



## Public Input No. 46-NFPA 909-2018 [ Global Input ]

Type your content here ...Remove "ANSI" and "Standard for" from all UL publications referenced in this code.

### Statement of Problem and Substantiation for Public Input

Update of references and removal of repetitive wording and removal of ANSI because many years ago, UL preferred the ANSI/UL reference because there was a transition of traditional UL standards towards an ANSI standards development process.

Now, years later, a large majority of UL Standards are ANSI approved and follow the ANSI development and maintenance process. However, sometimes readers are confused because they don't understand the standards are UL standards, not developed by ANSI. There are many other references to standards promulgated by different standards development organizations where they are considered ANSI approved but do not include ANSI in the reference.

### Submitter Information Verification

**Submitter Full Name:** Kelly Nicoello

**Organization:** UL LLC

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Wed Dec 26 14:58:42 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [CI-32-NFPA 909-2019](#)

**Statement:** This CI serves as a placeholder to permit referenced publications to be updated to the current editions at the second draft stage. Referenced NFPA publications, other than extract references, are updated editorially.



## Public Input No. 50-NFPA 909-2018 [ Section No. 2.3.1 ]

### 2.3.1 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, 2015b 2018b .

ASTM E119, *Standard Tests Methods for Fire Tests of Building Construction and Materials*, 2015 2018b .

ASTM E136, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C*, 2016 2018 .

ASTM E1591, *Standard Guide for Obtaining Data for Fire Growth Models*, 2013.

ASTM E2652, *Standard Test Method for Behavior of Materials in a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*, 2016 2018 .

ASTM E2965. *Standard Test Method for Determination of Low Levels of Heat Release Rate for Materials and Products Using an Oxygen Consumption Calorimeter*, 2017.

## Statement of Problem and Substantiation for Public Input

Date updates and the addition of ASTM E2965 per PI 49.

## Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 49-NFPA 909-2018 [Section No. 9.12.7.2]	

## Submitter Information Verification

**Submitter Full Name:** Marcelo Hirschler

**Organization:** GBH International

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Dec 27 17:23:34 EST 2018

**Committee:** CUL-AAA

## Committee Statement

**Resolution:** CI-32-NFPA 909-2019

**Statement:** This CI serves as a placeholder to permit referenced publications to be updated to the current editions at the second draft stage. Referenced NFPA publications, other than extract references, are updated editorially.



## Public Input No. 47-NFPA 909-2018 [ Section No. 2.3.2 ]

### **2.3.2** UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ANSI/ UL 263, Standard for *Fire Tests of Building Construction and Materials*, 2011, revised 2015 2018 .

ANSI/ UL 723, Standard for *Test for Surface Burning Characteristics of Building Materials*, - 2008, revised 2013 2018 .

### Statement of Problem and Substantiation for Public Input

Update of references and removal of repetitive wording and removal of ANSI because many years ago, UL preferred the ANSI/UL reference because there was a transition of traditional UL standards towards an ANSI standards development process.

Now, years later, a large majority of UL Standards are ANSI approved and follow the ANSI development and maintenance process. However, sometimes readers are confused because they don't understand the standards are UL standards, not developed by ANSI. There are many other references to standards promulgated by different standards development organizations where they are considered ANSI approved but do not include ANSI in the reference.

### Related Public Inputs for This Document

Related Input	Relationship
<a href="#">Public Input No. 48-NFPA 909-2018 [Section No. N.1.2.7]</a>	

### Submitter Information Verification

**Submitter Full Name:** Kelly Nicoello

**Organization:** UL LLC

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Wed Dec 26 15:00:18 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [CI-32-NFPA 909-2019](#)

**Statement:** This CI serves as a placeholder to permit referenced publications to be updated to the current editions at the second draft stage. Referenced NFPA publications, other than extract references, are updated editorially.



## Public Input No. 57-NFPA 909-2019 [ Section No. 3.3.83.5 ]

### 3.3.83.5 Sprinkler System.

A system, commonly activated, by heat from a fire and discharges water over the fire area, that consists of an integrated network of piping designed in accordance with fire protection engineering standards that includes a water supply source, a water control valve, a waterflow alarm, and a drain. The portion of the sprinkler system above ground is a network of specifically sized or hydraulically designed piping installed in a building, structure, or area, generally overhead, and to which sprinklers are attached in a systematic pattern. The system is commonly activated by heat from a fire and discharges water over the fire area. [13, 2016 \_ 2019 ]

### Statement of Problem and Substantiation for Public Input

The added text, "commonly activated by heat from a fire and discharges water over the fire area," revises the definition to match the new definition provided in NFPA 13-2019 section 3.3.206.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 13:44:01 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-1-NFPA 909-2019](#)

**Statement:** Extract update.



## Public Input No. 55-NFPA 909-2019 [ Section No. 4.1 ]

### 4.1 General.

The governing body of the cultural resource property shall adopt protection goals and objectives that reflect the acceptable level of loss for both of the following:

- (1) Items of cultural significance
- (2) Interruption of service to the client community
- (3) Use of the facility as a designated critical operations area for emergency management agencies.

### Statement of Problem and Substantiation for Public Input

This correlates with a related PI. It might be helpful to recognize temporary use of chapels and churches for community emergency management operations.

### Submitter Information Verification

**Submitter Full Name:** Michael Anthony

**Organization:** Standards Michigan Group, LLC

**Affiliation:** [www.standardsmichigan.com](http://www.standardsmichigan.com)

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Wed Jan 02 15:22:12 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-66-NFPA 909-2019](#)

**Statement:** The revision should meet the intent of PI-55 on Section 4.1. The only revision is the addition of the new Item (3)(g).



## Public Input No. 58-NFPA 909-2019 [ Section No. 6.4 ]

### 6.4 Continuity of Essential Building Systems.

The emergency operations component of the protection plan shall include contingencies for the continuity of the following essential building systems, as required:

- (1) Electricity
- (2) Water
- (3) Heating, ventilation, air conditioning (HVAC)
- (4) Detection, ~~suppression,~~ and security systems
- (5) Fuel sources
- (6) Communication systems
- (7) ~~Sprinkler, standpipe, and fire suppression systems~~

### Statement of Problem and Substantiation for Public Input

Two changes were made to better clarify the types of essential systems. The first change deletes the word suppression and adds alarm. These are similar systems. The second change adds sprinkler, standpipe and fire suppression systems.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 14:08:12 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-2-NFPA 909-2019](#)

**Statement:** The revision, in combination with the added definition of 'fire suppression' in Ch. 3, accomplishes what is intended by the submitter of PI-58.



## Public Input No. 59-NFPA 909-2019 [ Section No. 7.3.2 ]

### 7.3.2

The fire safety manager shall be responsible for oversight of all of the following:

- (1) Egress systems
- (2) Fire prevention
- (3) Fire inspections
- (4) Periodic property surveys
- (5) Operation, maintenance, and testing of fire protection equipment, such as fire detection, sprinkler, and fire suppression equipment systems
- (6) Management operational systems (*see Chapter 10*)

### Statement of Problem and Substantiation for Public Input

The change provides clarification that the fire safety manager is responsible for oversight of fire detection, sprinkler and fire suppression systems.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 14:19:45 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-3-NFPA 909-2019](#)

**Statement:** The revision, in combination with the added definition of 'fire suppression' in Ch. 3, accomplishes the intent of PI-59.



## Public Input No. 60-NFPA 909-2019 [ Section No. 7.4.2 ]

### 7.4.2

As a minimum, records of the following shall be kept:

- (1) The protection plan
- (2) Training of staff and volunteers, including fire evacuation drills, damage limitation, and use of portable fire extinguishers
- (3) Inspection, testing, and maintenance reports for all fire safety equipment and systems, including records of actions taken to correct deficiencies
- (4) As-built plans, specifications, wiring and layout diagrams, and acceptance test reports for all fire protection systems (e.g., fire detection and alarm systems, ~~automatic~~ sprinkler and fire suppression systems)
- (5) Inspection reports by local code enforcement officials, the authority having jurisdiction, local fire service officials, and insurance loss control representatives, including records of actions taken to correct deficiencies identified during each inspection
- (6) Fire protection systems actuation and alarm reports that include information on the cause of the alarm or activation, the response, and any corrective action(s) taken
- (7) Full reports of all fire incidents, including the cause, extent of damage, response, and recovery activities

### Statement of Problem and Substantiation for Public Input

The change provides clarification that records must be maintained for both sprinkler and fire suppression systems.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 14:23:54 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** FR-4-NFPA 909-2019

**Statement:** The revision, in combination with the added definition of 'fire suppression' in Ch. 3, accomplishes the intent of PI-60.





