considered acceptable for use by emergency services. While it is certainly possible for manufacturers to design and produce products that fall below the required NFPA performance levels, such products would not be able to be certified as compliant with their respective NFPA standards.

One would then think that a product's status should be very simple. It either meets the performance requirements of an NFPA standard or it does not, and thus is either certified or not. Unfortunately, one would be wrong in thinking so. All a manufacturer has to do is integrate Product A that does not meet the performance requirements of its associated NFPA standard into Product B that does meet the performance requirements of Product B's associated standard, and one has effectively skirted Product A's NFPA standard. Product B is now certified as compliant to Product B's associated NFPA standard incorporating an integrated Product A that is non-NFPA-compliant.

Why is this important? It goes to the heart of the NFPA standards-writing process. Let's take thermal imagers as an example. Why invest a lot of time and money into developing minimum performance requirements for thermal imagers if all a manufacturer has to do is slap one that falls short of those requirements on an NFPA-compliant SCBA, call it an "SCBA accessory" instead of a "thermal imager," and still be able to market the SCBA as being NFPA-compliant? If a fire department wants to purchase a non-NFPA-compliant product, that is certainly their prerogative. But if a fire department wants to purchase an NFPA-compliant product, such as an SCBA, then they should have the expectation that all of that product is NFPA-compliant with all associated NFPA standards.

The same reasoning applies to PASS devices and escape belts. While it is true that all SCBA-integrated PASS devices that are currently being offered have been certified as compliant to NFPA 1982, there

is no language in NFPA 1981 requiring that. An SCBA manufacturer that also manufactures PASS devices could develop a "budget" version that perhaps isn't as loud, or utilizes a different sound pattern, or has a different frequency range—all to save manufacturing cost and lower the selling price—and there is nothing in NFPA 1981 to prevent them from getting that substandard, non-NFPA-compliant PASS device certified as an accessory in an NFPA-compliant SCBA.

"This isn't really a PASS device," the SCBA/PASS manufacturer says. "It's an SCBA accessory. It's just another useful tool for the firefighter to use. Why would anyone not want to give a firefighter all the tools possible? Not everyone wants to spend the money to get a real PASS device, so we're offering them a quasi-PASS device that almost does what a PASS device does."

Virtually everyone would agree that this is completely unacceptable, but it could happen today without the proposed TIA.

One could create the same scenario with SCBA-integrated ladder and escape belts. "So what if this SCBA-integrated ladder belt doesn't meet NFPA 1983?" the SCBA manufacturer says. "It's better than nothing. It's just another tool in the firefighter's arsenal." Once again, the firefighter is getting an NFPA-compliant SCBA with a substandard, non-NFPA-compliant integrated accessory—this time a ladder belt.

So what we're hypothetically hearing is:

> "This is just another tool for them to use."
>
> "Requiring this accessory to meet NFPA performance requirements is overkill. Firefighters don't need all that."
>
> "We're giving them what they want."
>
> "It's not really a thermal imager / PASS device / escape belt. It just looks and acts like one."
>
> "OK, so it doesn't meet NFPA performance requirements … but it's close."

Such dubious logic used by manufacturers to rationalize the integration of non-NFPA-compliant accessories for which NFPA standards exist undermines the entire NFPA standards development process. If an NFPA standard has minimum performance requirements, the intention should be that those minimum performance requirements apply to the product regardless of whether it is marketed as a standalone device or as part of another NFPA-compliant product. Accessory non-compliance with its associated NFPA standard should not be acceptable and should preclude NFPA compliance certification of the parent product.

The proposed TIA accomplishes such preclusion. It also sets a precedent for the future integration of other devices that either already have or will eventually have their own NFPA product performance standards.

Note: This TIA is co-submitted and endorsed by Daniel N. Rossos, Oregon Department of Public Safety Standards and Training (Chair of the TC on Respiratory Protection Equipment), and it is endorsed by William E. Haskell, III, National Institute for Occupational Safety & Health (Chair of the Correlating Committee on Fire and Emergency Services Protective Clothing and Equipment).

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangers condition or situation.

Every day that passes without this TIA in place is a day where substandard, non-NFPA-compliant accessories could be certified, shipped and used in a certified NFPA-compliant product without affecting that parent product's certification, even though NFPA standards do exist for such accessories. The door must be closed immediately to stop this abuse of the NFPA process and subversion of the NFPA's mission.

Standards Council Issued TIAs

At its August 2017 meeting, the NFPA Standards Council considered the issuance of several proposed Tentative Interim Amendments (TIAs). The following TIAs were issued on August 17, 2017 by the Council and effective September 6, 2017.

A Tentative Interim Amendment is tentative because it has not been processed through the entire standards-making procedures. It is interim because it is effective only between editions of the standard. A TIA automatically becomes a public input of the proponent for the next edition of the standard; as such, it then is subject to all of the procedures of the standards-making process.

The following TIAs were issued concurrently with the 2018 editions and will be incorporated within the document:

NFPA 10® - 2018 Edition
Standard for Portable Fire Extinguishers
Reference: 6.1.3.10.6.1(new)
TIA 18-1
(SC 17-8-17 / TIA Log #1268)
www.nfpa.org/10

NFPA 30A - 2018 Edition
Code for Motor Fuel Dispensing Facilities and Repair Garages
Reference: 5.4.4 and 6.4.2
TIA Log No. 18-1
(SC 17-8-18 / TIA Log #1270)
www.nfpa.org/10

NFPA 70E® – 2018 Edition
Standard for Electrical Safety in the Workplace®
Reference: Annex H.2
TIA 18-1
(SC 17-8-20 / TIA Log #1253R)
www.nfpa.org/70E

NFPA 70E® – 2018 Edition
Standard for Electrical Safety in the Workplace®
Reference: 110.4(A), 130.2(A)(3), 130.6(C)(2), 130.6(F) and 130.6(G)
TIA 18-2
(SC 17-8-21 / TIA Log #1265)
www.nfpa.org/70E

NFPA 99 – 2018 Edition
Health Care Facilities Code
Reference: 14.2.10.1.2
TIA 18-1
(SC 17-8-56 / TIA Log #1241)
www.nfpa.org/99

NFPA 101® – 2018 Edition
Life Safety Code®
Reference: 40.1.2.1.3
TIA 18-1
(SC 17-8-24 / TIA Log #1263)
www.nfpa.org/101

NFPA 1582 – 2018 Edition
Standard on Comprehensive Occupational Medical Program for Fire Departments
Reference: 9.13.6.1
TIA 18-1
(SC 17-8-28 / TIA Log #1258)
www.nfpa.org/1582

NFPA 1971 – 2018 Edition
Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting
Reference: Various Sections
TIA 18-1
(SC 17-8-32 / TIA Log #1277)
www.nfpa.org/1971

NFPA 1971 – 2018 Edition
Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting
Reference: 2.3.2, 8.21.4, Table B.4, Table B.5 and C.1.2.2
TIA 18-2
(SC 17-8-33 / TIA Log #1272)
www.nfpa.org/1971

NFPA 1992 – 2018 Edition
Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies
Reference: 2.3.3, Table 5.3.2(a), 8.11.3.1, and 8.11.4
TIA 18-1
(SC 17-8-35 / TIA Log #1274)
www.nfpa.org/1992

NFPA 1992 – 2018 Edition
Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies
Reference: 8.10.8.2
TIA 18-2
(SC 17-8-36 / TIA Log #1278)
www.nfpa.org/1992

NFPA 1994 – 2018 Edition
Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents
Reference: 2.3.4, Table 5.3.2(a), 8.14.3.1 and 8.14.4
TIA 18-1
(SC 17-8-37 / TIA Log #1275)
www.nfpa.org/1994

NFPA 1994 – 2018 Edition
Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents
Reference: 7.4.5.1, 7.5.5.1, 7.6.5.1 and 7.7.5.1
TIA 18-2
(SC 17-8-38 / TIA Log #1279)
www.nfpa.org/1994

NFPA 1994 – 2018 Edition
Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents
Reference: 7.1.1.2, 8.3.5.1, 8.3.6.2, and 8.3.7.1
TIA 18-3
(SC 17-8-39 / TIA Log #1280)
www.nfpa.org/1994

