



Public Comment No. 16-NFPA 13-2023 [Global Input]

Based on the new definition of "blocking," replace "firestopped" or any derivations with the appropriate phrasing of "blocking."

The following sections need to be revised (see attached word document for changes):

9.2.1.16.2

10.2.6.1.2.1

11.2.4.1.2.1

11.2.4.1.2.2

11.2.4.1.2.3

19.2.3.1.5.2

20.9.1.2

20.10.2

25.5.3.2.1

25.5.3.2.2

A.3.3.46.1

A.19.2.3.1.5.2(10)

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
PC-16_Blocking.docx	All sections that referenced "Firestopping" revised to uses the correct form of "Blocking"	

Statement of Problem and Substantiation for Public Comment

The term firestopped needs to be replaced with the new term "blocking."

Related Item

- FR-1331

Submitter Information Verification

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Submittal Date: Wed Mar 08 15:59:05 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1196-NFPA 13-2023](#)

Statement: The term "firestopping" was revised to say "blocking."

9.2.1.16.2

In buildings having more than a single story, blocking shall be required at pipe penetrations at each floor.

10.2.6.1.2.1 Obstructed Construction for Ceilings with Slopes Not Exceeding 1 in 12.

Where the slope of the ceiling does not exceed 1 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.
- (2) Where the maximum depth of the structural members, including concrete tees, is 18 in. (450 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members.
- (3) Where the maximum depth of the structural members, including concrete tees, is greater than 18 in. (450 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are constructed with blocking so that individual channel volumes do not exceed 400 ft³ (11.3 m³).
- (4) Where composite wood joists are constructed with blocking so that individual channel volumes do not exceed 400 ft³ (11.3 m³), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the joists only when a maximum distance of 22 in. (550 mm) can be maintained between the sprinkler deflector and the ceiling/roof deck.

11.2.4.1.2.1 Obstructed Construction for Ceilings with Slopes Not Exceeding 1 in 12.

Where the slope of the ceiling does not exceed 1 in 12 under obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.
- (2) Where the maximum depth of the noncombustible structural members is 18 in. (450 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.
- (3) Where the maximum depth of the noncombustible structural members is greater than 18 in. (450 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are constructed with blocking so that individual channel volumes do not exceed 400 ft³ (11.3 m³).
- (4) Sprinkler deflectors shall be installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances

11.2.4.1.2.2 Obstructed Construction for Ceilings with Slopes Not Exceeding 2 in 12 with Solid Structural Members. Where the slope of the ceiling is greater than 1 in 12 but does not exceed 2 in 12 under solid obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of solid obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.
- (2) Where the maximum depth of the noncombustible solid structural members is 12 in. (300 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.
- (3) Where the maximum depth of the noncombustible solid structural members is greater than 12 in. (300 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are constructed with blocking so that individual channel volumes do not exceed 400 ft³ (11.3 m³).
- (4) Sprinkler deflectors shall be installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances.

11.2.4.1.2.3 Obstructed Construction for Ceilings with Slopes Not Exceeding 4 in 12 with Solid Structural Members. Where the slope of the ceiling is greater than 2 in 12 but does not exceed 4 in 12 under solid obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of solid obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.
- (2) Where the maximum depth of the noncombustible solid structural members is 12 in. (300 mm) and are installed perpendicular to the ceiling slope, sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are constructed with blocking so that individual channel volumes do not exceed 300 ft³ (8.5 m³).
- (3) Sprinkler deflectors shall be installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances.

19.2.3.1.5.2

The following unsprinklered concealed spaces shall not require a minimum area of sprinkler operation of 3000 ft² (280 m²):

- (1) Noncombustible and limited-combustible concealed spaces with minimal combustible loading having no access, including those with small openings such as those used as return air for a plenum