## Public Input No. 62-NFPA 909-2019 [ Section No. 9.12.6 ]

### 9.12.6\* Compensatory Features.

Where equivalencies of modifications to existing requirements are proposed, the following fire safety features shall be considered as compensatory:

- (1) Noncombustible or limited-combustible construction materials
- (2) Noncombustible or fire-retardant treated interior finish materials
- (3) Noncombustible or fire-retardant treated materials for furnishings and contents
- (4) Rated walls and doors that prevent the horizontal spread of fire and smoke, to subdivide building areas or to segregate specific hazards, such as boilers, furnaces, or storage areas, from the remainder of the building
- (5) Enclosure of stairways, ventilation shafts, and other vertical openings with rated construction to prevent the vertical spread of fire and smoke
- (6) \* Firestops and fireblocks to prevent the spread of fire within walls, between rafters and joists, and through horizontal and vertical fire barriers
- (7) \* Fire-resistive construction using fire-resistive materials
- (8) \* Fire detection and alarm systems that sound an alarm within the structure and that transmit an alarm signal to an alarm-monitoring location or to a local fire department
- (9) ~~Automatic suppression system~~ Sprinkler systems, automatic suppression systems , manual suppression systems, or a ~~combination of both~~ combination
- (10) Management and operational controls that meet the requirements of Chapter 10
- (11) Installation of arc-fault circuit-interrupters (AFCIs)
- (12) Height of ceilings, with recognition that a large volume of space above head height provides occupants at floor level additional time to evacuate the room or building

### Statement of Problem and Substantiation for Public Input

The change provides clarification that sprinkler systems, automatic suppression systems, manual fire suppression systems, or a combination can be considered as compensatory features.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 15:23:24 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** FR-9-NFPA 909-2019

**Statement:** The revision, in combination with the added definition of 'fire suppression' in Ch. 3, accomplishes the intent of PI-62.



## Public Input No. 49-NFPA 909-2018 [ Section No. 9.12.7.2 ]

### 9.12.7.2 Limited-Combustible Material.

A material shall be considered a limited combustible material where all the conditions of 9.12.7.2(1) and 9.12.7.2(2), and the conditions of either 9.12.7.2.1 or 9.12.7.2.2 are met: [5000:7.1.4.2]

- (1) The material does not comply with the requirements for a noncombustible material, in accordance with 9.12.7.1. [5000:7.1.4.2(1)]
- (2) The material, in the form in which it is used, exhibits a potential heat value not exceeding 3500 Btu/lb (8141 kJ/kg), when tested in accordance with NFPA 259. [5000:7.1.4.2(2)]

#### 9.12.7.2.1

The material shall have the structural base of a noncombustible material with a surfacing not exceeding a thickness of  $\frac{1}{8}$  in. (3.2 mm) where the surfacing exhibits a flame spread index not greater than 50 when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, or ANSI/UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials*. [5000:7.1.4.2.1]

#### 9.12.7.2.2

The material shall be composed of materials that, in the form and thickness used, neither exhibit a flame spread index greater than 25 nor evidence of continued progressive combustion when tested in accordance with ASTM E84 or ANSI/UL 723, and are of such composition that all surfaces that would be exposed by cutting through the material on any plane would neither exhibit a flame spread index greater than 25 nor exhibit evidence of continued progressive combustion when tested in accordance with ASTM E84 or ANSI/UL 723. [5000:7.1.4.2.2]

#### 9.12.7.2.3—

Materials shall be considered limited-combustible materials where tested in accordance with ASTM E2965, Standard Test for Determination of Low Levels of Heat Release Rate for Materials and Products Using an Oxygen Combustion Calorimeter, at an incident heat flux of  $75 \text{ kW/m}^2$  for a 20-minute exposure, and both the following conditions are met:

- (1) The peak heat release rate shall not exceed  $150 \text{ kW/m}^2$  for longer than 10 seconds.
- (2) The total heat released shall not exceed  $8 \text{ MJ/m}^2$  . [5000:7.1.4.2.3]

#### 9.12.7.2.4

Where the term *limited-combustible* is used in this code, it shall also include the term *noncombustible*. [5000:7.1.4.2.3 4 ]

## Statement of Problem and Substantiation for Public Input

This just extracts a new option for limited combustible material in NFPA 5000, based on testing to ASTM E2965. An associated PI will add ASTM E2965 to the section on referenced ASTM standards.

## Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 50-NFPA 909-2018 [Section No. 2.3.1]	

## Submitter Information Verification

**Submitter Full Name:** Marcelo Hirschler

**Organization:** GBH International

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Dec 27 17:19:44 EST 2018

**Committee:** CUL-AAA

### **Committee Statement**

**Resolution:** [FR-5-NFPA 909-2019](#)

**Statement:** The revision extracts a new option for limited-combustible material in NFPA 5000, based on testing to ASTM E2965.



## Public Input No. 51-NFPA 909-2018 [ Section No. 9.12.8 ]

### 9.12.8 Fire Spread Control.

#### 9.12.8.1

New openings in fire-rated assemblies, such as for doorways and pipe and duct penetrations, shall have self-closing or automatic fire doors and automatic fire dampers having fire resistance ratings in accordance with the applicable building code.

#### 9.12.8.2

Actuation of any automatic fire protection system in a fire area shall close all automatic fire dampers in the fire areas served by the system.

#### 9.12.8.3

Penetrations in fire-rated assemblies around wiring, pipes, ducts, and so forth, shall be sealed with approved materials to maintain the integrity of the fire-rated assembly.

#### 9.12.8.4

New elevator shafts, dumbwaiters, stairways, and other vertical openings through the structure shall be constructed in a manner to prevent the spread of fire, smoke, and heat from one level to another.

#### 9.12.8.5

New doors in fire-rated assemblies that are required to remain in the open position for any reason shall be equipped with approved door-holding devices controlled by a listed device or system.

#### 9.12.8.6

Unless otherwise required by the applicable building code, the fire resistance rating required by this code shall be assessed by testing in accordance with ASTM E119, Standard Tests Methods for Fire Tests of Building Construction and Materials, or UL 263, Standard for Fire Tests of Building Construction and Materials..

## Statement of Problem and Substantiation for Public Input

Testing for fire resistance rating in US building codes, whether NFPA 5000 or IBC, is conducted using ASTM E119 (or its equivalent, UL 263). The NFPA version of ASTM E119 has been withdrawn several years ago. It is always important to specify the test method to be used for assessing any fire property, such as a fire resistance rating.

## Submitter Information Verification

**Submitter Full Name:** Marcelo Hirschler

**Organization:** GBH International

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Dec 27 17:33:35 EST 2018

**Committee:** CUL-AAA

## Committee Statement

**Resolution:** [FR-67-NFPA 909-2019](#)

**Statement:** Testing for fire resistance rating in US building codes is conducted using ASTM E119 or UL 263. It is important to specify the test method to be used for assessing any fire property, such as fire resistance rating. The applicable building code can be referenced in jurisdictions where neither ASTM E119 nor UL 263 is utilized.



## Public Input No. 64-NFPA 909-2019 [ Section No. 9.12.9.1 ]

### 9.12.9.1 Existing Protection Systems.

The project team shall evaluate the design and layout of existing electronic premises security, fire detection, sprinkler, and fire suppression systems for impairments caused by the project work.

### Statement of Problem and Substantiation for Public Input

The change provides clarification that existing sprinkler systems must be evaluated by the project team.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 15:29:22 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-6-NFPA 909-2019](#)

**Statement:** The revision, in combination with the added definition of 'fire suppression' in Ch. 3, accomplishes the intent of PI-64.



## Public Input No. 65-NFPA 909-2019 [ Section No. 9.12.12.1 ]

### 9.12.12.1

Automatic fire ~~suppression~~ sprinkler and standpipe systems shall be monitored for water flow and tamper by a fire alarm system complying with *NFPA 72*.

### Statement of Problem and Substantiation for Public Input

The change provides clarification that sprinkler and standpipe system waterflow and tamper switches shall be monitored.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 15:32:04 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-68-NFPA 909-2019](#)

**Statement:** The revision should meet the intent of PI-65.



## Public Input No. 66-NFPA 909-2019 [ Section No. 9.12.13.3.4 ]

### 9.12.13.3.4

A corrosion protection plan incorporating the design features and components required by NFPA 13 shall be developed to address piping corrosion- ~~in accordance with NFPA 13~~ .

### Statement of Problem and Substantiation for Public Input

The previous language implied that NFPA 13 has a requirement to prepare a corrosion protection plan. The revised language better characterizes that the intent that the plan required by NFPA 909 must address corrosion based on the requirements of NFPA 13.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 15:39:38 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-7-NFPA 909-2019](#)

**Statement:** The previous language implied that NFPA 13 has a requirement to prepare a corrosion protection plan. The revised language better characterizes that the intent that the plan required by NFPA 909 must address corrosion based on the requirements of NFPA 13.



