AGENDA

NFPA Technical Committee on Subterranean Spaces
First Draft Meeting

Friday, April 12, 2019
Web/Teleconference

1. **Call meeting to order.** Call meeting to order by Chair Jack Poole at 12:00 p.m. on April 12.

2. **Self-introduction of members and guests**. For a current committee roster**, see page 2.**

3. **Approval of Minutes.** Approve the April 11, 2014 Second Draft Meeting minutes, **see page 3**.

4. **Chair's Report and Agenda Review.**

5. **The Process – NFPA Staff First Draft Presentation, see page 5.**

6. **NFPA 520 First Draft preparation.** For Public Inputs, **see page 18**.

7. **New Business.**

8. **Adjournment.**

Address List No Phone

03/20/2019
Valerie Ziavras

Subterranean Spaces

SUB-AAA

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Chair — **SUB-AAA**
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Principal: James Priest

Valerie Ziavras — 7/27/2016
Staff Liaison — **SUB-AAA**
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Meeting Minutes

Subterranean Spaces Technical Committee
April 11, 2014 at 121:00 am eastern

Web/Teleconference Second Draft Meeting

Item 1, Call to Order

The Second Draft meeting was called to order by Chair Jack Poole at 11:13 am on Friday, April 11, 2014 via Adobe Connect Online Meeting.

Item 2, Introduction of Members and Guests

The Chair opened the meeting with welcoming remarks. The Chair provided a general overview of the agenda and opening remarks.

A roll-call of participants and guests was conducted at the beginning of the session.

TECHNICAL COMMITTEE MEMBERS WHO PARTICIPATED:

NAME	COMPANY
Jack Poole, Chair	Poole Fire Protection, Inc.
Joseph Cappuccio, Principal	The RJA Group, Inc.
John Hastings, Principal	Kansas City Fire Department
David Melzer, Principal	Dean Realty Company
James Priest, Principal	FERMI National Accelerator Laboratory
John Kubicek Alternate to James Priest	US Department of Energy
Kristen Zane Alternate to Lisa Krause	Hunt Midwest Real Estate Development, Inc.

TECHNICAL COMMITTEE MEMBERS WHO DID NOT PARTICIPATE *(Whose Alternates Did Not Participate)*:

The following Technical Committee principal members did not participate:

NAME	COMPANY
Michael Dillon	Dillon Consulting Engineers, Inc.
Charles Doughty	Iron Mountain/National Underground Storage, Inc.
William Eppich	The Protectowire Company, Inc.
Francis McGarry	Frank McGarry Associates, Inc.

The following Guests were Present:

NAME	COMPANY
Jim Bisker	US Department of Energy
Tony Meister	Structura Logica

The following NFPA staff participated:

Allan Fraser

Item 3, Approval of Minutes

The committee approved the minutes of the May 13, 2013 First Draft meeting as corrected.

Item 4, Staff Liaison Report

Allan Fraser reviewed General Procedures as well as the New Process

Item 5, Review of Public Comments received for NFPA 520

The committee reviewed eight (8) Public Inputs and developed five (5) Second Revisions to NFPA 520.

Item 6, Next Meeting

The date and location (method) of the next meeting will be determined prior to the next cycle.

Item 9, Adjournment

The meeting was adjourned at 12:10 pm by the Chair, Jack Poole.

Minutes prepared by Allan B. Fraser, CBI, CPCA, NFPA Staff Liaison

F20 First Draft Meeting

Subterranean Spaces

April 12, 2019| Staff liaison: Val Ziavras | Chair: Jack Poole

NFPA Second Draft Meeting

At this and all NFPA committee meetings we are concerned with your safety.

If the fire alarm sounds, please proceed to an exit.