NFPA 1994 – 2018 Edition
Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents
Reference: 8.5.2.3(new)
TIA 18-4
(SC 17-8-40 / TIA Log #1288)
www.nfpa.org/1994

NFPA 1994 – 2018 Edition
Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents
Reference: 8.7.1.7, 8.7.2.1, 8.7.2.2, 8.7.10, 8.7.15(new), and 8.20.12(new)
TIA 18-5
(SC 17-8-41 / TIA Log #1289)
www.nfpa.org/1994

NFPA 1994 – 2018 Edition
Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents
Reference: 8.7.4.4*
TIA 18-6
(SC 17-8-42 / TIA Log #1290)
www.nfpa.org/1994

NFPA 1994 – 2018 Edition
Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents
Reference: 8.7.13.4
TIA 18-7
(SC 17-8-43 / TIA Log #1291)
www.nfpa.org/1994

NFPA 1999 – 2018 Edition
Standard on Protective Clothing Ensembles for Emergency Medical Operations
Reference: 2.3.3 and 8.18.4
TIA 18-1
(SC 17-8-45 / TIA Log #1276)
www.nfpa.org/1999

NFPA 1999 – 2018 Edition
Standard on Protective Clothing Ensembles for Emergency Medical Operations
Reference: 7.6.1, 8.3.3.2 and 8.3.7
TIA 18-2
(SC 17-8-46 / TIA Log #1281)
www.nfpa.org/1999

NFPA 5000® – 2018 Edition
Building Construction and Safety Code®
Reference: 2.3.35(New), 3.3.296(New), 3.3.670(New), 38.9.15(New), and Annex G(New)
TIA 18-1
(SC 17-8-47 / TIA Log #1261)
www.nfpa.org/5000

Also at the August 2017 meeting, the Standards Council approved the following (7) Tentative Interim Amendments to the following NFPA standards:

NFPA 70® – 2017 Edition
National Electrical Code®
Reference: 406.4(D)(4), Exception No. 2
TIA 17-6
(SC 17-8-19 / TIA Log #1266)
www.nfpa.org/70

NFPA 96 – 2017 Edition
Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
Reference: 10.5.3, 11.1.4
TIA 17-1
(SC 17-8-22 / TIA Log #1257)
www.nfpa.org/96

NFPA 921 – 2017 Edition
Guide for Fire and Explosion Investigations
Reference: 3.3.116, 20.1.3, 24.1, and 28.8.2
TIA 17-1
(SC 17-8-26 / TIA Log #1269)
www.nfpa.org/921

NFPA 1127 – 2018 Edition

Code for High Power Rocketry
Reference: 4.16.3.3
TIA 18-1
(SC 17-8-27 / TIA Log #1260)
www.nfpa.org/1127

NFPA 1906 – 2016 Edition
Standard for Wildland Fire Apparatus
Reference: 2.3.8, 14.1.1, 14.4, A.14.4, A.14.4.3.4, A.14.1.1(new), and E.1.2.4
TIA 16-3
(SC 17-8-29 / TIA Log #1267)
www.nfpa.org/1906

NFPA 1931 – 2015 Edition
Standard for Manufacturer's Design of Fire Department Ground Ladders
Reference: 3.3.26(new), A.3.3.26(new), 4.1.3.5.1, 4.8(new)
TIA 15-1
(SC 17-8-30 / TIA Log #1254)
www.nfpa.org/1931

NFPA 1977 – 2016 Edition
Standard on Protective Clothing and Equipment for Wildland Fire Fighting
Reference: 2.3.4 and 8.23.4.1
TIA 16-2
(SC 17-8-34 / TIA Log #1273)
www.nfpa.org/1977

Committee Calendar

Detailed meeting information is located on each Document Information Page. If you are planning to attend a Technical Committee meeting as a guest, please familiarize yourself with the *Regulations Governing the Development of NFPA Standards* (Section 3.3.3.3) for further information.

For specific meeting information, please contact the responsible staff liaison listed on NFPA's Document Information Page. On the Document Information Page, please refer to the Technical Committee tab.

September 2017

14–15 Fire and Emergency Service Organization and Deployment—Volunteer (1720 First Draft), San Antonio, TX
15 Garages and Parking Structures (88A Second Draft), Teleconference NFPA Headquarters, Quincy MA
18 Building Fire and Life Safety Directors (1082 First Draft), Teleconference NFPA Headquarters, Quincy, MA
19–21 Inspection, Testing, and Maintenance of Water-Based Systems, (25 First Draft), Phoenix, AZ
26–27 Public Emergency Service Communication (1221 Second Draft), Norman, OK
26–27 Ovens and Furnaces (86 Second Draft), Orlando, FL
26–27 Motor Craft (302 First Draft), NFPA Headquarters, Quincy, MA
27–28 Fire Doors and Windows (80/105 First Draft), NFPA Headquarters, Quincy, MA
28 Gas Hazards (306 Second Draft), Teleconference NFPA Headquarters, Quincy, MA
8–29 Pre-Incident Planning (1620 Pre-First Draft), NFPA Headquarters, Quincy, MA

October 2017

2–5 Fixed Guideway Transit and Passenger Rail Systems (502 First Draft), Redondo Beach, FL
17 Static Electricity (77 Second Draft), Teleconference NFPA Headquarters, Quincy, MA
17–19 Fixed Guideway Transit and Passenger Rail Systems (130 First Draft), Mesa, AZ
17–19 Liquefied Petroleum Gases (58 First Draft), Tampa, FL
18 Determination of Fire Loads for Use in Structural Fire Protection Design (557 First Draft), NFPA Headquarters, Quincy, MA
24–25 Fire and Life Safety in Animal Housing Facilities (150 Second Draft), Raleigh, NC
31 Oct–Nov 2 Manufacture and Storage of Aerosol Products (30B Second Draft), St. Louis, MO

November 2017

7–9 Combustible Metal (484 Second Draft), Kansas City, MO
7–9 Fundamentals of Combustible Dust (652 Second Draft), Kansas City, MO
8–9 Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (1710 First Draft), New Orleans, LA
8–9 Fire and Emergency Service Organization and Deployment—Career (1710 First Draft), New Orleans, LA
15–16 National Fire Alarm and Signaling Code (72 Second Draft), Savannah, GA
29–30 Boiler and Combustion Systems Hazards Code (TC on Fundamentals) (85 Second Draft), Nashville, TN

December 2017

6–7 Guide for Structural Fire Fighting (1700 Pre-First Draft), Kansas City, MO
12–13 Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (654 First Draft), Houston, TX

January 2018

19–20 Emergency Vehicle Technicians Professional Qualifications (1071 First Draft), Orlando, FL

New Committees Seeking Members

- Responding to Active Shooter Incidents (ACT-AAA) Submit online application
- Unmanned Aerial Systems (UAS-AAA) Submit online application
- Energy Storage Systems (ESS-AAA): Submit online application
- Hazardous Waste (HDW-AAA): Submit online application
- Low Pressure Dispensing Containers (LPQ-AAA): Submit online application
- Building Fire & Life Safety Directors (BLF-AAA): Submit online application
- Facilities for Fire Training and Associated Props (FAB-AAA): Submit online application
- Tactical Operations for Video Equipment and Cameras (TAC-AAA): Submit online application

Committees Seeking Members

NFPA is currently accepting online applications for Committee membership. Deadline for applications to be reviewed at the December 2017 Standards Council meeting is September 15, 2017.

To apply for NFPA Committee membership, visit the Document Information Page for the relevant NFPA standard(s) for which the Committee is responsible.

Then choose the "Technical Committee" tab and select the link "Submit a Committee application online". Sign-in or create a free online account with NFPA before using this application system.

NFPA 80, *Standard for Fire Doors and Other Opening Protectives*
The Technical Committee on Fire Doors and Windows is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer , Special Expert.

NFPA 80A, *Recommended Practice for Protection of Buildings from Exterior Fire Exposures*
The Technical Committee on Exposure Fire Protection is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Consumer.