## Public Input No. 68-NFPA 909-2019 [ Section No. 9.12.13.3.6.3 ]

### 9.12.13.3.6.3

Where the inspection or examinations required by 9.12.13.3.6.1 or 9.12.13.3.6.3 2 reveal that pitting, nodules, tubercles, or carbuncles are present, an obstruction investigation shall be conducted in accordance with the requirements of NFPA 25.

### Statement of Problem and Substantiation for Public Input

The change corrects the reference to 9.12.13.6.2 for alternative nondestructive examination.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 15:54:52 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-8-NFPA 909-2019](#)

**Statement:** The change corrects the reference to 9.12.13.6.2 for alternative nondestructive examination.





## Public Input No. 69-NFPA 909-2019 [ Section No. 9.12.24.4.1.1 ]

### 9.12.24.4.1.1

~~An automatic~~ A sprinkler system or alternative fire suppression system shall be required for compact storage of collections.

### Statement of Problem and Substantiation for Public Input

The change provides clarification that a sprinkler system is required to be used for protection of compact storage.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 18:25:21 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** The added definition of 'fire suppression' in Ch. 3 accomplishes the intent of this input.



## Public Input No. 70-NFPA 909-2019 [ Section No. 9.12.24.4.1.4 ]

### 9.12.24.4.1.4 System Design.

#### (A)\*

The ~~automatic fire suppression- sprinkler~~ system, the compact storage system, and the storage compartmentalization features shall be designed to limit fire damage in accordance with the facility's fire safety objectives.

#### (B)

Design calculations shall include the number and size of the storage modules, the separation provided between the modules end-to-end and back-to-back, and type of material being stored.

#### (C)

~~Where the automatic fire suppression is provided by automatic fire sprinkler systems, the systems~~  
Sprinkler systems shall be wet pipe, single interlock preaction, or non-interlock preaction systems.

#### (D)

Dry pipe or double-interlock preaction sprinkler systems shall not be installed in compact storage areas.

#### (E)

Where compact storage is installed in an existing storage area, the existing automatic fire detection, sprinkler, and fire suppression systems shall be modified as required to accommodate the increased fire loading.

## Statement of Problem and Substantiation for Public Input

The change provides clarification that a sprinkler system can be effectively used for protection of compact storage.

## Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 18:33:41 EST 2019

**Committee:** CUL-AAA

## Committee Statement

**Resolution:** [FR-10-NFPA 909-2019](#)

**Statement:** The revision, in combination with the added definition of 'fire suppression' in Ch. 3, accomplishes the intent of PI-70.



## Public Input No. 72-NFPA 909-2019 [ New Section after 9.12.24.7 ]

### 9.12.24.7.2

An automatic sprinkler system shall be required for wet collections.

### Statement of Problem and Substantiation for Public Input

Proposed FPRF testing of wet collections will result in new protection criteria. This PI indicates that sprinkler protection is required. Another section will be added regarding system design.

### Related Public Inputs for This Document

Related Input	Relationship
<a href="#">Public Input No. 71-NFPA 909-2019 [Section No. 9.12.24.7]</a>	
<a href="#">Public Input No. 73-NFPA 909-2019 [New Section after 9.12.24.7]</a>	

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 19:01:25 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** It is recognized that additional data and testing is anticipated. This PI will be brought up for a future edition as that information becomes available.



## Public Input No. 73-NFPA 909-2019 [ New Section after 9.12.24.7 ]

### **9.12.24.7.3 System Design.**

(A) The automatic sprinkler system, the wet collections storage shelving units, and the storage room compartmentalization features shall be designed to limit fire damage in accordance with the facility's fire safety objectives.

(B) The automatic fire sprinkler systems shall be wet pipe, single interlock preaction, or non-interlock preaction systems.

(C) Dry pipe and double-interlock preaction sprinkler systems shall not be installed in wet collections storage areas.

(D) The basis of design for the sprinkler systems shall be on full scale fire testing.

(E) Where wet collections storage is installed in an existing storage area, the existing automatic fire detection, sprinkler, and fire suppression systems shall be modified as required to accommodate the increased fire loading.

### **Statement of Problem and Substantiation for Public Input**

This PI is intended to be a placeholder for protection criteria to be provided based upon full scale fire testing to be proposed to FPRF.

### **Related Public Inputs for This Document**

<b>Related Input</b>	<b>Relationship</b>
<a href="#">Public Input No. 71-NFPA 909-2019 [Section No. 9.12.24.7]</a>	
<a href="#">Public Input No. 72-NFPA 909-2019 [New Section after 9.12.24.7]</a>	

### **Submitter Information Verification**

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 19:05:42 EST 2019

**Committee:** CUL-AAA

### **Committee Statement**

**Resolution:** It is recognized that additional data and testing is anticipated. This PI will be brought up for a future edition as that information becomes available.



## Public Input No. 71-NFPA 909-2019 [ Section No. 9.12.24.7 ]

### 9.12.24.7 Wet Collections.

9.12.24.7.1 Shelving units used to hold wet collections shall meet the following requirements:

- (1) Designed to support the loads placed on them
- (2) Tied together or anchored securely to prevent an earthquake or other event from toppling one or more shelves
- (3) Constructed with raised lips and barriers across all open shelves to prevent containers from falling off the shelf
- (4) Anchored and braced in storage areas that are subject to earthquakes
- (5)\* Designed such that anchors and bracing provide shelving with strength equal to or greater than the building structure

### Statement of Problem and Substantiation for Public Input

Proposed FPRF testing of wet collections will result in new protection criteria. This PI will reconfigure this section to match 9.12.24 for Compact Storage. The PI creates a Heading and subsection. PI 72 adds a second subsection regarding fire protection criteria.

### Related Public Inputs for This Document

Related Input	Relationship
<a href="#">Public Input No. 72-NFPA 909-2019 [New Section after 9.12.24.7]</a>	
<a href="#">Public Input No. 73-NFPA 909-2019 [New Section after 9.12.24.7]</a>	

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 18:58:26 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** It is recognized that additional data and testing is anticipated. This PI will be brought up for a future edition as that information becomes available.



## Public Input No. 74-NFPA 909-2019 [ Section No. 9.12.24.8.3 ]

### 9.12.24.8.3

~~An automatic fire suppression~~ A sprinkler system designed and installed in compliance with NFPA 13 shall be installed in the book stacks.

### Statement of Problem and Substantiation for Public Input

Provides clarification that a sprinkler system is required.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 19:26:39 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-11-NFPA 909-2019](#)

**Statement:** Provides clarification that a sprinkler system is required.



## Public Input No. 75-NFPA 909-2019 [ Section No. 9.12.25.1.2 ]

### 9.12.25.1.2

The proposed exhibit shall not compromise or adversely affect the following in the exhibit, the exhibition area, or the building:

- (1) Egress systems, equipment, and measures
- (2) Emergency access
- (3) Fire protection systems, including detection, alarms, sprinklers, and automatic suppression
- (4) Fire safety
- (5) Emergency lighting systems

### Statement of Problem and Substantiation for Public Input

Provides differentiation of sprinkler and fire suppression systems.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 19:30:50 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-69-NFPA 909-2019](#)

**Statement:** The revision in combination with the proposed definition of 'fire suppression' meets the intent of PI-75.



## Public Input No. 76-NFPA 909-2019 [ Section No. 9.12.25.2 ]

### 9.12.25.2 Exhibit Cases.

#### 9.12.25.2.1

Fixed exhibit cases that are integral with the building structure in fully protected buildings or where ~~fire suppression- sprinkler~~ systems are required by the applicable building code shall be equipped with approved fire detection and ~~suppression- sprinkler~~ systems.

#### 9.12.25.2.1.1\*

Fixed or movable exhibit cases that are not integral with the building structure in fully protected buildings or where ~~fire suppression- sprinkler~~ systems are required by the applicable building code shall be equipped with approved fire detection systems.

#### 9.12.25.2.1.2

~~Fire suppression- Sprinkler~~ systems shall be permitted to be deleted when the exhibit cases have all of the following:

- (1) No internal ignition sources
- (2) Full enclosure with complete sides, top, and bottom that are not integral with the building structure
- (3) Do not communicate directly with the primary HVAC system or with void spaces in the walls, floor, or ceiling
- (4) Fixed cases constructed of metal, glass, or other noncombustible material
- (5) The areas around the exhibit cases protected by an automatic ~~fire suppression- sprinkler~~ system

#### 9.12.25.2.2\*

Light fixtures, motors, active climate control systems, or other electrical or mechanical components installed in exhibit cases shall be located outside the artifact chamber.

#### 9.12.25.2.3\*

Where flammable or highly combustible materials are displayed in exhibit cases, whether movable or fixed, the cases or the areas in which they are located shall be protected by approved fire detection and ~~fire suppression- sprinkler~~ systems.

## Statement of Problem and Substantiation for Public Input

Provides clarification regarding code required sprinkler systems.

## Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 19:35:02 EST 2019

**Committee:** CUL-AAA

## Committee Statement

**Resolution:** The added definition of 'fire suppression' in Ch. 3 accomplishes the intent of PI-75.





## Public Input No. 32-NFPA 909-2018 [ Section No. 12.2.5.1 ]

### 12.2.5.1

Maintenance shall be performed to keep all fire protection systems operable, and ~~necessary~~ repairs shall be made.

### Statement of Problem and Substantiation for Public Input

In light of the disastrous fires in Scotland and Brazil in less than 3 months time in just this year, it is imperative that the importance of repair work to fire protection systems be heightened. The word "necessary" is subjective, leaving it to the governing body and/or fire safety manager to decide what is a "necessary" repair and what, in their view, is not. If fire protection systems are being inspected and tested according to the respective documents referenced in Chapter 12, which is the expectation, then an item notated for repair as a result of such inspections and tests is a necessary repair on the basis of that NFPA-based inspection and test, not on the basis of a subjective determination of what is a necessary repair. Allowing a subjective process to take place with regard to repair work is to gamble with precious, irreplaceable resources. The removal of this subjective language still gives the end-user the flexibility to determine how those necessary repairs will take place in line with their protection plan rather than if they should take place at all.

### Submitter Information Verification

**Submitter Full Name:** Joe Scibetta

**Organization:** BuildingReports

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Wed Sep 05 14:04:45 EDT 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-12-NFPA 909-2019](#)

**Statement:** In light of the disastrous fires in Scotland and Brazil in less than 3 months time in just this year, it is imperative that the importance of repair work to fire protection systems be heightened. The word "necessary" is subjective, leaving it to the governing body and/or fire safety manager to decide what is a "necessary" repair and what, in their view, is not. If fire protection systems are being inspected and tested according to the respective documents referenced in Chapter 12, which is the expectation, then an item notated for repair as a result of such inspections and tests is a necessary repair on the basis of that NFPA-based inspection and test, not on the basis of a subjective determination of what is a necessary repair. Allowing a subjective process to take place with regard to repair work is to gamble with precious, irreplaceable resources. The removal of this subjective language still gives the end-user the flexibility to determine how those necessary repairs will take place in line with their protection plan rather than if they should take place at all.



## Public Input No. 54-NFPA 909-2019 [ Section No. 13.8.3 ]

### 13.8.3

A licensed or registered electrician shall verify that electrical circuits do not exceed their rated capacity in accordance with Article 590 of the National Electrical Code (NFPA 70) .

### Statement of Problem and Substantiation for Public Input

Just a suggestion to get more granular about the references to the NEC.

### Submitter Information Verification

**Submitter Full Name:** Michael Anthony

**Organization:** Standards Michigan Group, LLC

**Affiliation:** www.standardsmichigan.com

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Wed Jan 02 15:15:57 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** Compliance with NFPA 70 is already required by 13.8.1.



## Public Input No. 77-NFPA 909-2019 [ Section No. 14.4.4.3.1 ]

### 14.4.4.3.1\*

Storage of collections preserved in combustible or flammable petrochemicals shall comply with the requirements of NFPA 30 and 9 .12.24.7.

### Statement of Problem and Substantiation for Public Input

This PI adds a tie to the general requirements for wet collections.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 19:45:05 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-71-NFPA 909-2019](#)

**Statement:** The revision adds a reference to the general requirements for wet collections.



## Public Input No. 37-NFPA 909-2018 [ Section No. A.7.1.1 ]

### A.7.1.1

An important element of the vulnerability assessment is a qualitative or quantitative fire risk assessment. Techniques for preparing a fire risk assessment are presented in the *SFPE Engineering Guide to Performance-Based Fire Protection- Analysis and Design of Buildings* ; *SFPE Engineering Guide to Fire Risk Assessment*, NFPA's *Fire Protection Handbook*, Chapters 3.7, 3.8, and 3.11; and the *SFPE Handbook of Fire Protection Engineering*,- Section-5 . NFPA 551 provides guidance on how to evaluate fire risk assessments.

### Statement of Problem and Substantiation for Public Input

Three edits are suggested:

1. To provide correct name of the SFPE Engineering to Performance-Based Fire Protection
2. Add the SFPE Engineering Guide to Fire Risk Assessment, 2006 to list of publications that provide information on conducting fire risk assessments
3. The current edition of the SFPE Handbook of Fire Protection Engineer no longer has Sections. So the edit is needed to delete section 5.

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Tue Dec 18 10:26:26 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-13-NFPA 909-2019](#)

**Statement:** The revision accomplishes the following:

1. Provides correct name of the SFPE Engineering Guide to Performance-Based Fire Protection
2. Adds the SFPE Engineering Guide to Fire Risk Assessment, 2006 to list of publications that provide information on conducting fire risk assessments (see FR-30 on Annex N)
3. The current edition of the SFPE Handbook of Fire Protection Engineering no longer has Sections, so the revision is needed to delete "Section 5."



## Public Input No. 33-NFPA 909-2018 [ Section No. A.7.4.1 ]

### A.7.4.1

Some records should be kept longer than others. ~~The~~ When specifying the retention period for each type of record, the fire safety management component of the protection plan should specify- take into account the retention period for each type of record minimum retention periods required by applicable documents referenced in this standard .

### Statement of Problem and Substantiation for Public Input

The intent of this PI is to refer the user of the standard to referenced documents when specifying the retention period for each record addressed in the protection plan. Current wording of this annex note is too vague and allows for the possibility of specifying a retention period that fails to meet the minimum requirements called for in documents related to installation, inspection, testing and maintenance.

### Submitter Information Verification

**Submitter Full Name:** Joe Scibetta

**Organization:** BuildingReports

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Sep 06 11:35:12 EDT 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-14-NFPA 909-2019](#)

**Statement:** The revision references "established retention periods" rather than a general reference to applicable standards as suggested in PI-33 since all applicable standards might not specify record retention periods.



## Public Input No. 78-NFPA 909-2019 [ Section No. A.9.12.4 ]

### A.9.12.4

Equivalency refers to alternative measures of protection that can be established to provide a level of safety equivalent to the prevailing code. For example, the installation of fire detection, sprinkler protection, and suppression that is not legally required in place of structurally altering the interior of a building can result in an equivalent level of protection. Less common is the compensation for a code deficiency by operational features — for example, compensating for a dead-end corridor with occupant training.

Equivalency is a common code clause that allows other means of compliance if they can be demonstrated and documented. There are many ways to address the issue of documenting equivalency, such as, in order of complexity, precedents, ad hoc equivalency, risk indexing, and component performance evaluation.

Precedents are continually established in the regulation of fire safety for cultural resource properties and historic buildings. They represent acceptable alternatives that have not been formally incorporated into a regulatory document. The annexes of this document are a unique source for identifying many of these precedents. Others might be available locally.

Ad hoc equivalency can be established by employing subjective logic. One qualitative approach used to evaluate alternative arrangements for equivalent safety is NFPA 550. The tree is a logic diagram that represents all possible means of meeting fire safety objectives. Increasing fire safety measures on one branch of the tree can offset a lack of required measures on another branch, thus establishing an arrangement of equivalent fire protection.

Fire risk indexing is a method that should be permitted to be used to establish conformance to a prevailing code. This process consists of a multi-attribute decision analysis approach to quantitatively balance variables of risk, hazard, and safety to achieve an acceptable level of fire safety. Fire risk indexing is a systematic approach to equivalency that considers the building in its entirety and produces a calculated value to identify the degree of compliance with the intent of a prescriptive code.

The following documents have an established record of meeting code objectives through an indexing approach:

- (1) NFPA 101A, Chapters 4 through 9
- (2) *Wisconsin Historic Building Code*, Subchapter IV, Building Evaluation Method, Chapter ILHR 70

Performance-based fire safety can also be approached on a component basis rather than a systematic basis. Some fire safety components already have a form of performance criteria such as fire resistance. Component performance can also be evaluated on a more ad hoc basis through the use of equivalency clauses in building codes. Codifying more component performance criteria can provide solutions for many problems. For example, establishing measurable fire safety objectives for doors, stairs, fire escapes, dead ends, exit signs, and similar features is particularly useful for dealing with these issues in existing cultural resource properties, particularly in historic buildings.

## Statement of Problem and Substantiation for Public Input

Adds sprinkler protection as an equivalency.

## Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 19:52:41 EST 2019

**Committee:** CUL-AAA

### **Committee Statement**

**Resolution:** The new definition of 'fire suppression' in Ch. 3 should accomplish what is intended by the submitter.



## Public Input No. 79-NFPA 909-2019 [ Section No. A.9.12.9 ]

### A.9.12.9

Without automatic fire protection systems, fire-resistive or noncombustible construction can survive, but combustible contents in the fire compartment will not. Fire protection systems should provide for both detection and extinguishment. While these functions are separate, they can and often should be consolidated into one continuous fire protection system that detects a fire, sounds the alarm, alerts the fire service, and initiates automatic extinguishing devices. Smoke detection systems provide an opportunity for occupant action with portable fire extinguishers before fire development activates the automatic sprinkler or other fire suppression system. Careful planning permits the installation of the necessary equipment with a minimal effect on the appearance or use of the public spaces in the cultural resource facility.