Reminders

- Update your contact information
- Recording of the meeting is prohibited
- Declare your interests
- Robert's Rules of Order
  - Call the Question

First Draft Documents

First Draft Schedule

Timeline F20

Public Input Stage (First Draft):

Ballot Posting: August 2019

First Draft Report: September 2019

Comment Stage (Second Draft):

Public Comment Closing Date: 11/14/2019

Second Draft Meeting Nov-May/2020

Tech Session Preparation:

NITMAM Closing Date: 08/27/2020

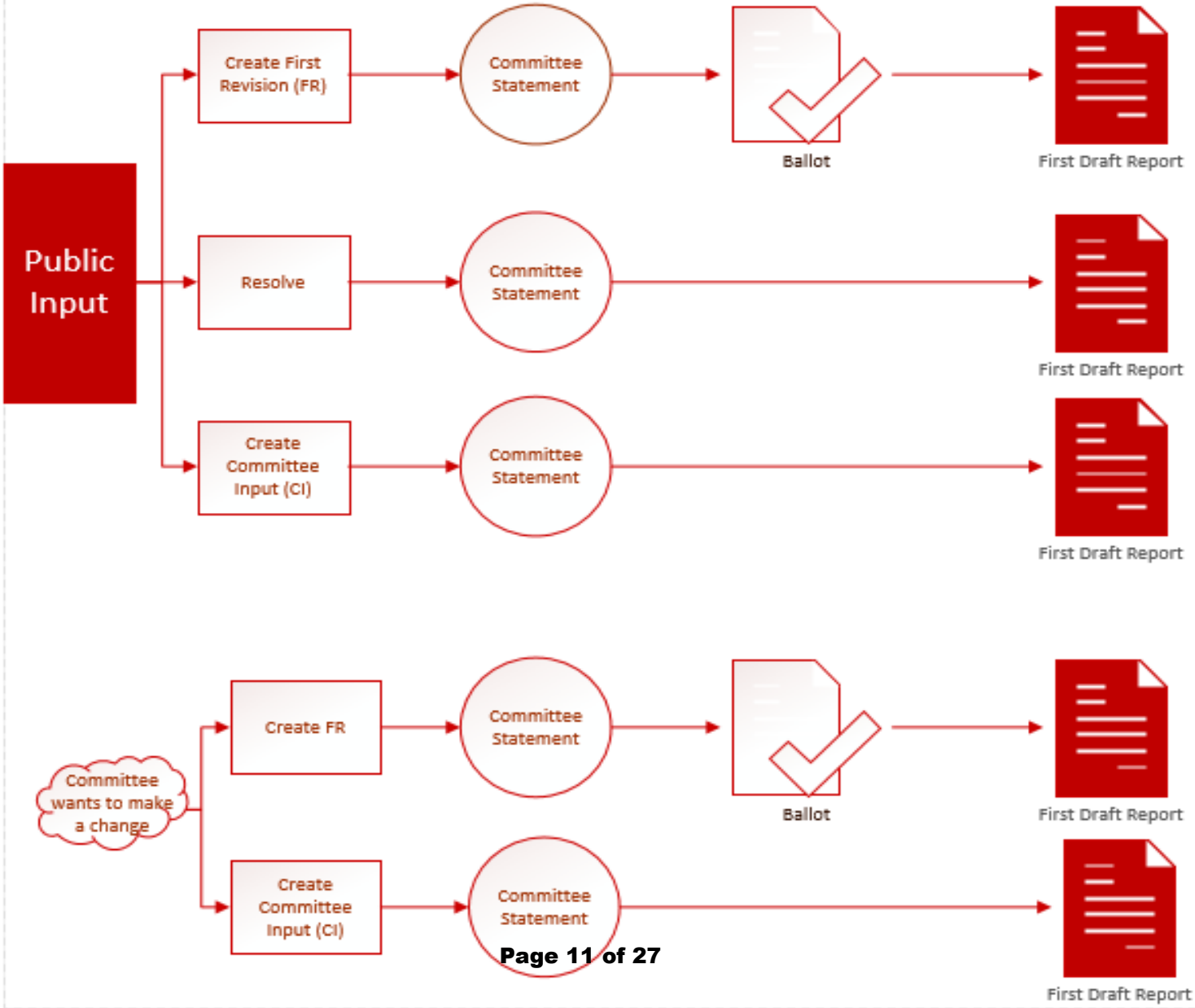
Standards Council Issuance:

2020 edition date for Consent Standards

First Draft Actions

- Create First Revisions (new material or based on Public Input)
- Resolve Public Inputs
- Create Committee Inputs

FIRST DRAFT MEETING ACTIONS



Legal

Antitrust Matters

- It is the policy of the NFPA to strictly comply with state and federal antitrust laws.
- NFPA expects all participants in its standards development activities to conduct themselves in strict accordance with these laws.
- It is the obligation of each participant to read and understand NFPA's Antitrust Policy. (You can access this policy at nfpa.org/regs.)