- (2) Noncombustible and limited-combustible concealed spaces with limited access and not permitting occupancy or storage of combustibles, including those with small openings such as those used as return air for a plenum
- (3) Combustible concealed spaces filled entirely with noncombustible insulation
- (4) *Light or ordinary hazard occupancies where noncombustible or limited-combustible ceilings are directly attached to the bottom of solid wood joists or solid limited-combustible construction or noncombustible construction to create enclosed joist spaces 160 ft³ (4.5 m³) or less in volume, including space below insulation that is laid directly on top or within the ceiling joists in an otherwise sprinklered concealed space
- (5) Concealed spaces where rigid materials are used and the exposed surfaces comply with one of the following in the form in which they are installed in the space:
 - (a) The surface materials have a flame spread index of 25 or less and the materials have demonstrated that the flame front does not progress more than 10.5 ft (3.2 m) beyond the centerline of the burners at any time during the 30-minute test period, when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, or UL 723, *Test for Surface Burning Characteristics of Building Materials*, extended for an additional 20 minutes in the form in which they are installed in the space
 - (b) The surface materials comply with the requirements of ASTM E2768, *Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials (30 min Tunnel Test)*
- (6) Concealed spaces in which the exposed materials are constructed entirely of fire-retardant-treated wood as defined by NFPA 703
- (7) Concealed spaces over isolated small rooms not exceeding 55 ft² (5.1 m²) in area
- (8) Vertical pipe chases under 10 ft² (0.9 m²), provided that in multifloor buildings the chases are constructed with blocking at each floor and pipe penetrations at each floor are properly sealed, and where such pipe chases contain no sources of ignition, and piping is noncombustible
- (9) Exterior columns under 10 ft² (0.9 m²) in area formed by studs or wood joists, supporting exterior canopies that are fully protected with a sprinkler system
- (10) *Light or ordinary hazard occupancies where noncombustible or limited-combustible ceilings are attached to the bottom of composite wood joists either directly or on to metal channels not exceeding 1 in. (25 mm) in depth, provided the adjacent joist channels are constructed with blocking so that volumes not exceeding 160 ft³ (4.5 m³) using materials equivalent to 1/2 in. (13 mm) gypsum board, and at least 3 1/2 in. (90 mm) of batt insulation is installed at the bottom of the joist channels when the ceiling is attached utilizing metal channels
- (11) Cavities within unsprinklered wall spaces
- (12) Exterior soffits, eaves, overhangs, and decorative frame elements complying with 9.2.1.20.

20.9.1.2 Obstructed Construction with ESFR Sprinklers.

Where the ceiling slope is greater than 2 in 12 (16.7 percent) but does not exceed 4 in 12 (33.3 percent), the ESFR sprinkler system criteria specified in Chapters 20 through 26 shall apply when all the following conditions are satisfied:

- (1) Purlins or beams supporting the roof deck run across the roof slope.
- (2) Purlins or beams do not exceed 18 in. (450 mm) deep.
- (3) Purlins or beams do not exceed 5 ft (1.5 m) on centers.
- (4) Purlins or beams are supported by girders not more than 40 ft (12 m) on centers.
- (5) Purlin or beam channels are constructed with blocking above each girder.

20.10.2

The following unsprinklered combustible concealed spaces shall not require a minimum design area of sprinkler operation of 3000 ft² (280 m²):

- (1) Noncombustible and limited-combustible concealed spaces with minimal combustible loading having no access. The space shall be considered a concealed space even with small openings such as those used as return air for a plenum.
- (2) Noncombustible and limited-combustible concealed spaces with limited access and not permitting occupancy or storage of combustibles. The space shall be considered a concealed space even with small openings such as those used as return air for a plenum.
- (3) Combustible concealed spaces filled entirely with noncombustible insulation.
- (4) Concealed spaces where rigid materials are used and the exposed surfaces have a flame spread index of 25 or less and the materials have demonstrated that the flame does not progress more than 10.5 ft (3.2 m) beyond the centerline of the burners at any time during the 30-minute test period, when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, or UL 723, *Test for Surface Burning Characteristics of Building Materials*, extended for an additional 20 minutes in the form in which they are installed in the space.
- (5) Concealed spaces where rigid materials are used and the materials comply with the requirements of ASTM E2768, *Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials (30 min Tunnel Test)*.
- (6) Concealed spaces in which the exposed materials are constructed entirely of fire-retardant-treated wood as defined by NFPA 703.
- (7) Concealed spaces over isolated small compartments not exceeding 55 ft² (5.1 m²) in area.
- (8) Vertical pipe chases under 10 ft² (0.9 m²), provided that in multifloor buildings the chases are constructed with blocking at each floor. Such pipe chases shall contain no sources of ignition, piping shall be noncombustible, and pipe penetrations at each floor shall be properly sealed.
- (9) Exterior columns under 10 ft² (0.9 m²) in area formed by studs or wood joists, supporting exterior canopies that are fully protected with a sprinkler system.
- (10) Cavities within unsprinklered wall spaces.