Additional descriptions, applications, and limitations of the fire protection systems mentioned in this chapter are contained in Annex C, Section C.3, Glossary of Fire Protection Systems.

Planning for the fire protection equipment must also include providing and maintaining an adequate water supply to support standpipe and hose systems for fire service as well as for automatic sprinkler systems.

A vast selection of makes, models, and styles of fire protection equipment are available today to meet practically any need a cultural resource property might have. Choosing a reputable supplier and installer is a crucially important decision that a fire protection consultant can assist a library in making. In lieu of a consultant, other valuable information can usually be obtained from the insurer, other businesses or cultural properties in the area, and the local fire department. The cultural resource property should seek to procure a system for which parts and service are readily available now and will be in the future. In addition, the fire protection equipment and system should be listed or approved.

Many states and jurisdictions now require designers and installers of fire protection systems to be licensed and certified by national boards. Prospective installers should be asked to show proof of their qualifications, as well as their experience in installing similar systems, preferably in similar occupancies. Check to see how satisfied these other businesses were with the installation and final product. Libraries generally have special concerns and needs, especially in book-stack areas, and these must be discussed in detail with the contractor prior to beginning work. A detailed construction schedule is helpful and should be worked out in advance. The staff should also be made aware of the improvements to take place and how these fire protection systems work.

Once a fire protection system is installed, it is imperative that the system be thoroughly inspected, tested, and maintained to ensure that it functions properly.

## Statement of Problem and Substantiation for Public Input

The reference to library has been deleted since the discuss is general and applies to other cultural properties.

## Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 19:57:33 EST 2019

**Committee:** CUL-AAA

## Committee Statement

**Resolution:** [FR-15-NFPA 909-2019](#)

**Statement:** The revision clarifies the committee's intent and meets the intent of PI-79.





## Public Input No. 80-NFPA 909-2019 [ Section No. A.9.12.13.4.2 ]

### A.9.12.13.4.2

It is imperative for the installer to follow the manufacturer's installation instructions to be sure pipe joints are made up properly and to prevent clogging pipes, fittings, and sprinkler head orifices with solvent cement. Following are some of the precautions that should be taken:

- (1) Make certain that thread sealants, gasket lubricants, or fire stop materials are compatible with the CPVC pipe
- (2) Use tools specifically designed for use with plastic pipe and fittings
- (3) Use only approved solvent cements in accordance with the manufacturer's application instructions
- (4) Pipe ends should be cut square, deburred, and beveled before solvent cementing
- (5) Rotate pipe quarter turn when bottoming pipe in fitting sockets
- (6) Prevent puddling of solvent cement in pipe and fittings, and take special care to keep solvent cement out of sprinkler head orifices
- (7) Follow the manufacturer's instructions on cure times before pressure testing
- (8) Use only insulation and/or glycerin and water solutions for freeze protection
- (9) Allow for movement of the pipe due to expansion and contraction
- (10) Use only latex paint on CPVC pipe

### Statement of Problem and Substantiation for Public Input

This PI deletes the word "head," which has been removed from NFPA 13.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 20:03:12 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-16-NFPA 909-2019](#)

**Statement:** The revision deletes the term "head," which has been removed from NFPA 13, in two places.



## Public Input No. 81-NFPA 909-2019 [ Section No. A.9.12.24.4.1.3 ]

### A.9.12.24.4.1.3

The ~~automatic fire suppression~~ sprinkler system, the compact storage system, and the storage compartmentation features should be designed to limit fire damage in accordance with the facility's fire safety objectives (e.g., confine fire growth to the compact storage module of origin). Significant factors to consider include the number and size of the storage modules, the separation provided between the modules (end-to-end and back-to-back), and the type of materials being stored. In general, double-interlock preaction systems and dry pipe systems are inappropriate for compact storage, because of the additional delay they introduce, coupled with the delays in activation resulting from the compact storage units themselves.

Other protection features should be considered to limit the extent of the potential fire damage, including the following:

- (1) Very high density sprinkler systems
- (2) Quick-response sprinklers
- (3) Early-warning smoke detectors
- (4) Spacers between carriages or, for automated systems, automatic park mode to increase flue spaces between carriages upon activation of a fire alarm or during idle periods
- (5) Metal vertical barriers in the middle of the shelf
- (6) Open-top shelving

### Statement of Problem and Substantiation for Public Input

The change provides clarification that a sprinkler system is to be used for protection of compact storage.

### Submitter Information Verification

**Submitter Full Name:** Mark Hopkins

**Organization:** National Fire Sprinkler Association

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 20:08:51 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** The new definition of 'fire suppression' in Ch. 3 should accomplish what is intended by the submitter.



## Public Input No. 38-NFPA 909-2018 [ Section No. A.9.13 ]

### A.9.13

Section 9.13 provides requirements for the evaluation of a performance-based protection design. The evaluation process is summarized in Figure 9.2. On the left-hand side of Figure 9.2 is input from the code. The life safety and cultural resource property preservation goals have been stated in Section 4.2. The objectives necessary to achieve these goals are stated in Section 4.3, and 9.13.9, Performance Criteria, specifies the measures that are to be used to determine whether the objectives have been met.

At the top of Figure 9.2 is the input necessary to evaluate a fire-safe design. The design specifications need to include certain retained prescriptive requirements. All assumptions about the life safety design, the fire safety design, and the response of the building and its occupants to a fire must be clearly stated as indicated in 9.13.13.2. Scenarios are used to assess the adequacy of the design as specified in 9.13.16. Eight sets of initiating events are specified for performance-based fire protection designs, which the ensuing outcomes need to be satisfactory.

Appropriate methods for assessing performance are to be used per 9.13.15. Safety factors need to be applied to account for uncertainties in the assessment as stated in 9.13.22. If the resulting predicted outcomes of the scenarios are bounded by the performance criteria, the objectives have been met and the fire safety design, coupled with the goals of maintaining the culturally significant features of the building under evaluation, is considered to be in compliance with this code. A design that fails to comply can be changed and reassessed as indicated on the right-hand side of Figure 9.2.

The approval and acceptance of a fire safety design depend on the quality of the documentation of the process. The minimum documentation that needs to accompany a submission is specified by 9.13.23.

The performance option of this code establishes acceptable levels of risk to occupants of buildings and structures as addressed in Section 4.2 and evaluates the degree or extent to which the proposed designs will alter or impact the culturally significant features of the property. While the performance option of this code does contain goals, objectives, and performance criteria necessary to provide an acceptable level of risk to culturally significant collections and building features, it does not describe how to meet the goals, objectives, and performance criteria. Design and engineering analysis are needed to develop solutions that meet the provisions of this chapter. The *SFPE Engineering Guide to Performance-Based Fire Protection Analysis and Design of Buildings* - provides a framework for these assessments. Other useful references include the Australian *Fire Safety Engineering Guidelines* and the British Standard BS 7974, *Application of Fire Safety Engineering Principles to the Design of Buildings*.

## Statement of Problem and Substantiation for Public Input

Edit needed to provide correct title of the SFPE Guide.

## Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Tue Dec 18 10:39:05 EST 2018

**Committee:** CUL-AAA

## Committee Statement

**Resolution:** [FR-17-NFPA 909-2019](#)

**Statement:** The revision corrects the title of the SFPE Guide.



## Public Input No. 39-NFPA 909-2018 [ Section No. A.9.13.4 ]

### A.9.13.4

A third-party reviewer is a person or group of persons chosen by the authority having jurisdiction to review proposed performance-based designs. [The SFPE Guidelines for Peer Review in the Fire Protection Design Process \(2009\)](#) address the initiation, scope, conduct, and report of a 3rd party review of a fire protection engineering design.

### Statement of Problem and Substantiation for Public Input

The SFPE Peer Review Guide provides information on how to conduct a 3rd party review for a performance-based design.

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Tue Dec 18 10:42:03 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-18-NFPA 909-2019](#)

**Statement:** The SFPE Peer Review Guide provides information on how to conduct a third-party review for a performance-based design.