Legal

Antitrust Matters (cont'd)

- Participants must avoid any conduct, conversation or agreement that would constitute an unreasonable restraint of trade.
- Conversation topics that are off limits include:
  - Profit, margin, or cost data;
  - Prices, rates, or fees;
  - Selection, division or allocation of sales territories, markets or customers;
  - Refusal to deal with a specific business entity.

Legal

Antitrust Matters (cont'd)

- NFPA's standards development activities are based on openness, honesty, fairness and balance.
- Participants must adhere to the *Regulations Governing the Development of NFPA Standards* and the *Guide for the Conduct of Participants in the NFPA Standards Development Process.* (You can access the *Regulations* and *Guide* at nfpa.org/regs.)
- Follow guidance and direction from your employer or other organization you may represent.
- Be sure to ask questions if you have them.

Legal

Antitrust Matters (cont'd)

- Manner is which standards development activity is conducted can be important.
- The *Guide* requires standards development activity to be conducted with openness, honesty and in good faith.
- Participants are not entitled to speak on behalf of NFPA.
- Participants must take appropriate steps to ensure their statements whether written or oral and regardless of the setting, are portrayed as personal opinions, not the position of NFPA.
- Be sure to ask questions if you have them.

Legal

Patents

- Disclosures of essential patent claims should be made by the patent holder.
- Patent disclosures should be made early in the process.
- Others may also notify NFPA if they believe that a proposed or existing NFPA standard includes an essential patent claim.
- NFPA has adopted and follows ANSI's Patent Policy.
- It is the obligation of each participant to read and understand NFPA's Patent Policy. (You can access this policy at nfpa.org/regs.)

THE FIRE PROTECTION RESEARCH FOUNDATION

TC Struggles with an Issue

- TC needs data on a new technology or emerging issue
- Two opposing views on an issue with no real data
- Data presented is not trusted by committee

Code Fund Lends a Hand

- TC rep and/or staff liaison submits a Code Fund Request
- Requests are reviewed by a Panel and chosen based on need / feasibility

Research Project Carried Out

- Funding for project is provided by the Code Fund and/or industry sponsors
- Project is completed and data is available to TC

www.nfpa.org/codefund

Public Input No. 8-NFPA 520-2018 [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 ~~E 136,~~ E119, Standard Test Methods for Fire Tests of Building Construction and Materials, 2018c.

ASTM E136, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C*, ~~2012~~ 2018 .

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

Statement of Problem and Substantiation for Public Input

This updates the date for ASTM E136 and adds the references to ASTM E2652 and ASTM E119 added to other public inputs.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 1-NFPA 520-2018 [New Section after 4.1]	
Public Input No. 4-NFPA 520-2018 [Section No. 4.1.4.2]	

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler
Organization: GBH International
Street Address:
City:
State:
Zip:
Submittal Date: Wed Dec 26 18:54:22 EST 2018
Committee: SUB-AAA

Public Input No. 9-NFPA 520-2018 [New Section after 2.3.2]

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

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

Statement of Problem and Substantiation for Public Input

UL 263 is being added by other PIs

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 4-NFPA 520-2018 [Section No. 4.1.4.2]	

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler
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Submittal Date: Wed Dec 26 18:58:31 EST 2018
Committee: SUB-AAA

Public Input No. 10-NFPA 520-2018 [Section No. 2.4]

2.4 References for Extracts in Mandatory Sections.

NFPA 72®, National Fire Alarm and Signaling Code, 2016 edition.

NFPA 101, Life Safety Code, 2018 edition.