25.5.3.2 Open Wood Joist Construction with CMSA Ceiling-Level Sprinklers.

25.5.3.2.1

Where CMSA ceiling-level sprinklers are installed under open wood joist construction, blocking in accordance with 25.5.3.2.2 shall be provided or the minimum operating pressure of the sprinklers shall be 50 psi (3.4 bar) for a K-11.2 (K-160) sprinkler or 22 psi (1.5 bar) for a K-16.8 (K240) sprinkler.

25.5.3.2.2

Where each joist channel of open wood joist construction is constructed with blocking at intervals not exceeding 20 ft (6.1 m), the design pressures specified in Table 25.5.3.1 shall be permitted to be used.

A.3.3.46.1 Obstructed Construction.

The following examples of obstructed construction are provided to assist the user in determining the type of construction feature:

- (1) *Beam and Girder Construction.* The term *beam and girder construction* as used in this standard includes noncombustible and combustible roof or floor decks supported by wood beams of 4 in. (100 mm) or greater nominal thickness or concrete or steel beams spaced 3 ft to 7 1/2 ft (900 mm to 2.3 m) on center and either supported on or framed into girders. [Where supporting a wood plank deck, this includes semi-mill and panel construction, and where supporting (with steel framing) gypsum plank, steel deck, concrete, tile, or similar material, this includes much of the so-called noncombustible construction.]
- (2) *Concrete Tee Construction.* The term *concrete tee construction* as it is used in this standard refers to solid concrete members with stems (legs) having a nominal thickness less than the nominal height. [See Figure A.3.3.46.1(a) for examples of concrete tee construction.]
- (3) *Composite Wood Joist Construction.* The term *composite wood joist construction* refers to wood beams of “I” cross section constructed of wood flanges and solid wood web, supporting a floor or roof deck. Composite wood joists can vary in depth up to 48 in. (1.2 m), can be spaced up to 48 in. (1.2 m) on centers, and can span up to 60 ft (18 m) between supports. Joist channels should be constructed with blocking so that individual channel areas do not exceed 300 ft² (28 m²). [See Figure A.3.3.46.1(b) for an example of composite wood joist construction.]
- (4) *Panel Construction.* The term *panel construction* as used in this standard includes ceiling panels formed by members capable of trapping heat to aid the operation of sprinklers and limited to a maximum of 300 ft² (28 m²) in area. There should be no unfilled penetrations in the cross-sectional area of the bounding structural members including the interface at the roof. Beams spaced more than 7 1/2 ft (2.3 m) apart and framed into girders qualify as panel construction, provided the 300 ft² (28 m²) area limitation is met.
- (5) *Semi-Mill Construction.* The term *semi-mill construction* as used in this standard refers to a modified standard mill construction, where greater column spacing is used and beams rest on girders.
- (6) *Wood Joist Construction.* The term *wood joist construction* refers to solid wood members of rectangular cross section, which can vary from 2 in. to 4 in. (50 mm to 100 mm) nominal width and can be up to 14 in. (350 mm) nominal depth, spaced up to

3 ft (900 mm) on centers, and can span up to 40 ft (12 m) between supports, supporting a floor or roof deck. Solid wood members less than 4 in. (100 mm) nominal width and up to 14 in. (350 mm) nominal depth, spaced more than 3 ft (900 mm) on centers, are also considered as wood joist construction. Wood joists can exceed 14 in. (350 mm) in nominal depth.