NFPA 88A, *Standard for Parking Structures*
The Technical Committee on Garages and Parking Structures is seeking members in the following interest classifications: Manufacturer, User Installer/Maintainer Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*
The Technical Committee on Air Conditioning is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 90B, *Standard for the Installation of Warm Air Heating and Air-Conditioning Systems*
The Technical Committee on Air Conditioning is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 101A, *Guide on Alternative Approaches to Life Safety*
The Technical Committee on Alternative Approaches to Life Safety is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 101, *Life Safety Code®*
The Technical Committee on Assembly Occupancies is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Fundamentals is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer..

The Technical Committee on Health Care Occupancies is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Means of Egress is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Educational and Day-Care Occupancies is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Fire Protection Features is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Industrial, Storage, and Miscellaneous Occupancies is seeking members in the following interest classifications: Installer/Maintainer. Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Mercantile and Business Occupancies is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Board and Care Facilities is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Building Service and Fire Protection Equipment is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Interior Finish and Contents is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

The Technical Committee on Residential Occupancies is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Detention and Correctional Occupancies is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 102, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures*
The Technical Committee on Assembly Occupancies is seeking members in the following interest classifications: Manufacturer Installer/Maintainer Labor Applied Research/Testing Laboratory Insurance, and Consumer.

NFPA 105, *Standard for Smoke Door Assemblies and Other Opening Protectives*
The Technical Committee on Fire Doors and Windows is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance Consumer, and Special Expert.

NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations*
The Technical Committee on Motion Picture and Television Industry is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 150, *Standard on Fire and Life Safety in Animal Housing Facilities*

The Technical Committee on Animal Housing Facilities is seeking members in the following interest classifications: Applied Research/Testing Laboratory and Consumer.

NFPA 220, *Standard on Types of Building Construction*

The Technical Committee on Building Construction is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls*

The Technical Committee on Building Construction is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 225, *Model Manufactured Home Installation Standard*

The Technical Committee on Manufactured Housing is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing, Authority, Insurance, Consumer, and Special Expert.

NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*

The Technical Committee on Construction and Demolition is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Consumer.

NFPA 252, *Standard Methods of Fire Tests of Door Assemblies*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 253, *Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 257, *Standard on Fire Test for Window and Glass Block Assemblies*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 259, *Standard Test Method for Potential Heat of Building Materials*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 260, *Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and, Consumer.

NFPA 261, *Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 262, *Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 265, *Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile or Expanded Vinyl Wall Coverings on Full Height Panels and Walls*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 268, *Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 269, *Standard Test Method for Developing Toxic Potency Data for Use in Fire Hazard Modeling*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 270, *Standard Test Method for Measurement of Smoke Obscuration Using a Conical Radiant Source in a Single Closed Chamber*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 274, *Standard Test Method to Evaluate Fire Performance Characteristics of Pipe Insulation*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 275, *Standard Method of Fire Tests for the Evaluation of Thermal Barriers*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 276, *Standard Method of Fire Test for Determining the Heat Release Rate of Roofing Assemblies with Combustible Above-Deck Roofing Components*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 277, *Standard Methods of Tests for Evaluating Fire and Ignition Resistance of Upholstered Furniture Using a Flaming Ignition Source*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 284, *Standard Test Method for Mattresses for Correctional Occupancies*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 285, *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 286, *Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 287, *Standard Test Methods for Measurement of Flammability of Materials in Cleanrooms Using a Fire Propagation Apparatus (FPA)*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 288, *Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal Fire Resistance-Rated Assemblies*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 289, *Standard Method of Fire Test for Individual Fuel Packages*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 290, *Standard for Fire Testing of Passive Protection Materials for Use on LP-Gas Containers*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 501, *Standard on Manufactured Housing*

The Technical Committee on Manufactured Housing is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 501A, *Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities*

The Technical Committee on Manufactured Housing is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labr, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 520, *Standard on Subterranean Spaces*

The Technical Committee on Subterranean Spaces is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 550, *Guide to the Fire Safety Concepts Tree*

The Technical Committee on Fire Risk Assessment Methods is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 551, *Guide for the Evaluation of Fire Risk Assessments*

The Technical Committee on Fire Risk Assessment Methods is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 555, *Guide on Methods for Evaluating Potential for Room Flashover*

The Technical Committee on Hazard and Risk of Contents and Furnishings is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 556, *Guide on Methods for Evaluating Fire Hazard to Occupants of Passenger Road Vehicles*

The Technical Committee on Hazard and Risk of Contents and Furnishings is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 557, *Standard for Determination of Fire Loads for Use in Structural Fire Protection Design*

The Technical Committee on Hazard and Risk of Contents and Furnishings is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 703, *Standard for Fire Retardant—Treated Wood and Fire–Retardant Coatings for Building Materials*

The Technical Committee on Structures, Construction, and Materials is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 705, *Recommended Practice for a Field Flame Test for Textiles and Films*

The Technical Committee on Fire Tests is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 909, *Code for the Protection of Cultural Resource Properties - Museums, Libraries, and Places of Worship*

The Technical Committee on Cultural Resources is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Consumer.

NFPA 914, Code for Fire Protection of Historic Structures

The Technical Committee on Cultural Resources is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Consumer.

NFPA 1082, Standard for Building Fire and Life Safety Director Professional Qualifications

The Technical Committee on Building Fire and Life Safety Directors is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 5000, *Building Construction and Safety Code®*

The Technical Committee on Assembly Occupancies is seeking members in the following interest categories: Manufacturer,

Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Health Care Occupancies is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Educational and Day-Care Occupancies is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Fire Protection Features is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Industrial, Storage, and Miscellaneous Occupancies is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Mercantile and Business Occupancies is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Building Code is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing, Authority, Insurance, Consumer, and Special Expert.

The Technical Committee on Board and Care Facilities is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Interior Finish and Contents is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Residential Occupancies is seeking members in the following interest classification: Applied Research/Testing Laboratory.

The Technical Committee on Building Construction is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Detention and Correctional Occupancies is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Structures, Construction, and Materials is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

The Technical Committee on Building Systems is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert, Electrical.

NFPA 70B, *Recommended Practice for Electrical Equipment Maintenance*

The Technical Committee on Electrical Equipment Maintenance is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 70E, *Standard for Electrical Safety in the Workplace®*

The Technical Committee on Electrical Safety in the Workplace is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 72, *National Fire Alarm and Signaling Code*

The Technical Committee on Emergency Communication Systems is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Fundamentals of Fire Alarm and Signaling Systems is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Single- and Multiple-Station Alarms and Household Signaling Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Initiating Devices for Fire Alarm and Signaling Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Notification Appliances for Fire Alarm and Signaling Systems is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Protected Premises Fire Alarm and Signaling Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Public Emergency Reporting Systems is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance Consumer, and Special Expert.

The Technical Committee on Supervising Station Fire Alarm and Signaling Systems is seeking members in the following interest classifications:, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

The Technical Committee on Testing and Maintenance of Fire Alarm and Signaling Systems is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 73, *Standard for Electrical Inspections for Existing Dwellings*

The Technical Committee on Electrical Systems Maintenance is seeking members in the following interest classifications: Manufacturer,

User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 79, *Electrical Standard for Industrial Machinery*
The Technical Committee on Electrical Equipment of Industrial Machinery is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 110, *Standard for Emergency and Standby Power Systems*
The Technical Committee on Emergency Power Supplies is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory Insurance, and Consumer.

NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*
The Technical Committee on Emergency Power Supplies is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 730, *Guide for Premises Security*
The Technical Committee on Premises Security is seeking members in the following interest classifications: Manufacturer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 731, *Standard for the Installation of Electronic Premises Security Systems*
The Technical Committee on Premises Security is seeking members in the following interest classifications: Manufacturer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 780, *Standard for the Installation of Lightning Protection Systems*
The Technical Committee on Lightning Protection is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 790, *Standard for Competency of Third-Party Field Evaluation Bodies*
The Technical Committee on Electrical Equipment Evaluation is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 791, *Recommended Practice and Procedures for Unlabeled Electrical Equipment Evaluation*
The Technical Committee on Electrical Equipment Evaluation is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

Emergency Response

NFPA 13E, *Recommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems*
The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 402, *Guide for Aircraft Rescue and Fire-Fighting Operations*
The Technical Committee on Aircraft Rescue and Fire Fighting is seeking members in the following interest classifications: Installer/Maintainer, and Insurance.