Statement of Problem and Substantiation for Public Input

Extract for proposed new section 4.1.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 1-NFPA 520-2018 [New Section after 4.1]	

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler
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Submittal Date: Wed Dec 26 19:02:52 EST 2018
Committee: SUB-AAA

Public Input No. 2-NFPA 520-2018 [Section No. 3.3.8]

3.3.8 Noncombustible Material.

~~A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat. Materials that are reported as passing ASTM E 136, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C* , shall be considered noncombustible materials.~~ [see 4.1]

Statement of Problem and Substantiation for Public Input

This new requirement is accompanied by a PI (PI 1) that simply references this section in the section on definitions. NFPA codes (including NFPA 1, 101 and 5000) and many other NFPA documents have adopted this approach to defining a noncombustible material. There are three reasons for this: (1) the first and second sentences of the existing definition are technically contradictory since materials passing ASTM E136 are allowed to ignite and generate a flame (for a shot period); the revised proposal, (2) the Manual of Style does not allow definitions (which are not enforceable) to contain requirements and the present definition of noncombustible material includes a requirement as it talks about compliance with ASTM E136 and (3) this obtains consistency within NFPA terminology and requirements.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 1-NFPA 520-2018 [New Section after 4.1]	
Public Input No. 1-NFPA 520-2018 [New Section after 4.1]	

Submitter Information Verification

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Committee: SUB-AAA

Public Input No. 1-NFPA 520-2018 [New Section after 4.1]

4.1* Noncombustible Material [101: 2018].

4.1.1 A material that complies with any one of the following shall be considered a noncombustible material:

(1)* The material, in the form in which it is used, and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat.

(2) The material is reported as passing ASTM E136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C.

(3) The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, Standard Test Method for Behavior of Materials in a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750 Degrees C.

A.4.1 The provisions of 4.1 do not require inherently noncombustible materials to be tested in order to be classified as noncombustible materials.

A.4.1.1(1) Examples of such materials include steel, concrete, masonry and glass.

(sections 4.1 to 4.5 are to be renumbered 4.2 to 4.6)

Statement of Problem and Substantiation for Public Input

This new requirement is accompanied by a PI (PI 2) that simply references this section in the section on definitions. NFPA codes (including NFPA 1, 101 and 5000) and many other NFPA documents have adopted this approach to defining a noncombustible material. There are three reasons for this: (1) the first and second sentences of the existing definition are technically contradictory since materials passing ASTM E136 are allowed to ignite and generate a flame (for a shot period); the revised proposal, (2) the Manual of Style does not allow definitions (which are not enforceable) to contain requirements and the present definition of noncombustible material includes a requirement as it talks about compliance with ASTM E136 and (3) this obtains consistency within NFPA terminology and requirements.
The proposed wording is being extracted from NFPA 101.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 2-NFPA 520-2018 [Section No. 3.3.8]	
Public Input No. 8-NFPA 520-2018 [Section No. 2.3.1]	
Public Input No. 2-NFPA 520-2018 [Section No. 3.3.8]	
Public Input No. 8-NFPA 520-2018 [Section No. 2.3.1]	
Public Input No. 10-NFPA 520-2018 [Section No. 2.4]	

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Committee: SUB-AAA

Public Input No. 4-NFPA 520-2018 [Section No. 4.1.4.2]

4.1.4.2

Control areas shall be separated from each other and all other areas by a wall with at least a 2-hour fire resistance rating, when tested in accordance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials or with or UL 263, Standard for Fire Tests of Building Construction and Materials .

4.1.4.2.1

The number of control areas within a building used for retail or wholesale sales shall not exceed two.

4.1.4.2.2

The number of control areas in buildings with other uses shall not exceed four.

Statement of Problem and Substantiation for Public Input

It is important to designate which test is to be used for assessing fire resistance rating. NFPA 5000 (as well as NFPA 220 and 221) use only ASTM E119 (or UL 263, which is the same test) for assessing fire resistance ratings. This is being proposed in every instance where fire resistance ratings are required in NFPA 520.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 5-NFPA 520-2018 [Section No. 4.2.2]	
Public Input No. 6-NFPA 520-2018 [Sections 4.2.3, 4.2.4, 4.2.5]	
Public Input No. 7-NFPA 520-2018 [Section No. 4.4.3]	
Public Input No. 8-NFPA 520-2018 [Section No. 2.3.1]	
Public Input No. 9-NFPA 520-2018 [New Section after 2.3.2]	

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Public Input No. 5-NFPA 520-2018 [Section No. 4.2.2]

4.2.2

Walls separating buildings from common spaces shall be of construction with at least a 2-hour fire resistance rating, when tested in accordance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials or with or UL 263, Standard for Fire Tests of Building Construction and Materials .