- (7) *Bar Joist Construction with Fireproofing*. In order to meet building codes, bar joists are often covered with fireproofing materials. In such an event, if greater than 30 percent of the area of the joist is obstructed, it should be considered obstructed construction.
- (8) *Steel Purlin Construction*. This term refers to clear span or multiple span buildings with straight or tapered columns and frames supporting C- or Z-type purlins greater than 4 in. (100 mm) in depth spaced up to 7 1/2 ft (2.3 m) on center.
- (9) *Truss Construction (Wood or Steel)*. The term *truss construction* refers to parallel or pitched chord members connected by open web members supporting a roof or floor deck with top and bottom members greater than 4 in. (100 mm) in depth. [See Figure A.3.3.46.1(c).]
- (10) *Bar Joist Construction (Wood or Steel)*. The term *bar joist construction* refers to construction employing joists consisting of steel truss-shaped members. Wood truss-shaped members, which consist of wood top and bottom chord members with steel tube or bar webs, are also defined as bar joists. Bar joists include noncombustible or combustible roof or floor decks on bar joist construction with top and bottom chord members greater than 4 in. (100 mm) in depth. [See Figure A.3.3.46.2(a) and Figure A.3.3.46.2(b) for examples of bar joist construction.] (AUT-SSI)

A.19.2.3.1.5.2(10)

The gypsum board (or equivalent material) used as the blocking material will compartment the concealed space and restrict the ability for fire to spread beyond 160 ft³ (4.5 m³) zones covering multiple joist channels.



Public Comment No. 160-NFPA 13-2023 [Global Input]

Change ther term "fire stopped" with the term "blocking" throught NFPA 13.

Statement of Problem and Substantiation for Public Comment

The term firestopping is often confused as NFPA 13 and the various building codes assign different meanings to this term. This comment proposes to exchange the term "fire stopped" with the term "blocking." A definition of blocking was added to NFPA 13 as FR – 1331 and it appears from the annex note that the intent was to apply this new term to these obstructed construction requirements.

Related Item

- FR-1331

Submitter Information Verification

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Submittal Date: Mon May 29 17:17:52 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1196-NFPA 13-2023

Statement: The term "firestopping" was revised to say "blocking."



Public Comment No. 154-NFPA 13-2023 [Section No. 1.2.2]

1.2.2

Sprinkler systems and private fire service mains are specialized fire protection systems and shall require design and installation by ~~qualified~~ knowledgeable and experienced personnel.

Statement of Problem and Substantiation for Public Comment

This comment seeks to return to the previous edition language. The existing language "knowledgeable and experienced" is appropriate and as stated in the last revision cycle when a similar change was rejected, state and local jurisdictions are charged with the responsibility to determine qualifications. Additional PCs are being submitted to reject related language from Section 3.3.180 (FR-1008) and Section 4.3 (FR-1173)

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 155-NFPA 13-2023 [Section No. 3.3.180]</u>	
<u>Public Comment No. 156-NFPA 13-2023 [Section No. 4.3]</u>	

Related Item

- FR-1001

Submitter Information Verification

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Submittal Date: Mon May 29 13:21:17 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1014-NFPA 13-
Statement: The term "qualified" was changed to "knowledgeable and experienced" which allows companies to train their personnel for their job. Using the term knowledgeable and experienced allows AHJ's to establish acceptable criteria for those performing the work.



Public Comment No. 2-NFPA 13-2023 [New Section after 1.5]

A.1.5

Subsequent editions of NFPA are not always adopted as soon as they are published and could lag several code cycles before the new edition is referenced. Where a newer edition of this standard is published, that standard should be permitted to be used in its entirety.

Statement of Problem and Substantiation for Public Comment

While the committee stated that the equivalency provisions already permit the use of later editions, specific reference is necessary as we have dealt with multiple jurisdictions that only accept the editions referenced by the adopted code. This statement is even more necessary based on NFPA's policy to only issue TIA's on the current edition.

Related Item

- PI-122

Submitter Information Verification

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Submittal Date: Wed Mar 08 15:16:34 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1114-NFPA 13-2023

Statement: Adding the information to the annex provides guidance to Authorities Having Jurisdiction that a newer standard may be used, if used in its entirety.