NFPA 403, *Standard for Aircraft Rescue and Fire-Fighting Services at Airports*
The Technical Committee on Aircraft Rescue and Fire Fighting is seeking members in the following interest classifications: Installer/Maintainer, and Insurance.

NFPA 405, *Standard for the Recurring Proficiency of Airport Fire Fighters*
The Technical Committee on Aircraft Rescue and Fire Fighting is seeking members in the following interest classifications: Installer/Maintainer, and Insurance.

NFPA 412, *Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment*
The Technical Committee on Aircraft Rescue and Fire Fighting is seeking members in the following interest classifications: Installer/Maintainer, and Insurance.

NFPA 414, *Standard for Aircraft Rescue and Fire-Fighting Vehicles*
The Technical Committee on Aircraft Rescue and Fire Fighting is seeking members in the following interest classifications: Installer/Maintainer, and Insurance.

NFPA 424, *Guide for Airport/Community Emergency Planning*
The Technical Committee on Aircraft Rescue and Fire Fighting is seeking members in the following interest classifications: Installer/Maintainer, and Insurance.

NFPA 450, *Guide for Emergency Medical Services and Systems*
The Technical Committee on Emergency Medical Services is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 451, *Guide for Fire Based Community Healthcare Providers*
The Technical Committee on Emergency Medical Services is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*
The Technical Committee on Hazardous Materials Response Personnel is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Insurance.

NFPA 473, *Standard for Competencies for EMS Personnel Responding to Hazardous Materials/Weapons of Mass Destruction Incidents*
The Technical Committee on Hazardous Materials Response Personnel is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Insurance.

NFPA 475, *Recommended Practice for Organizing, Managing, and Sustaining a Hazardous Materials/Weapons of Mass Destruction Response Program*
The Technical Committee on Hazardous Materials Response Personnel is seeking members in the following interest classifications:

Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Insurance.

NFPA 610, *Guide for Emergency and Safety Operations at Motorsports Venues*

The Technical Committee on Safety at Motorsports Venues is seeking members in the following interest classifications: Manufacturer, User, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 901, *Standard Classifications for Incident Reporting and Fire Protection Data*

The Technical Committee on Fire Reporting is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 921, *Guide for Fire and Explosion Investigations*

The Technical Committee on Fire Investigations is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 950, *Standard for Data Development and Exchange for the Fire Service*

The Technical Committee on Data Exchange for the Fire Service is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 951, *Guide to Building and Utilizing Digital Information*

The Technical Committee on Data Exchange for the Fire Service is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1000, *Standard for Fire Service Professional Qualifications Accreditation and Certification Systems*

The Technical Committee on Accreditation and Certification for Fire Service, Public Safety, and Related Personnel to Professional Qualifications Standards is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1001, *Standard for Fire Fighter Professional Qualifications*

The Technical Committee on Fire Fighter Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*

The Technical Committee on Fire Fighter Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1003, *Standard for Airport Fire Fighter Professional Qualifications*

The Technical Committee on Fire Fighter Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1005, *Standard for Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters*

The Technical Committee on Fire Fighter Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer

NFPA 1006, *Standard for Technical Rescue Personnel Professional Qualifications*

The Technical Committee on Rescue Technician Professional Qualifications is seeking members in the following interest classifications: Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1021, *Standard for Fire Officer Professional Qualifications*

The Technical Committee on Fire Officer Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1026, *Standard for Incident Management Personnel Professional Qualifications*

The Technical Committee on Incident Management Personnel Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1031, *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*

The Technical Committee on Fire Inspector and Plan Examiner Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1033, *Standard for Professional Qualifications for Fire Investigator*

The Technical Committee on Fire Investigator Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1035, *Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist and Youth Firesetter Program Manager Professional Qualifications*

The Technical Committee on Public Fire Educator, Public Information Officer, Youth Firesetter Intervention Specialist, and Youth Firesetter Program Manager Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1037, *Standard on Fire Marshal Professional Qualifications*

The Technical Committee on Fire Marshal Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications*

The Technical Committee on Fire and Emergency Services Instructor Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1051, *Standard for Wildland Firefighting Personnel Professional Qualifications*

The Technical Committee on Wildland Fire Fighting Personnel Professional Qualifications is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor,

Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1061, *Standard for Professional Qualifications for Public Safety Telecommunications Personnel*
The Technical Committee on Public Safety Telecommunicator Professional Qualifications is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1071, *Standard for Emergency Vehicle Technician Professional Qualifications*
The Technical Committee on Emergency Vehicle Technicians Professional Qualifications is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*
The Technical Committee on Hazardous Materials Response Personnel is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Insurance.

NFPA 1081, *Standard for Industrial Fire Brigade Member Professional Qualifications*
The Technical Committee on Industrial Fire Brigade Personnel Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1091, *Standard for Traffic Control Incident Management Personnel Professional Qualifications*
The Technical Committee on Traffic Control Incident Management Professional Qualifications is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1141, *Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas*
The Technical Committee on Wildland and Rural Fire Protection is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting*
The Technical Committee on Wildland and Rural Fire Protection is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1143, *Standard for Wildland Fire Management*
The Technical Committee on Wildland Fire Management is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1144, *Standard for Reducing Structure Ignition Hazards from Wildland Fire*
The Technical Committee on Wildland and Rural Fire Protection is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1145, *Guide for the Use of Class A Foams in Fire Fighting*
The Technical Committee on Wildland Fire Management is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1201, *Standard for Providing Fire and Emergency Services to the Public*
The Technical Committee on Emergency Service Organization Risk Management is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Consumer.

NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*
The Technical Committee on Public Emergency Service Communication is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1250, *Recommended Practice in Fire and Emergency Service Organization Risk Management*
The Technical Committee on Emergency Service Organization Risk Management is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, and Consumer.

NFPA 1300, *Standard on Community Risk Assessment and Reduction*
The Technical Committee on Fire Prevention Organization and Deployment is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1401, *Recommended Practice for Fire Service Training Reports and Records*
The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1402, *Guide to Building Fire Service Training Centers*
The Technical Committee on Facilities for Fire Training and Associated Props is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1403, *Standard on Live Fire Training Evolutions*
The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1404, *Standard for Fire Service Respiratory Protection Training*
The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1405, *Guide for Land-Based Fire Departments that Respond to Marine Vessel Fires*

The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1407, *Standard for Training Fire Service Rapid Intervention Crews*

The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1408, Standard for Training Fire Service Personnel in the Operation, Care, Use, and Maintenance of Thermal Imagers

The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1410, *Standard on Training for Emergency Scene perations*

The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1451, *Standard for a Fire and Emergency Service Vehicle Operations Training Program*

The Technical Committee on Fire Service Training is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1452, *Guide for Training Fire Service Personnel to Conduct Community Risk Reduction*

The Technical Committee on Fire Prevention Organization and Deployment is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*

The Technical Committee on Fire Service Occupational Safety and Health is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications*

The Technical Committee on Fire Service Occupational Safety and Health is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*

The Technical Committee on Fire Service Occupational Safety and Health is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1581, *Standard on Fire Department Infection Control Program*

The Technical Committee on Fire Service Occupational Safety and Health is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*

The Technical Committee on Fire Service Occupational Safety and Health is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1583, *Standard on Health-Related Fitness Programs for Fire Department Members*

The Technical Committee on Fire Service Occupational Safety and Health is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1584, *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*

The Technical Committee on Fire Service Occupational Safety and Health is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1600, *Standard on Disaster/Emergency Management and Business Continuity/Continuity of Operations Programs*

The Technical Committee on Emergency Management and Business Continuity is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 1616, *Standard for Mass Evacuation, Sheltering, and Reentry Programs*

The Technical Committee on Mass Evacuation and Sheltering is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1620, *Standard for Pre-Incident Planning*

The Technical Committee on Pre-Incident Planning is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents*

The Technical Committee on Technical Search and Rescue is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1700, *Guide for Structural Fire Fighting*

The Technical Committee on Fundamentals of Fire Control Within a Structure Utilizing Fire Dynamics is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*

The Technical Committee on Fire and Emergency Service Organization and Deployment-Career is seeking members in the following interest classifications: Manufacturer, Labor, Applied Research/Testing Laboratory, and Insurance.

NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments*

The Technical Committee on Fire and Emergency Service Organization and Deployment-Volunteer is seeking members in the following

interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1730, *Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations*
The Technical Committee on Fire Prevention Organization and Deployment is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1800, *Standard on Electronic Safety Equipment for Emergency Services*
The Technical Committee on Electronic Safety Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, and Insurance.

NFPA 1801, *Standard on Thermal Imagers for the Fire Service*
The Technical Committee on Electronic Safety Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, and Insurance.

NFPA 1802, *Standard on Personal Portable (Hand-Held) Two-Way Radio Communications Devices for Use by Emergency Personnel in the Hazard Zone*
The Technical Committee on Electronic Safety Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, and Insurance.

NFPA 1851, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*
The Technical Committee on Structural and Proximity Fire Fighting Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1852, *Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA)*
The Technical Committee on Respiratory Protection Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1855, *Standard for Selection, Care, and Maintenance of Protective Ensembles for Technical Rescue Incidents*
The Technical Committee on Special Operations Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1858, *Standard on Selection, Care, and Maintenance of Life Safety Rope and Equipment for Emergency Services*
The Technical Committee on Special Operations Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1859, *Selection, Care and Maintenance of Tactical Video Equipment*
The Technical Committee on Tactical Operations for Video Equipment and Cameras is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1877, *Standard on Selection, Care, and Maintenance of Wildland Fire Fighting Protective Clothing and Equipment*
The Technical Committee on Wildland Fire Fighting Protective Clothing and Equipment is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1901, *Standard for Automotive Fire Apparatus*
The Technical Committee on Fire Department Apparatus is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance Consumer, and Special Expert.

NFPA 1906, *Standard for Wildland Fire Apparatus*
The Technical Committee on Fire Department Apparatus is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-service Emergency Vehicles*
The Technical Committee on Fire Department Apparatus is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1912, *Standard for Fire Apparatus Refurbishing*
The Technical Committee on Fire Department Apparatus is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1917, *Standard for Automotive Ambulances*
The Technical Committee on Ambulances is seeking members in the following interest classification: Consumer.

NFPA 1925, *Standard on Marine Fire-Fighting Vessels*
The Technical Committee on Marine Fire Fighting Vessels is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1931, *Standard for Manufacturer's Design of Fire Department Ground Ladders*
The Technical Committee on Fire Department Ground Ladders is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1932, *Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders*
The Technical Committee on Fire Department Ground Ladders is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1936, *Standard on Powered Rescue Tools*
The Technical Committee on Fire Department Rescue Tools is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1937, *Standard for the Selection, Care, and Maintenance of Rescue Tools*
The Technical Committee on Fire Department Rescue Tools is seeking members in the following interest classifications: Installer/

Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1951, *Standard on Protective Ensembles for Technical Rescue Incidents*

The Technical Committee on Special Operations Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1952, *Standard on Surface Water Operations Protective Clothing and Equipment*

The Technical Committee on Special Operations Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1953, *Standard on Protective Ensembles for Contaminated Water Diving*

The Technical Committee on Special Operations Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1971, *Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*

The Technical Committee on Structural and Proximity Fire Fighting Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1975, *Standard on Emergency Services Work Clothing Elements*

The Technical Committee on Special Operations Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1977, *Standard on Protective Clothing and Equipment for Wildland Fire Fighting*

The Technical Committee on Wildland Fire Fighting Protective Clothing and Equipment is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1981, *Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services*

The Technical Committee on Respiratory Protection Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1982, *Standard on Personal Alert Safety Systems (PASS)*

The Technical Committee on Electronic Safety Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, and Insurance.

NFPA 1983, *Standard on Life Safety Rope and Equipment for Emergency Services*

The Technical Committee on Special Operations Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance Consumer, and Special Expert.

NFPA 1984, *Standard on Respirators for Wildland Fire-Fighting Operations*

The Technical Committee on Respiratory Protection Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1986, *Standard on Respiratory Protection Equipment for Tactical and Technical Operations*

The Technical Committee on Tactical and Technical Operations Respiratory Protection Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1987, *Standard on Combination Unit Respirator Systems for Tactical and Technical Operations*

The Technical Committee on Tactical and Technical Operations Respiratory Protection Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1989, *Standard on Breathing Air Quality for Emergency Services Respiratory Protection*

The Technical Committee on Respiratory Protection Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1991, *Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies and CBRN Terrorism Incidents*

The Technical Committee on Hazardous Materials Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1992, *Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies*

The Technical Committee on Hazardous Materials Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1994, *Standard on Protective Ensembles for First Responders to CBRN Terrorism Incidents*

The Technical Committee on Hazardous Materials Protective Clothing and Equipment is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1999, *Standard on Protective Clothing and Ensembles for Emergency Medical Operations*

The Technical Committee on Emergency Medical Services Protective Clothing and Equipment is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 2400, *Standard for Unmanned Aerial Systems (UAS)*

The Technical Committee on Unmanned Aerial Systems is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 3, *Recommended Practice for Commissioning of Fire Protection and Life Safety Systems*

The Technical Committee on Commissioning and Integrated Testing is seeking members in the following interest classification: Consumer.

NFPA 4, *Standard for Integrated Fire Protection and Life Safety System Testing*

The Technical Committee on Commissioning and Integrated Testing is seeking members in the following interest category: Consumer.

NFPA 10, *Standard for Portable Fire Extinguishers*

The Technical Committee on Portable Fire Extinguishers is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam*

The Technical Committee on Foam is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 12, *Standard on Carbon Dioxide Extinguishing Systems*

The Technical Committee on Gaseous Fire Extinguishing Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems*

The Technical Committee on Gaseous Fire Extinguishing Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 13, *Standard for the Installation of Sprinkler Systems*

The Technical Committee on Automatic Sprinkler Systems is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Consumer, and Special Expert.

The Technical Committee on Hanging and Bracing of Water-Based Fire Protection Systems is seeking members in the following interest classification: Consumer..

The Technical Committee on Private Water Supply Piping Systems is seeking members in the following interest classification: Consumer.

The Technical Committee on Sprinkler System Discharge Criteria is seeking members in the following interest classification: Consumer.

The Technical Committee on Sprinkler System Installation Criteria is seeking members in the following interest classification: Consumer.

NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*

The Technical Committee on Residential Sprinkler Systems is seeking members in the following interest classification: Consumer.

NFPA 13R, *Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies*

The Technical Committee on Residential Sprinkler Systems is seeking members in the following interest classification: Consumer.

NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*

The Technical Committee on Standpipes is seeking members in the following interest classifications: Manufacturer, User, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection*

The Technical Committee on Water Spray Fixed Systems is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 16, *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems*

The Technical Committee on Foam-Water Sprinklers is seeking members in the following interest classification: Consumer.

NFPA 17, *Standard for Dry Chemical Extinguishing Systems*

The Technical Committee on Dry and Wet Chemical Extinguishing Systems is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 17A, *Standard for Wet Chemical Extinguishing Systems*

The Technical Committee on Dry and Wet Chemical Extinguishing Systems is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 18, *Standard on Wetting Agents*

The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 18A, *Standard on Water Additives for Fire Control and Vapor Mitigation*

The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*

The Technical Committee on Fire Pumps is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 22, *Standard for Water Tanks for Private Fire Protection*

The Technical Committee on Water Tanks is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*

The Technical Committee on Private Water Supply Piping Systems is seeking members in the following interest classifications: Consumer.

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

The Technical Committee on Inspection, Testing, and Maintenance of Water-Based Systems is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 75, *Standard for the Standard for the Fire Protection of Information Technology Equipment*

The Technical Committee on Electronic Computer Systems is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 76, *Standard for the Fire Protection of Telecommunications Facilities*

The Technical Committee on Telecommunications is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Consumer, and Special Expert.