## Public Input No. 40-NFPA 909-2018 [ Section No. A.9.13.11 ]

### A.9.13.11

This evaluation should consider the use of multiple or redundant systems, features, and techniques. Prioritizing what, if any, culturally significant objects or building features are deemed acceptable to be lost to a fire needs to be evaluated and determined. The following could be potential areas of evaluation for the design team:

- (1) Set detailed performance criteria that would ensure that selected rooms or spaces are protected from flame, heat, or smoke. The *SFPE Engineers Guide to Performance-Based Analysis and Design of Buildings Fire Protection* describes a process of establishing damage limits. The *SFPE Handbook of Fire Protection Engineering* also contains relevant information on thermal damage to various building materials and information on corrosivity of smoke.
- (2) Demonstrate for each design fire scenario and the design specifications, conditions, and assumptions that each room or area will be fully isolated from the conditions in that room at a level where irreversible damage can occur.
- (3) Demonstrate for each design fire scenario and the design specifications, conditions, and assumptions that conditions will not reach a level where irreversible damage can occur in any room. The advantage of this procedure is that it conservatively requires that no culturally significant item need to be exposed to harm, regardless of where the room or space is located.
- (4) Demonstrate for each design fire scenario and the design specifications, conditions, and assumptions that no fire effects will reach any room or space beyond the room of origin. An advantage of this method is that it also removes the need for some of the modeling of fire effects, because it is not necessary to model the filling of rooms, only the spread of fire effects to those rooms. This method is even more conservative and simple than the procedures in A.9.13.11(2) and A.9.13.11(3), because it does not allow any harmful effects into any room with culturally significant features.

### Statement of Problem and Substantiation for Public Input

Edit need to provide correct title for the SFPE Guide.

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Tue Dec 18 10:46:03 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** FR-19-NFPA 909-2019

**Statement:** The revision provides the correct title for the SFPE Guide.



## Public Input No. 44-NFPA 909-2018 [ Section No. A.9.13.13.5.1 ]

### A.9.13.13.5.1

Examples of design features that might be incorporated to modify expected occupant characteristics include training, use of staff to assist with notification and movement, or type of notification appliance used. The SFPE Guide to Human Behavior in Fire, 2nd edition (2018), provides a listing and description of the relevant occupant characteristics that could be considered in this analysis.

### Statement of Problem and Substantiation for Public Input

The SFPE Engineering Guide to Human Behavior in Fire, 2nd edition (2018) has an entire chapter that list relevant occupant characteristics that can be assumed as part of a performance-based design. The guide also has an entire chapter dedicated to defining human behavior scenarios that are based on the occupant characteristics.

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Wed Dec 19 11:56:41 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-20-NFPA 909-2019](#)

**Statement:** The SFPE Guide to Human Behavior in Fire, 2nd edition (2019) has an entire chapter that list relevant occupant characteristics that can be assumed as part of a performance-based design. The guide also has an entire chapter dedicated to defining human behavior scenarios that are based on the occupant characteristics.



## Public Input No. 41-NFPA 909-2018 [ Section No. A.9.13.14 ]

### A.9.13.14

Design fire scenarios define the challenge a building is expected to withstand. They also need to define the threat to the culturally significant features or attributes of the building. Design fire scenarios capture and limit value judgments on the type and severity of the fire challenge to which a proposed fire safety system needs to respond. The system includes any or all of the following aspects of the proposed design that are intended to mitigate the effects of a fire:

- (1) Egress capabilities
- (2) Automatic detection
- (3) Barriers
- (4) Staff training
- (5) Placement of manual extinguishers

Design fire scenarios come from two sources — those that are specified in 9.13.16.2 through 9.13.16.9 and those that are developed by the design team based on the unique characteristics of the building as required by 9.13.16.2.1. In most, if not all, cases more than one design fire scenario should be developed to meet the requirements of 9.13.16.2.1.

Once the set of design fire scenarios is established — both those specified by 9.13.16.2 through 9.13.16.9 and those that are developed as required by 9.13.16.2.1 — they must be quantified into a format that can be used for the evaluation of proposed designs. The *SFPE Engineering Guide to Performance-Based Fire Protection- Analysis and Design of Buildings* - outlines a process and identifies the tools and references that can be used at each step of this process.

## Statement of Problem and Substantiation for Public Input

Edit need to provide correct title of the SFPE Guide.

## Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Tue Dec 18 12:00:35 EST 2018

**Committee:** CUL-AAA

## Committee Statement

**Resolution:** [FR-21-NFPA 909-2019](#)

**Statement:** The revision provides the correct title of the SFPE Guide.



## Public Input No. 42-NFPA 909-2018 [ Section No. A.9.13.19.4 ]

### A.9.13.19.4

Procedures used to develop required input data need to preserve the intended conservatism of all scenarios and assumptions. Conservatism is only one means to address the uncertainty inherent in calculations and does not remove the need to consider safety factors, sensitivity analysis, and other methods of dealing with uncertainty. The *SFPE Engineering Guide to Performance-Based Fire Protection Analysis and Design of Buildings* - outlines a process for identifying and treating uncertainty.

### Statement of Problem and Substantiation for Public Input

Edit needed to provide correct title of the SFPE Guide.

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Tue Dec 18 12:02:35 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-22-NFPA 909-2019](#)

**Statement:** The revision provides the correct title of the SFPE Guide.





## Public Input No. 45-NFPA 909-2018 [ New Section after A.9.13.20 ]

### A.9.13.21

The SFPE Engineering Guide for Substantiating a Fire Model for a Given Application (2013) provides a methodology for validating and verifying models (computer-based and hand calculations).

### Statement of Problem and Substantiation for Public Input

The SFPE Guide for Substantiating a Fire Model for a Given Application (2011) provides a framework for selecting, validating, and verifying a model for a selected application. The models that are discussed in this guide range from simple hand calculations to advanced computer-based applications.

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Wed Dec 19 12:11:20 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** FR-24-NFPA 909-2019

**Statement:** The SFPE Guidelines for Substantiating a Fire Model for a Given Application provide a framework for selecting, validating, and verifying a model for a selected application. The models that are discussed in this guide range from simple hand calculations to advanced computer-based applications.



## Public Input No. 43-NFPA 909-2018 [ Section No. A.9.13.23 ]

### A.9.13.23

The *SFPE Engineering Guide to Performance-Based Fire Protection- Analysis and Design of Buildings* describes the documentation that should be provided for a performance-based fire safety design.

Proper documentation of a performance-based design is critical to the design acceptance and construction. Proper documentation also assures that all parties involved understand what is necessary for the design implementation, maintenance, and continuity of the fire protection design. If attention to detail is maintained throughout documentation, there should be little dispute during approval, construction, start-up, and use.

Poor documentation could result in rejection of an otherwise good design, poor implementation of the design, or inadequate system maintenance and reliability, and it provides an incomplete record for future changes or if the design is forensically tested.

### Statement of Problem and Substantiation for Public Input

Edit needed to provide correct title of the SFPE Guide.

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Tue Dec 18 12:05:07 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-25-NFPA 909-2019](#)

**Statement:** The revision provides the correct title of the SFPE Guide.



## Public Input No. 56-NFPA 909-2019 [ Section No. A.11.4 ]

### A.11.4

A high standard of housekeeping is ~~the most important~~ a critical factor in the prevention of fire. Maintaining this high standard of housekeeping is every employee's responsibility; however, it is the ~~facility director~~ fire safety manager who assumes the final responsibility for this important activity.

### Statement of Problem and Substantiation for Public Input

To say that housekeeping is the most important factor in fire prevention is a highly subjective statement as an equally persuasive argument could be made that periodic, regular ITM is the most important factor in fire prevention. Changing this wording reflects a more objective approach to fire prevention without minimizing the importance of housekeeping. Additionally, Section 7.3.2 (2) makes it clear that the fire safety manager is in charge of fire prevention tasks, not the facility director. Also, the annex note for the fire safety manager definition makes it clear that this may be a position distinct from all other personnel, not necessarily the same person as the facility director. For consistency with other sections of this document, the fire safety manager should be the point of final accountability with regard to housekeeping. The fire safety manager is also defined specifically and referenced frequently in this document where as "facility director" is not defined or mentioned in the body of the document.

### Submitter Information Verification

**Submitter Full Name:** Joe Scibetta

**Organization:** BuildingReports

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 13:14:29 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-73-NFPA 909-2019](#)

**Statement:** In response to PI-56, the revision maintains the responsibility with the facility director. The intent is to specify that responsibility for ensuring that housekeeping is maintained should rise all the way up to the director level, rather than with the fire safety manager. The term 'facility director' is standard terminology for the individual in charge of the facility.



## Public Input No. 31-NFPA 909-2018 [ Section No. A.12.1 ]

### A.12.1

History has shown that performance reliability of fire protection systems and equipment increases where comprehensive inspection, testing, and maintenance procedures are enforced. Diligence during inspections- in carrying out these procedures is important.

### Statement of Problem and Substantiation for Public Input

This annex note clarifies that diligence in carrying out the procedures for testing and maintenance are equally important, not just on inspections. NFPA documents for inspection, testing and maintenance support this language adjustment as these activities are distinct from one another and are defined as such in those documents.