Public Comment No. 4-NFPA 13-2023 [New Section after 3.3]

3.3.X Air Maintenance Device

A device utilizing a restricted orifice or other means used to regulate the high pressure stored in an air receiver to the lower set pressure or the lower pressure required for supervisory air in a sprinkler system. (AUT-SSI)

Statement of Problem and Substantiation for Public Comment

The technical committee resolved the PI that proposed this definition at the first draft meeting by stating that the definition for an air maintenance device is not necessary because A.8.2.6.6.1 (A.8.2.8.2 in the SD Report) describes what an air maintenance device is. The only information that the annex note provides is that an air maintenance device is a "unique component within the air supply." That language hardly describes what an air maintenance device is, and strengthens the argument that all components within the air supply are "unique" and should require listing (i.e., air compressors).

Related Item

- PI-131

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Submittal Date: Wed Mar 08 15:28:57 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: The language in the annex describes an air pressure maintenance device as used in the body of the Standard.



Public Comment No. 213-NFPA 13-2023 [Section No. 3.3.87]

3.3.87 Flexible Coupling.

A

~~listed coupling or fitting that allows axial displacement, rotation, and at least 1 degree of angular movement of the pipe without inducing harm on the pipe. For pipe diameters of 8 in. (200 mm) and larger, the angular movement is permitted to be less than 1 degree but not less than 0.5 degree. (AUT-SSI)~~

mechanical coupling forming a sealed joint in which there is limited angular, axial and rotational movement without overstressing the pipe joint

Statement of Problem and Substantiation for Public Comment

Flexible coupling are installed in piping systems to allow limited movement. The prior definition of a flexible coupling was only specific to systems in seismic areas. This new definition will recognize that flexible coupling are used in piping systems, other than seismic areas, where movement is needed. The prior definition is considered a requirement for systems in seismic areas and therefor should be relocated to the chapter on seismic protection. This proposed definition is consistent with ISO standards.

Related Item

- FR 1346

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Submittal Date: Wed May 31 13:37:27 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but held

Resolution: The implication of moving this information to a different section is new work. It will have to be addressed at first draft of the next cycle as a full cycle is needed to ensure that the flexible couplings are addressed appropriately outside of seismic.



Public Comment No. 193-NFPA 13-2023 [New Section after 3.3.142]

3.3.##* Non-Flat Obstruction.

An obstruction where the underside of the obstruction's footprint is not flat in all directions.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
.1685528891494		

Statement of Problem and Substantiation for Public Comment

The term non-flat obstruction is used in the guidelines for supplemental sprinklers but has not been defined. This public comment adds a definition for non-flat obstructions to help clarify the guidance for the end user.

Related Item

- FR-1209

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Submittal Date: Wed May 31 06:26:54 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1071-NFPA 13-2023

Statement: The term "non-flat obstruction" has been provided since the term is now used in the body of the standard. The proposed annex language is intended to help clarify for the end user examples of non-flat obstructions.



Public Comment No. 194-NFPA 13-2023 [New Section after 3.3.142]

3.3.##* Non-Solid Obstruction.

An obstruction that consists of openings that constitute at least 30 percent of the footprint of the obstruction.

Statement of Problem and Substantiation for Public Comment

The first draft report has added language for supplemental sprinklers that uses the term non-solid obstruction, which is not currently defined in the standard. This public comment adds a definition for the term non-solid obstruction to help clarify the guidelines for the end user.

Related Item

- FR-1209

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Submission Date: Wed May 31 06:30:45 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1115-NFPA 13-2023

Statement: The term "non-solid obstruction" has been provided since the term is now used in the body of the standard. The proposed annex language is intended to help clarify for the end user examples of non-solid obstructions.



Public Comment No. 172-NFPA 13-2023 [New Section after 3.3.145.2]

3.3.145.3 Grouped Obstruction

Two or more adjacent solid objects with a horizontal distance between of the objects less than 3 times the object's least dimension

Statement of Problem and Substantiation for Public Comment

Clarification is needed for what constitutes a grouped obstruction as this term is used in the new "supplemental sprinkler guidelines accepted as first draft revisions. This will fill a "hole" in NFPA 13 as confusion is common when determining if groups of objects that are collectively over 4 ft wide but are individually under 4 ft wide (ie pipe rack) are considered as a single obstruction less then 4 ft wide (or 2 ft wide for ESFR) or as a collective obstruction 4 ft or greater.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 173-NFPA 13-2023 [New Section after 3.3.145.2]	
<u>Related Item</u>	
• Fr-1209	

Submitter Information Verification

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Submittal Date: Mon May 29 22:44:05 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected
Resolution: As used in the annex this definition does not align with the 30-percent open allowance.