NFPA 92, *Standard for Smoke Control Systems*

The Technical Committee on Smoke Management Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*

The Technical Committee on Venting Systems for Cooking Appliances is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 99, *Health Care Facilities Code*

The Technical Committee on Health Care Emergency Management and Security is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Hyperbaric and Hypobaric Facilities is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

The Technical Committee on Mechanical Systems is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

The Technical Committee on Medical Equipment is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

The Technical Committee on Electrical Systems is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Fundamentals is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

The Technical Committee on Piping Systems is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 99B, *Standard for Hypobaric Facilities*

The Technical Committee on Hyperbaric and Hypobaric Facilities is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 115, *Standard for Laser Fire Protection*

The Technical Committee on Laser Fire Protection is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 130, *Standard for Fixed Guideway Transit and Passenger Rail Systems*

The Technical Committee on Fixed Guideway Transit and Passenger Rail Systems is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 170, *Standard for Fire Safety and Emergency Symbols*

The Technical Committee on Fire Safety and Emergency Symbols is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 204, *Standard for Smoke and Heat Venting*

The Technical Committee on Smoke Management Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 232, *Standard for the Protection of Records*

The Technical Committee on Record Protection is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 291, *Recommended Practice for Fire Flow Testing and Marking of Hydrants*

The Technical Committee on Private Water Supply Piping Systems is seeking members in the following interest classifications: Consumer.

NFPA 318, *Standard for the Protection of Semiconductor Fabrication Facilities*

The Technical Committee on Semiconductor and Related Facilities is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 407, *Standard for Aircraft Fuel Servicing*

The Technical Committee on Aircraft Fuel Servicing is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 408, *Standard for Aircraft Hand Portable Fire Extinguishers*

The Technical Committee on Portable Fire Extinguishers is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 409, *Standard on Aircraft Hangars*

The Technical Committee on Airport Facilities is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, and Consumer.

NFPA 410, *Standard on Aircraft Maintenance*

The Technical Committee on Aircraft Maintenance Operations is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 418, *Standard for Heliports*

The Technical Committee on Helicopter Facilities is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 502, *Standard for Road Tunnels, Bridges, and Other Limited Access Highways*

The Technical Committee on Road Tunnel and Highway Fire Protection is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, and Consumer.

NFPA 750, *Standard on Water Mist Fire Protection Systems*

The Technical Committee on Water Mist Fire Suppression Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 770, *Standard on Hybrid (Water and Inert Gas) Fire Extinguishing Systems*

The Technical Committee on Hybrid (Water and Inert Gas) Fire Extinguishing Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1150, *Standard on Foam Chemicals for Fires in Class A Fuels*

The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 1192, *Standard on Recreational Vehicles*

The Technical Committee on Recreational Vehicles is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1194, *Standard for Recreational Vehicle Parks and Campgrounds*

The Technical Committee on Recreational Vehicles is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 1961, *Standard on Fire Hose*

The Technical Committee on Fire Hose is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1962, *Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances*

The Technical Committee on Fire Hose is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1963, *Standard for Fire Hose Connections*

The Technical Committee on Fire Hose is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1964, *Standard for Spray Nozzles*

The Technical Committee on Fire Hose is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 1965, *Standard for Fire Hose Appliances*

The Technical Committee on Fire Hose is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems*

The Technical Committee on Gaseous Fire Extinguishing Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 2010, *Standard for Fixed Aerosol Fire-Extinguishing Systems*

The Technical Committee on Aerosol Extinguishing Technology is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer Industrial Hazards.

NFPA 2, *Hydrogen Technologies Code*

The Technical Committee on Hydrogen Technology is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 30, *Flammable and Combustible Liquids Code*

The Technical Committee on Operations is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

The Technical Committee on Storage and Warehousing of Containers and Portable Tanks is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

The Technical Committee on Fundamentals is seeking members in the following interest categories: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*

The Technical Committee on Automotive and Marine Service Stations is seeking members in the following interest classification: Consumer.

NFPA 30B, *Code for the Manufacture and Storage of Aerosol Products*

The Technical Committee on Aerosol Products is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 31, *Standard for the Installation of Oil-Burning Equipment*

The Technical Committee on Liquid Fuel Burning Equipment is seeking members in the following interest classifications: User,

Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 32, *Standard for Dry Cleaning Facilities*
The Technical Committee on Textile and Garment Care Processes is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials*
The Technical Committee on Finishing Processes is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Consumer, and Special Expert.

NFPA 34, *Standard for Dipping, Coating, and Printing Processes Using Flammable or Combustible Liquids*
The Technical Committee on Finishing Processes is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Consumer, and Special Expert.

NFPA 35, *Standard for the Manufacture of Organic Coatings*
The Technical Committee on Manufacture of Organic Coatings is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 36, *Standard for Solvent Extraction Plants*
The Technical Committee on Solvent Extraction Plants is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines*
The Technical Committee on Internal Combustion Engines is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 40, *Standard for the Storage and Handling of Cellulose Nitrate Film*
The Technical Committee on Hazardous Chemicals is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals*
The Technical Committee on Laboratories Using Chemicals is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 51, *Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes*
The Technical Committee on Industrial and Medical Gases is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*
The Technical Committee on Hot Work Operations is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 52, *Vehicular Natural Gas Fuel Systems Code*
The Technical Committee on Vehicular Alternative Fuel Systems is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 53, *Recommended Practice on Materials, Equipment, and Systems Used in Oxygen-Enriched Atmospheres*
The Technical Committee on Oxygen-Enriched Atmospheres is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 54, *National Fuel Gas Code*
The Technical Committee on National Fuel Gas Code is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Insurance, Consumer, and Special Expert.

NFPA 55, *Compressed Gases and Cryogenic Fluids Code*
The Technical Committee on Industrial and Medical Gases is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 56, *Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping Systems*
The Technical Committee on Gas Process Safety is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 58, *Liquefied Petroleum Gas Code*
The Technical Committee on Liquefied Petroleum Gases is seeking members in the following interest classifications: User, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 59, *Utility LP-Gas Plant Code*
The Technical Committee on LP-Gases at Utility Gas Plants is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 59A, *Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)*
The Technical Committee on Liquefied Natural Gas is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 61, *Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities*
The Technical Committee on Agricultural Dusts is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 67, *Guideline on Explosion Protection for Gaseous Mixtures in Pipe Systems*
The Technical Committee on Explosion Protection Systems is seeking members in the following interest classifications: Installer/

Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 68, *Standard on Explosion Protection by Deflagration Venting*

The Technical Committee on Explosion Protection Systems is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 69, *Standard on Explosion Prevention Systems*

The Technical Committee on Explosion Protection Systems is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 77, *Recommended Practice on Static Electricity*

The Technical Committee on Static Electricity is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment*

The Technical Committee on Incinerators and Waste Handling Systems is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 85, *Boiler and Combustion Systems Hazards Code*

The Technical Committee on Boiler Combustion System Hazards is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Fluidized Bed Boilers is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Fundamentals of Combustion Systems Hazards is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Heat Recovery Steam Generators is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Multiple Burner Boilers is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Pulverized Fuel Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

The Technical Committee on Single Burner Boilers is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

The Technical Committee on Stoker Operations is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 86, *Standard for Ovens and Furnaces*

The Technical Committee on Ovens and Furnaces is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 87, *Recommended Practice for Fluid Heaters*

The Technical Committee on Fluid Heaters is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 91, *Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Particulate Solids*

The Technical Committee on Handling and Conveying of Dusts, Vapors, and Gases is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 120, *Standard for Fire Prevention and Control in Coal Mines*

The Technical Committee on Mining Facilities is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Consumer, and Special Expert.

NFPA 122, *Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities*

The Technical Committee on Mining Facilities is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Consumer, and Special Expert.

NFPA 160, *Standard for the Use of Flame Effects Before an Audience*

The Technical Committee on Special Effects is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*

The Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat-Producing Appliances is seeking members in the following interest classifications: User, and Labor.

NFPA 214, *Standard on Water-Cooling Towers*

The Technical Committee on Water-Cooling Towers is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 301, *Code for Safety to Life from Fire on Merchant Vessels*

The Technical Committee on Merchant Vessels is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 303, *Fire Protection Standard for Marinas and Boatyards*

The Technical Committee on Marinas and Boatyards is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 306, *Standard for the Control of Gas Hazards on Vessels*

The Technical Committee on Gas Hazards is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 307, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves*

The Technical Committee on Marine Terminals is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 312, *Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up*

The Technical Committee on Shipbuilding, Repair, and Lay-Up is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair*

The Technical Committee on Tank Leakage and Repair Safeguards is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*

The Technical Committee on Tank Leakage and Repair Safeguards is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 350, *Guide for Safe Confined Space Entry and Work*

The Technical Committee on Confined Space Safe Work Practices is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids*

The Technical Committee on Transportation of Flammable Liquids is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 400, *Hazardous Materials Code*

The Technical Committee on Hazardous Chemicals is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 484, *Standard for Combustible Metals*

The Technical Committee on Combustible Metals and Metal Dusts is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 495, *Explosive Materials Code*

The Technical Committee on Explosives is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 496, *Standard for Purged and Pressurized Enclosures for Electrical Equipment*

The Technical Committee on Electrical Equipment in Chemical Atmospheres is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 497, *Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas*

The Technical Committee on Electrical Equipment in Chemical Atmospheres is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 498, *Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives*

The Technical Committee on Explosives is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 499, *Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas*

The Technical Committee on Electrical Equipment in Chemical Atmospheres is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations*

The Technical Committee on Industrial Trucks is seeking members in the following interest classifications: Manufacturer, User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance Consumer, and Special Expert.