### Submitter Information Verification

**Submitter Full Name:** Joe Scibetta

**Organization:** BuildingReports

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Aug 09 19:07:56 EDT 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-26-NFPA 909-2019](#)

**Statement:** This annex note clarifies that diligence in carrying out the procedures for testing and maintenance are equally important, not just on inspections. NFPA documents for inspection, testing and maintenance support this language adjustment as these activities are distinct from one another and are defined as such in those documents.



## Public Input No. 61-NFPA 909-2019 [ Section No. A.14.1.4 ]

### A.14.1.4

While this chapter prescribes minimum requirements for the protection of museums, libraries, and their collections from fire, additional guidance in security, fire prevention, fire protection, and fire loss contingency planning is provided in this annex for trustees, chief librarians, museum directors, fire safety managers and other staff officers who are responsible for the fire safety of the building(s) and the collections therein and for the life safety of those persons who visit or work in the buildings. It emphasizes the responsibility of all such officials to protect against fire hazards in their properties by using qualified personnel and consultants to present an analysis of the fire risk embodied in the collections, building(s), and operations. This analysis should also include an assessment of the impact of the loss or interruption that a security or fire incident would impose on the facility's service to the community.

### Statement of Problem and Substantiation for Public Input

The fire safety manager, mentioned throughout this document, and responsible for fire protection, should be mentioned in this annex note.

### Submitter Information Verification

**Submitter Full Name:** Joe Scibetta

**Organization:** BuildingReports

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Thu Jan 03 15:15:43 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-27-NFPA 909-2019](#)

**Statement:** The fire safety manager, mentioned throughout this document, and responsible for fire protection, should be mentioned in this annex note.



## Public Input No. 67-NFPA 909-2019 [ Section No. A.14.4.1.1 ]

### A.14.4.1.1

Smoking in museums and libraries presents not only a fire hazard but also a threat to the collections. For these reasons, smoking should be either completely prohibited ~~with~~ within the building(s) or strictly controlled in accordance with the provisions of Section 11.5.

### Statement of Problem and Substantiation for Public Input

This appears to be a grammatical error in need of correction.

### Submitter Information Verification

**Submitter Full Name:** Joe Scibetta

**Organization:** BuildingReports

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Jan 03 15:49:59 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-28-NFPA 909-2019](#)

**Statement:** Editorial correction.



## Public Input No. 34-NFPA 909-2018 [ Section No. E.3 ]

### E.3 SFPE.

Society of Fire Protection Engineers, ~~7315 Wisconsin Avenue, Suite 620E, Bethesda, MD 20814 . 9711~~  
~~Wahingtonian Blvd. Suite 380. Gaithersburg, MD 20878 .~~

SFPE is a professional society of fire protection engineers. They meet annually, publish technical information, conduct technical seminars, and support local chapters. Members are located in all parts of the world. ~~Names and addresses~~ Contact information of members in a particular geographic area can be obtained from ~~SFPE headquarters~~ a searchable database (Find a FPE) that can be found on the SFPE website [www.SFPE.org](http://www.SFPE.org).

### Statement of Problem and Substantiation for Public Input

This PI will provide the correct address for SFPE. It also gives instruction on how to locate a searchable database for fire protection engineers that can be found on the SFPE website.

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Tue Dec 18 09:57:48 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-29-NFPA 909-2019](#)

**Statement:** The revision provides the correct address for SFPE. It also gives instruction on how to locate a searchable database for fire protection engineers that can be found on the SFPE website.



**Public Input No. 35-NFPA 909-2018 [ Section No. N.1.1 ]**

A large, empty rectangular box with a thin border, intended for public input or comments.



**N.1.1 NFPA Publications.**

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1, *Fire Code*, 2015 edition.

NFPA 10, *Standard for Portable Fire Extinguishers*, 2013 edition.

NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam*, 2016 edition.

NFPA 12, *Standard on Carbon Dioxide Extinguishing Systems*, 2015 edition.

NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems*, 2015 edition.

NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2016 edition.

NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*, 2016 edition.

NFPA 17, *Standard for Dry Chemical Extinguishing Systems*, 2017 edition.

NFPA 17A, *Standard for Wet Chemical Extinguishing Systems*, 2017 edition.

NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, 2016 edition.

NFPA 22, *Standard for Water Tanks for Private Fire Protection*, 2013 edition.

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2017 edition.

NFPA 40, *Standard for the Storage and Handling of Cellulose Nitrate Film*, 2016 edition.

NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, 2014 edition.

NFPA 70B, *Recommended Practice for Electrical Equipment Maintenance*, 2016 edition.

NFPA 72<sup>®</sup>, *National Fire Alarm and Signaling Code*, 2016 edition.

NFPA 80, *Standard for Fire Doors and Other Opening Protectives*, 2016 edition.

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, 2015 edition.

NFPA 92, *Standard for Smoke Control Systems*, 2015 edition.

NFPA 101<sup>®</sup>, *Life Safety Code<sup>®</sup>*, 2015 edition.

NFPA 101A, *Guide on Alternative Approaches to Life Safety*, 2016 edition.

NFPA 204, *Standard for Smoke and Heat Venting*, 2015 edition.

NFPA 220, *Standard on Types of Building Construction*, 2015 edition.

NFPA 232, *Standard for the Protection of Records*, 2017 edition.

NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*, 2013 edition.

NFPA 291, *Recommended Practice for Fire Flow Testing and Marking of Hydrants*, 2016 edition.

NFPA 550, *Guide to the Fire Safety Concepts Tree*, 2017 edition.

NFPA 551, *Guide for the Evaluation of Fire Risk Assessments*, 2016 edition.

NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*, 2015 edition.

NFPA 730, *Guide for Premises Security*, 2014 edition.

NFPA 731, *Standard for the Installation of Electronic Premises Security Systems*, 2017 edition.

NFPA 750, *Standard on Water Mist Fire Protection Systems*, 2015 edition.

NFPA 780, *Standard for the Installation of Lightning Protection Systems*, 2017 edition.

NFPA 914, *Code for Fire Protection of Historic Structures*, 2015 edition.

NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*, 2016 edition.

NFPA 1600<sup>®</sup>, *Standard on Disaster/Emergency Management and Business Continuity/Continuity of Operations Programs*, 2016 edition.

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems*, 2015 edition.

Fire, Electrical, and Building Safety Resource, [www.nfpa.org](http://www.nfpa.org).

*Fire Protection Handbook*, NFPA, 2008.

Hall, J. R. "Non-Home Structure Fires by Equipment Involved in Ignition," NFPA, Quincy, MA, 2012.

Isner, M. S. "Investigation Report: Fire in Los Angeles Central Library Causes \$22 Million Loss." *Fire*

*Journal* 81, no. 2 (1987): 56–63, 72–79.

Rosenberg, P. A., *Facility Security: New Threats, New Strategies*, NFPA, Quincy, MA, 2002.

*SFPE Engineering Guide to Performance-Based Fire Protection: Analysis and Design of Buildings*. Quincy, MA.: National Fire Protection Association; Bethesda Gaithersburg, MD.: Society of Fire Protection Engineers, 2000 2007.

*SFPE Handbook of Fire Protection Engineering*, Quincy, MA: National Fire Protection Association; Bethesda, MD: Society of Fire Protection Engineers, 2008.

Wiley, A. E. "The Charles Klein Law Library Fire, Philadelphia, Pennsylvania." *Fire Journal* 66, no. 6, (November 1972):15–22.

## Statement of Problem and Substantiation for Public Input

Edits were made to provide correct title of the SFPE Guide. Also, the SFPE Handbook was deleted as the current edition (5th) is not an NFPA document.

## Related Public Inputs for This Document

Related Input	Relationship
<a href="#">Public Input No. 36-NFPA 909-2018 [Section No. N.1.2.9]</a>	

## Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Tue Dec 18 10:08:27 EST 2018

**Committee:** CUL-AAA

## Committee Statement

**Resolution:** [CI-32-NFPA 909-2019](#)

**Statement:** This CI serves as a placeholder to permit referenced publications to be updated to the current editions at the second draft stage. Referenced NFPA publications, other than extract references, are updated editorially.



## Public Input No. 52-NFPA 909-2018 [ Section No. N.1.2.1 ]

### N.1.2.1 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, 2015 2018b .

ASTM E1355, *Standard Guide for Evaluating the Predictive Capability of Deterministic Fire Models*, 2012 (2018) .

ASTM E1472, *Standard Guide for Documenting Computer Software for Fire Models*, 2007 (withdrawn 2011).

### Statement of Problem and Substantiation for Public Input

date updates - ASTM E1355 was reapproved without change and that is indicated with both dates, as shown.

### Submitter Information Verification

**Submitter Full Name:** Marcelo Hirschler

**Organization:** GBH International

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Thu Dec 27 17:39:28 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [CI-32-NFPA 909-2019](#)

**Statement:** This CI serves as a placeholder to permit referenced publications to be updated to the current editions at the second draft stage. Referenced NFPA publications, other than extract references, are updated editorially.