Public Comment No. 173-NFPA 13-2023 [New Section after 3.3.145.2]

3.3.145.3 Nonsolid Obstruction

An obstruction that has openings of 30% or more in its cross-sectional area.

Statement of Problem and Substantiation for Public Comment

Clarification is needed for what constitutes a nonsolid obstruction as this term is used in the new "supplemental sprinkler" guidelines accepted as first draft revisions. This definition is based upon the typical NFPA seventy percent open concept and FM guidelines.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 172-NFPA 13-2023 [New Section after 3.3.145.2]	
<u>Related Item</u>	
• FR-1209	

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Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1115-NFPA 13-2023
Statement: The term "non-solid obstruction" has been provided since the term is now used in the body of the standard. The proposed annex language is intended to help clarify for the end user examples of non-solid obstructions.



Public Comment No. 155-NFPA 13-2023 [Section No. 3.3.180]

3.3.180 – Qualified Personnel.

Competent and capable individual(s) having met the requirements and training for a given field acceptable to the AHJ. [**25**, 2023] (AUT-SSI)

Statement of Problem and Substantiation for Public Comment

Based upon the suggested action of PC-154 which seeks to return Section 1.2.2 to previous edition language and delete the language "qualified personnel" (and replace with "knowledgeable and experienced personnel") there is no need for this definition. As stated in the substantiation of related PC-154, The existing language "knowledgeable and experienced" is appropriate and as stated in the last revision cycle, state and local jurisdictions are charged with the responsibility to determine qualifications.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 154-NFPA 13-2023 [Section No. 1.2.2]</u>	Related
<u>Public Comment No. 156-NFPA 13-2023 [Section No. 4.3]</u>	

Related Item

• FR-1008 • FR-1001 • FR-1173

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Committee: AUT-SSI

Committee Statement

Committee Action: Accepted
Resolution: SR-1015-NFPA 13-2023
Statement: The term "qualified" was changed to "knowledgeable and experienced" which allows companies to train their personnel for their job. Using the term knowledgeable and experienced allows AHJ's to establish acceptable criteria for those performing the work. The term is no longer used in the standard and is being deleted based on the action taken in Section 1.2.2.



Public Comment No. 6-NFPA 13-2023 [Section No. 3.3.237]

3.3.237 – 46.3 Panel Construction.

Ceiling panels formed by members capable of trapping heat to aid the operation of sprinklers and limited to a maximum of 300 ft² (28 m²) in area with no unfilled penetrations in the cross-sectional area of the bounding structural members including the interface at the roof . (See A.3.3.46.1(4)) . (AUT-SSI)

Statement of Problem and Substantiation for Public Comment

The section needs to be moved to be a subsection of the construction definitions. Additionally, the first draft definition was missing the qualification on unfilled penetrations.

Related Item

- FR-1308

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Wed Mar 08 15:39:44 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: Panel Construction is appropriately located. In addition, the proposed language adds a requirement to the definition.



Public Comment No. 181-NFPA 13-2023 [New Section after 3.3.241]

3.3.xxx*

Vapor Phase Corrosion Inhibitor (VCI) - a chemical compound (substance) that emits rust-inhibiting vapor to protect ferrous and non-ferrous metals against corrosion in an air-filled dry pipe or preaction sprinkler system. The inhibitor forms a thin protective layer through adsorption separating the pipe from the air or water and provides protection against corrosion.

Statement of Problem and Substantiation for Public Comment

This definition is needed to introduce new terminology to NFPA 13. The definition is also necessary to differentiate between corrosion inhibitors that enter the system in the vapor phase versus those entering as a liquid. NFPA 13 currently includes requirements for corrosion inhibitors that enter the system in a liquid form; however, there are no requirements for VCI. VCI is applied through attachment of equipment to the air supply to a dry pipe or preaction sprinkler system. This new definition is part of a series of public inputs made during the first draft stage and public comments that integrate new requirements for VCI and clarify differences from other listed and non-listed corrosion inhibitors.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 182-NFPA 13-2023 [New Section after A.3.3.241.2]	
Public Comment No. 182-NFPA 13-2023 [New Section after A.3.3.241.2]	
Public Comment No. 183-NFPA 13-2023 [New Section after 5.1.4.3]	
Public Comment No. 185-NFPA 13-2023 [New Section after 7.8.3]	
Public Comment No. 187-NFPA 13-2023 [New Section after 8.2]	