NFPA 600, *Standard on Facility Fire Brigades*

The Technical Committee on Loss Prevention Procedures and Practices is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 601, *Standard for Security Services in Fire Loss Prevention*

The Technical Committee on Loss Prevention Procedures and Practices is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 652, *Standard on the Fundamentals of Combustible Dust*

The Technical Committee on Fundamentals of Combustible Dusts is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*

The Technical Committee on Handling and Conveying of Dusts, Vapors, and Gases is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 655, *Standard for Prevention of Sulfur Fires and Explosions*

The Technical Committee on Handling and Conveying of Dusts, Vapors, and Gases is seeking members in the following interest

classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 664, *Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities*

The Technical Committee on Wood and Cellulosic Materials Processing is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*

The Technical Committee on Classification and Properties of Hazardous Chemical Data is seeking members in the following interest classifications: Manufacturer, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 801, *Standard for Fire Protection for Facilities Handling Radioactive Materials*

The Technical Committee on Fire Protection for Nuclear Facilities is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 804, *Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants*

The Technical Committee on Fire Protection for Nuclear Facilities is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 805, *Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants*

The Technical Committee on Fire Protection for Nuclear Facilities is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 806, *Performance-Based Standard for Fire Protection for Advanced Nuclear Reactor Electric Generating Plants Change Process*

The Technical Committee on Fire Protection for Nuclear Facilities is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 820, *Standard for Fire Protection in Wastewater Treatment and Collection Facilities*

The Technical Committee on Wastewater Treatment Plants is seeking members in the following interest classifications: User, Installer/Maintainer Labor, Applied Research/Testing Laboratory, Enforcing Authority, Insurance, and Consumer.

NFPA 850, *Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations*

The Technical Committee on Electric Generating Plants is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 853, *Standard for the Installation of Stationary Fuel Cell Power Systems*

The Technical Committee on Electric Generating Plants is seeking members in the following interest classifications: Labor, Applied Research/Testing Laboratory, Enforcing Authority, and Consumer.

NFPA 855, *Standard for the Installation of Stationary Energy Storage Systems*

The Technical Committee on Energy Storage Systems is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Enforcing Authority, and Consumer.

NFPA 1122, *Code for Model Rocketry*

The Technical Committee on Pyrotechnics is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1123, *Code for Fireworks Display*

The Technical Committee on Pyrotechnics is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1124, *Code for the Manufacture, Transportation, and Storage of Fireworks and Pyrotechnic Articles*

The Technical Committee on Pyrotechnics is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1125, *Code for the Manufacture of Model Rocket and High-Power Rocket Motors*

The Technical Committee on Pyrotechnics is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience*

The Technical Committee on Special Effects is seeking members in the following interest classifications: User, Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 1127, *Code for High Power Rocketry*

The Technical Committee on Pyrotechnics is seeking members in the following interest classifications: Installer/Maintainer, Labor, Applied Research/Testing Laboratory, Insurance, and Consumer.

NFPA 2112, *Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire*

The Technical Committee on Flash Fire Protective Garments is seeking members in the following interest classifications: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

NFPA 2113, *Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Short-Duration Thermal Exposures from Fire*

The Technical Committee on Flash Fire Protective Garments is seeking members in the following interest categories: Installer/Maintainer, Labor, Enforcing Authority, Insurance, Consumer, and Special Expert.

Committees Seeking Public Input

The committees for the following documents are now accepting Public Input for recommendations of content for the documents listed below. Public Input received by 5:00 p.m. ET on the closing date indicated will be acted on by the committee, and that action will be published in the committee's First Draft Report. Submit Public Input electronically via our online electronic submission system. For instructions on how to use the electronic submission system, please go to www.nfpa.org/publicinput.

† Change in Public Input closing date or cycle
P* Indicates proposed document

Document No.	Public Input Title	Meeting Closing Date	Reporting
NFPA 11	Standard for Low-, Medium-, and High-Expansion Foam	1/3/2019	F2020
NFPA 13E	Recommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems	1/4/2018	F2019
NFPA 17	Standard for Dry Chemical Extinguishing Systems	1/9/2020	F2021
NFPA 17A	Standard for Wet Chemical Extinguishing Systems	1/9/2020	F2021
NFPA 18	Standard on Wetting Agents	1/3/2019	F2020
NFPA 18A	Standard on Water Additives for Fire Control and Vapor Mitigation	1/9/2020	F2021
NFPA 31	Standard for the Installation of Oil-Burning Equipment	1/4/2018	F2019
NFPA 32	Standard for Drycleaning Facilities	1/3/2019	F2020
NFPA 35	Standard for the Manufacture of Organic Coatings	1/3/2019	F2020
NFPA 36	Standard for Solvent Extraction Plants	1/3/2019	F2020
NFPA 51	Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes	6/30/2020	A2022
NFPA 53	Recommended Practice on Materials, Equipment, and Systems Used in Oxygen-Enriched Atmospheres	1/3/2019	F2020
NFPA 56	Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping System	1/4/2018	F2019
NFPA 61	Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes	1/4/2018	F2019
NFPA 75	Standard for the Fire Protection of Information Technology Equipment	1/4/2018	F2019
NFPA 76	Standard for the Fire Protection of Telecommunications Facilities	1/4/2018	F2019
NFPA 80A	Recommended Practice for Protection of Buildings from Exterior Fire Exposures	6/26/2019	A2021
NFPA 91	Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Particulate Solids	1/4/2018	F2019
NFPA 96	Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations	1/4/2018	F2019
NFPA 102	Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures	1/3/2019	F2020
NFPA 115	Standard for Laser Fire Protection	1/4/2018	F2019
NFPA 120	Standard for Fire Prevention and Control in Coal Mines	1/4/2018	F2019
NFPA 122	Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities	1/4/2018	F2019
NFPA 160	Standard for the Use of Flame Effects Before an Audience	6/27/2018	A2020
NFPA 214	Standard on Water-Cooling Towers	1/3/2019	F2020
NFPA 225	Model Manufactured Home Installation Standard	1/3/2019	F2020
NFPA 232	Standard for the Protection of Records	6/26/2019	A2021
NFPA 252	Standard Methods of Fire Tests of Door Assemblies	1/9/2020	F2021
NFPA 257	Standard on Fire Test for Window and Glass Block Assemblies	1/9/2020	F2021
NFPA 268	Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source	6/27/2018	A2020
NFPA 269	Standard Test Method for Developing Toxic Potency Data for Use in Fire Hazard Modeling	1/9/2020	F2021
NFPA 275	Standard Method of Fire Tests for the Evaluation of Thermal Barriers	1/9/2020	F2021
NFPA 287	Standard Test Methods for Measurement of Flammability of Materials in Cleanrooms Using a Fire Propagation Apparatus (FPA)	1/9/2020	F2021
NFPA 288	Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal Fire Resistance-Rated Assemblies	1/9/2020	F2021
NFPA 303	Fire Protection Standard for Marinas and Boatyards	6/27/2018	A2020
NFPA 307	Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves	6/27/2018	A2020
NFPA 312	Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up	6/27/2018	A2020
NFPA 326	Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair	1/4/2018	F2019