4.2.2.1

Glass partitions shall be permitted to be used to separate an enclosed lobby or office area from the common space provided they meet the following:

(1) The lobby or office area is low hazard.

(2) The lobby or office area is separated from the remainder of the tenant space by a wall with at least a 2-hour fire resistance rating, when tested in accordance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials or with or UL 263, Standard for Fire Tests of Building Construction and Materials .

Statement of Problem and Substantiation for Public Input

It is important to designate which test is to be used for assessing fire resistance rating. NFPA 5000 (as well as NFPA 220 and 221) use only ASTM E119 (or UL 263, which is the same test) for assessing fire resistance ratings. This is being proposed in every instance where fire resistance ratings are required in NFPA 520.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 4-NFPA 520-2018 [Section No. 4.1.4.2]	
Public Input No. 6-NFPA 520-2018 [Sections 4.2.3, 4.2.4, 4.2.5]	
Public Input No. 7-NFPA 520-2018 [Section No. 4.4.3]	

Submitter Information Verification

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Committee: SUB-AAA

Public Input No. 6-NFPA 520-2018 [Sections 4.2.3, 4.2.4, 4.2.5]

Sections 4.2.3, 4.2.4, 4.2.5

4.2.3

Walls separating buildings shall be of construction with at least a 2-hour fire resistance rating, when tested in accordance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials or with or UL 263, Standard for Fire Tests of Building Construction and Materials .

4.2.4

Buildings shall be subdivided by walls with at least a 2-hour fire resistance rating, when tested in accordance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials or with or UL 263, Standard for Fire Tests of Building Construction and Materials, into areas no larger than 360,000 net ft^2 (33,444 m^2).

4.2.5

Walls constructed with a fire resistance rating, when tested in accordance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials or with or UL 263, Standard for Fire Tests of Building Construction and Materials, shall be installed in accordance with NFPA 221.

Statement of Problem and Substantiation for Public Input

It is important to designate which test is to be used for assessing fire resistance rating. NFPA 5000 (as well as NFPA 220 and 221) use only ASTM E119 (or UL 263, which is the same test) for assessing fire resistance ratings. This is being proposed in every instance where fire resistance ratings are required in NFPA 520.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 4-NFPA 520-2018 [Section No. 4.1.4.2]	
Public Input No. 5-NFPA 520-2018 [Section No. 4.2.2]	
Public Input No. 7-NFPA 520-2018 [Section No. 4.4.3]	

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Public Input No. 3-NFPA 520-2018 [Section No. 4.2.9]

4.2.9

~~Fire-retardant coating on otherwise combustible construction materials~~ The use of coatings to increase the fire resistance rating of a combustible construction material shall not be permitted.

Statement of Problem and Substantiation for Public Input

No coatings can convert a combustible material into a noncombustible material. Therefore the reference needs to be to prohibit the use of coatings to improve the fire resistance rating, which is what NFPA 221 classifies.

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Committee: SUB-AAA

Public Input No. 7-NFPA 520-2018 [Section No. 4.4.3]

4.4.3

Rooms used to store equipment for standby or emergency power generation shall be separated from the remainder of the subterranean space by walls with at least a 2-hour fire resistance rating, when tested in accordance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials or with or UL 263, Standard for Fire Tests of Building Construction and Materials .

Statement of Problem and Substantiation for Public Input

It is important to designate which test is to be used for assessing fire resistance rating. NFPA 5000 (as well as NFPA 220 and 221) use only ASTM E119 (or UL 263, which is the same test) for assessing fire resistance ratings. This is being proposed in every instance where fire resistance ratings are required in NFPA 520.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 4-NFPA 520-2018 [Section No. 4.1.4.2]	
Public Input No. 5-NFPA 520-2018 [Section No. 4.2.2]	
Public Input No. 6-NFPA 520-2018 [Sections 4.2.3, 4.2.4, 4.2.5]	

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