## Public Input No. 53-NFPA 909-2019 [ Section No. N.1.2.4 ]

### N.1.2.4 IEEE Publications.

IEEE, Three Park Avenue, 17th Floor, New York, NY 10016-5997.

IEEE 3006.2 Recommended Practice for Evaluating the Reliability of Existing Industrial and Commercial Power Systems

IEEE 802.11, IEEE Standard for Information technology — Telecommunications and information exchange between systems Local and metropolitan area networks — Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications, 2012.

### Statement of Problem and Substantiation for Public Input

We do not normally think of churches and chapels as occupancies for emergency management operations but, in many natural disasters, these buildings are offered to regional emergency management authorities. Neither do we think that places of worship and museums as installations that require a high level of power reliability. However, where places of worship are indicated as designated critical operations areas (per NEC Article 708, and elsewhere in the NFPA suite) and where museums require reliable power for collections that are temperature and humidity sensitive (as well as requiring special security and fire protection regimes) it may be wise to at least point toward formal power reliability evaluation methodologies. I recognized that the titles of the IEEE Industry Application Society 3000-suite of documents may be problematic. We do not think of places of worship and museums as commercial facilities. But we must start somewhere so I submit this proposal to at least get this issue discussed formally. For committee references, here is a link to the present state of the IEEE IAS 3000-series "dot-standards" which are replacing the legacy color books:

<https://ias.ieee.org/standards/ieee-ias-sponsored-active-standards.html>

### Submitter Information Verification

**Submitter Full Name:** Michael Anthony

**Organization:** Standards Michigan

**Affiliation:** [www.standardsmichigan.com](http://www.standardsmichigan.com)

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Wed Jan 02 05:51:21 EST 2019

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** The noted documents are not cited in Annexes A through M.



## Public Input No. 48-NFPA 909-2018 [ Section No. N.1.2.7 ]

### **N.1.2.7** UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ANSI/ UL 263, ~~Standard for~~ *Fire Tests of Building Construction and Materials*, 2011, revised 2015 2018 .

ANSI/ UL 294, ~~Standard for~~ *Access Control System Units*,- 2013, revised 2015 2018 .

ANSI/ UL 305, ~~Standard for~~ *Panic Hardware*, 2012, revised 2014 2017 .

ANSI/ UL 437, ~~Standard for~~ *Key Locks*,- 2013 2017 .

ANSI/ UL 768, ~~Standard for~~ *Combination Locks*, 2006, revised 2013 2018 .

ANSI/ UL 1034 ~~Standard for~~ *Burglary-Resistant Electric Locking Mechanisms*, 2011, revised 2014 .

UL 634, *Connectors and Switches for Use with Burglar-Alarm Systems*, 2007, revised 2015.

UL 681, ~~Standard for~~ *Installation and Classification of Burglar and Holdup Alarm Systems*, 2014, revised 2018 .

UL 2058, *Outline of Investigation for High Security Electronic Locks*, 2005.

### Statement of Problem and Substantiation for Public Input

Now, years later, a large majority of UL Standards are ANSI approved and follow the ANSI development and maintenance process. However, sometimes readers are confused because they don't understand the standards are UL standards, not developed by ANSI. There are many other references to standards promulgated by different standards development organizations where they are considered ANSI approved but do not include ANSI in the reference.

### Related Public Inputs for This Document

Related Input	Relationship
<a href="#">Public Input No. 47-NFPA 909-2018 [Section No. 2.3.2]</a>	

### Submitter Information Verification

**Submitter Full Name:** Kelly Nicoello

**Organization:** UL LLC

**Street Address:**

**City:**

**State:**

**Zip:**

**Submission Date:** Wed Dec 26 15:01:47 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [CI-32-NFPA 909-2019](#)

**Statement:** This CI serves as a placeholder to permit referenced publications to be updated to the current editions at the second draft stage. Referenced NFPA publications, other than extract references, are updated editorially.



## Public Input No. 36-NFPA 909-2018 [ Section No. N.1.2.9 ]

### N.1.2.9 Other Publications.

*Before and After Disasters*, Heritage Preservation, 2005. [www.heritagepreservation.org/PDFS/Disaster.pdf](http://www.heritagepreservation.org/PDFS/Disaster.pdf).

Borenstein, S. W., *Microbiologically Influential Corrosion Handbook*, Woodhead Publishing Limited, 1994.

British Standard BS 7974, *Application of Fire Safety Engineering Principles to the Design of Buildings*, British Standards Institution, London, UK, 2001.

Cotton, P. E., "Fire Tests of Library Book Stacks," report dated December 21, 1959.

Cutler, Harold R., "Engineering Analysis of Compact Storage Fire Tests," unpublished report prepared by Firepro, Inc. for the Library of Congress, 1979.

Dorge, Valerie, and Sharon L. Jones, compilers, *Building an Emergency Plan: A Guide for Museums and Other Cultural Institutions*. The Getty Conservation Institute, 1999. [www.getty.edu/conservation/publications/pdf\\_publications/emergency\\_plan.pdf](http://www.getty.edu/conservation/publications/pdf_publications/emergency_plan.pdf).

*Draft Paper on the Characteristics of RFID-Systems*, The Association for Automatic Identification and Mobility, Warrendale, PA, 2000.

*Field Guide to Emergency Response*, Heritage Preservation, 1012 14th Street, NW, Suite 1200, Washington, DC 20005.

*Field Manual FM-3-19.30, Physical Security*, Headquarters, Department of the Army, 2001.

*Fire Safety Engineering Guidelines*, Australian Building Codes Board, Canberra, ACT, 2001.

Fontana, M. G., and Greene, N. D., *Corrosion Engineering*, McGraw Hill, 1978.

*Guidelines for the Security of Rare Books, Manuscripts, and Other Special Collections*, Association of College & Research Libraries, American Library Association, 50 East Huron Street, Chicago, IL 60611-2795.

Hatchfield, P., *Pollutants in the Museum Environment*, London, Archetype Publications Ltd., 85, 2002.

Honey, G., *Electronic Access Control*, Newnes, Oxford, UK, 2000.

Lougheed, G. D., J. R. Mawhinney, and J. O'Neill, "Full-Scale Fire Tests and the Development of Design Criteria for Sprinkler Protection of Mobile Shelving Units." *Fire Technology* 30, no. 1 (1994).

McLane, B., and Aulner, C., *CCTV Systems, Design & Installation*, National Training Center, Inc., Las Vegas, NV, 2004.

"A Legal Primer on Managing Museum Collections," Malero, Marie, second edition 1998.

Pierce, C., *Application & Design of CCTV*, LeapFrog Training & Consulting, Davenport, IA, 2002.

*Open for Business*, Institute for Business and Home Safety, 2006. [www.ibhs.org](http://www.ibhs.org)

"Risk and Insurance Management Manual for Libraries," Mary Breighner and William Payton, edited by Jeanne Drewes, ALA 2005 ISBN 0-8389-8325-1.

Roberge, P. R., *Handbook of Corrosion Engineering*, McGraw Hill, 2000.

Sampson, R. L., *A Practical Guide to Central Station Burglar Alarm Systems*, Central Station Alarm Association, Bethesda, MD, 1997.

[SFPE Handbook of Fire Protection Engineering, 5th Edition. Gaithersburg, MD, 2016.](#)

Trinkley, Michael. *Hurricane! Surviving the big one: a primer for libraries, museums and archives*, 2nd edition, Columbia, SC: Chicora Foundation; Atlanta, GA: Southeastern Library Network, c1998.

Waters, P., "Procedures for Salvage of Water-Damaged Library Materials," Restoration Officer, Library of Congress, 1975. (Copies available upon request from the Library of Congress, Washington, DC 20540.)

*Wisconsin Historic Building Code*, Madison, WI:Wisconsin Administrative Code.

*World Heritage List, United Nations Educational, Scientific, and Cultural Organization*, UNESCO World Heritage Centre, Paris, France, 2009.

## Statement of Problem and Substantiation for Public Input

The current edition of the SFPE handbook is no longer an NFPA document. As such, document should be moved to other publication section.

### Related Public Inputs for This Document

Related Input	Relationship
<a href="#">Public Input No. 35-NFPA 909-2018 [Section No. N.1.1]</a>	

### Submitter Information Verification

**Submitter Full Name:** Chris Jelenewicz

**Organization:** Society of Fire Protection Eng

**Street Address:**

**City:**

**State:**

**Zip:**

**Submittal Date:** Tue Dec 18 10:14:03 EST 2018

**Committee:** CUL-AAA

### Committee Statement

**Resolution:** [FR-30-NFPA 909-2019](#)

**Statement:** The revision adds a section for SFPE referenced publications in Annexes A through M.