NFPA 329	Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases	1/4/2018	F2019
NFPA 385	Standard for Tank Vehicles for Flammable and Combustible Liquids	1/9/2020	F2021
NFPA 407	Standard for Aircraft Fuel Servicing	6/26/2019	A2021
NFPA 408	Standard for Aircraft Hand Portable Fire Extinguishers	1/9/2020	F2021
NFPA 409	Standard on Aircraft Hangars	6/27/2018	A2020
NFPA 410	Standard on Aircraft Maintenance	1/4/2018	F2019
NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways	6/27/2018	A2020
NFPA 418	Standard for Heliports	1/3/2019	F2020
NFPA 423	Standard for Construction and Protection of Aircraft Engine Test Facilities	6/27/2018	A2020
NFPA 424	Guide for Airport/Community Emergency Planning	6/30/2020	A2022
NFPA 450	Guide for Emergency Medical Services and Systems	6/27/2018	A2020
NFPA 475	Recommended Practice for Organizing, Managing, and Sustaining a Hazardous Materials/Weapons of Mass Destruction Response Program	1/9/2020	F2021
NFPA 496	Standard for Purged and Pressurized Enclosures for Electrical Equipment	6/27/2018	A2020
NFPA 497	Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas	6/27/2018	A2020
NFPA 499	Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas	6/27/2018	A2020
NFPA 501	Standard of Manufactured Housing	6/27/2018	A2020
NFPA 501A	Standard for Fire Safety Criteria for Manufactured Home Installations Sites, and Communities	1/3/2019	F2020
NFPA 520	Standard on Subterranean Spaces	6/27/2018	A2020
NFPA 550	Guide to the Fire Safety Concepts Tree	1/9/2020	F2021
NFPA 555	Guide on Methods for Evaluating Potential for Room Flashover	6/27/2018	A2020
NFPA 600	Standard on Facility Fire Brigades	1/4/2018	F2019
NFPA 601	Standard for Security Services in Fire Loss Prevention	1/4/2018	F2019
NFPA 655	Standard for Prevention of Sulfur Fires and Explosions	1/9/2020	F2021
NFPA 664	Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities	1/4/2018	F2019
NFPA 704	Standard System for the Identification of the Hazards of Materials for Emergency Response	6/26/2019	A2021
NFPA 731	Standard for the Installation of Electronic Premises Security Systems	1/4/2018	F2019
NFPA 804	Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants	1/4/2018	F2019
NFPA 805	Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants	1/4/2018	F2019
NFPA 806	Performance-Based Standard for Fire Protection for Advanced Nuclear Reactor Electric Generating Plants Change Process	1/4/2018	F2019
NFPA 850	Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations	1/4/2018	F2019
NFPA 853	Standard for the Installation of Stationary Fuel Cell Power Systems	1/4/2018	F2019
NFPA 901	Standard Classifications for Incident Reporting and Fire Protection Data	1/3/2019	F2020
NFPA 909	Code for the Protection of Cultural Resource Properties — Museums, Libraries, and Places of Worship	1/3/2019	F2020
NFPA 921	Guide for Fire and Explosion Investigations	1/4/2018	F2019
NFPA 950	Standard for Data Development and Exchange for the Fire Service	1/4/2018	F2019
NFPA 951	Guide to Utilizing Digital Information	1/3/2019	F2020
NFPA 950	Standard for Data Development and Exchange for the Fire Service	1/4/2018	F2019
NFPA 951	Guide to Building and Utilizing Digital Information	1/3/2019	F2020
NFPA 1000	Standard for Fire Service Professional Qualifications Accreditation and Certification Systems	1/9/2020	F2021
NFPA 1002	Standard for Fire Apparatus Driver/Operator Professional Qualifications	1/9/2020	F2021
NFPA 1006	Standard for Technical Rescue Personnel Professional Qualifications	1/9/2020	F2021
NFPA 1021	Standard for Fire Officer Professional Qualifications	1/4/2018	F2019
NFPA 1031	Standard for Professional Qualifications for Fire Inspector and Plan Examiner	1/3/2019	F2020
NFPA 1033	Standard for Professional Qualifications for Fire Investigator	1/3/2019	F2020
NFPA 1035	Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist and Youth Firesetter Program Manager Professional Qualifications	1/3/2019	F2020
NFPA 1037	Standard on Fire Marshal Professional Qualifications	1/3/2019	F2020
NFPA 1051	Standard for Wildland Firefighting Personnel Professional Qualifications	6/27/2018	A2020
NFPA 1071	Standard for Emergency Vehicle Technician Professional Qualifications	1/4/2018	F2019
NFPA 1072	Standard for Hazardous Materials/Weapons of Mass Destruction		

	Emergency Response Personnel Professional Qualifications	1/9/2020	F2021
NFPA 1122	Code for Model Rocketry	6/30/2020	A2022
NFPA 1124	Code for the Manufacture, Transportation, and Storage of Fireworks and Pyrotechnic Articles	6/27/2018	A2020
NFPA 1125	Code for the Manufacture of Model Rocket and High-Power Rocket Motors	6/26/2019	A2021
NFPA 1126	Standard for the Use of Pyrotechnics Before a Proximate Audience	6/27/2018	A2020
NFPA 1127	Code for High Power Rocketry	4/3/2020	A2022
NFPA 1141	Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas	6/26/2019	A2021
NFPA 1142	Standard on Water Supplies for Suburban and Rural Fire Fighting	6/26/2019	A2021
NFPA 1145	Guide for the Use of Class A Foams in Fire Fighting	6/26/2019	A2021
NFPA 1150	Standard on Foam Chemicals for Fires in Class A Fuels	1/9/2020	F2021
NFPA 1194	Standard for Recreational Vehicle Parks and Campgrounds	6/27/2018	A2020
NFPA 1201	Standard for Providing Fire and Emergency Services to the Public	1/4/2018	F2019
NFPA 1250	Recommended Practice in Fire and Emergency Service Organization Risk Management	1/4/2018	F2019
NFPA 1401	Recommended Practice for Fire Service Training Reports and Records	1/9/2020	F2021
NFPA 1405	Guide for Land-Based Fire Departments that Respond to Marine Vessel Fires	1/4/2018	F2019
NFPA 1407	Standard for Training Fire Service Rapid Intervention Crews	1/4/2018	F2019
NFPA 1408	Standard for Training Fire Service Personnel in the Operation, Care, Use, and Maintenance of Thermal Imagers	1/4/2018	F2019
NFPA 1410	Standard on Training for Emergency Scene Operations	1/4/2018	F2019
NFPA 1521	Standard for Fire Department Safety Officer Professional Qualifications	1/4/2018	F2019
NFPA 1581	Standard on Fire Department Infection Control Program	1/4/2018	F2019
NFPA 1583	Standard on Health-Related Fitness Programs for Fire Department Members	1/4/2018	F2019
NFPA 1584	Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises	1/4/2018	F2019
NFPA 1616	Standard on Mass Evacuation, Sheltering, and Re-entry Programs	1/4/2018	F2019
NFPA 1620	Standard for Pre-Incident Planning	1/4/2018	F2019
NFPA 1670	Standard on Operations and Training for Technical Search and Rescue Incidents	1/9/2020	F2021
NFPA 1901	Standard for Automotive Fire Apparatus	6/27/2018	A2020
NFPA 1906	Standard for Wildland Fire Apparatus	6/27/2018	A2020
NFPA 1911	Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles	1/9/2020	F2021
NFPA 1912	Standard for Fire Apparatus Refurbishing	1/3/2019	F2020
NFPA 1931	Standard for Manufacturer's Design of Fire Department Ground Ladders	1/4/2018	F2019
NFPA 1932	Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders	1/4/2018	F2019
NFPA 1952	Standard on Surface Water Operations Protective Clothing and Equipment	6/27/2018	A2020
NFPA 1953	Standard on Protective Ensembles for Contaminated Water Diving	6/27/2018	A2020
NFPA 1977	Standard on Protective Clothing and Equipment for Wildland Fire Fighting	1/3/2019	F2020
NFPA 1983	Standard on Life Safety Rope and Equipment for Emergency Services	1/6/2021	F2022
NFPA 1984	Standard on Respirators for Wildland Fire Fighting Operations	1/3/2019	F2020
NFPA 1986	Standard on Respiratory Protection Equipment for Tactical and Technical Operations	1/9/2020	F2021
NFPA 1991	Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies	1/3/2019	F2020
NFPA 2010	Standard for Fixed Aerosol Fire-Extinguishing Systems	1/4/2018	F2019