Related Item

- PI-339

Submitter Information Verification

Submitter Full Name: Mark Hopkins
Organization: Terpconsulting
Affiliation: General Air Products
Street Address:
City:
State:
Zip:
Submission Date: Tue May 30 14:35:42 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1065-NFPA 13-2023](#)

Statement:

This definition is needed as Vapor Corrosion Inhibitor (VCI) has been added to the body of the standard.



Public Comment No. 28-NFPA 13-2023 [Section No. 7.5.1.3]

7.5.1.3—*

Joint compound or tape shall be applied only to male threads.

A.7.5.1.3

Only one form of lubricant should be used on threaded pipe and fittings. Both joint compound and tape act as a lubricant for the installation of threaded pipe and fittings. Utilizing both risks the potential for air pockets to form which creates a potential leaking point.

Statement of Problem and Substantiation for Public Comment

The "or" statement in the requirement leaves the section to be interpreted in two ways. The annex note provides clarification that only one lubricant should be used on male threads and not both.

Related Item

- PI-5

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Thu Mar 09 13:39:05 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: Some field practices use both joint compound and tape, however under certain circumstances this may damage components or result in leaks. As such, the lubricant method applied to threads should follow manufacturer's recommendations.



Public Comment No. 69-NFPA 13-2023 [Section No. 7.5.2.2.5]

7.5.2.2.5 –

~~Torch cutting and welding shall not be permitted as a means of modifying or repairing sprinkler systems.~~

Statement of Problem and Substantiation for Public Comment

This is an existing system requirement and is already included in Chapter 30.

This section also contradicts section 7.5.2.2.1.1

Related Item

- FR-51

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 04 20:52:59 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Accepted

Resolution: SR-1017-NFPA 13-2023

Statement: This is an existing system requirement and is already included in Chapter 30.

This section also contradicts section 7.5.2.2.1.1.



Public Comment No. 118-NFPA 13-2023 [Section No. 7.5.2.4.8]

7.5.2.4.8*

When welding is performed, the following shall apply:

- (1) Holes in piping for outlets shall not be cut to less than the full inside diameter of fittings prior to welding in place of the fittings.
- (2) Coupons shall be retrieved.
- (3) Openings cut into piping shall be smooth bore, and all internal slag and welding residue shall be removed.
- (4) Fittings shall not penetrate the internal diameter of the piping.
- (5) Steel plates shall not be welded to the ends of piping or fittings.
- (6) Fittings shall not be modified.
- (7) Nuts, clips, eye rods, angle brackets, or other fasteners shall not be welded to pipe or fittings, except as permitted in 7.5.2.2.3 and 7.5.2.4.7.
- (8) Completed welds shall be free from cracks, incomplete fusion, surface porosity greater than $\frac{1}{16}$ in. (1.6 mm) diameter, and undercut deeper than 25 percent of the wall thickness or $\frac{1}{32}$ in. (0.8 mm), whichever is less.
- (9) Completed circumferential butt weld reinforcement shall not exceed $\frac{3}{32}$ in. (2 mm).
- (10) After completion of the weld for fittings directly connected to a sprinkler, the inside diameter of the entrance from the pipe into the welded fitting shall not be less than inside diameter of the fitting. ____

Statement of Problem and Substantiation for Public Comment

During the previous revision cycle for NFPA 13, information was shared with the AUT-SSD Committee indicating that a reduction in the inside diameter of a welded outlet fitting can substantially reduce the flow through a sprinkler that is attached to the fitting. While the existing text indicates that the hole cut for the welded outlet fitting is not to be less than the inside diameter of the fitting, these revisions provide additional clarification that the fitting's inside diameter is not to be reduced as a result of the process for attaching the fitting to the pipe. The new annex text provides information regarding the impact of a reduced inside diameter on the flow through the sprinkler. .

Related Item

- Committee Input 1166

Submitter Information Verification

Submitter Full Name: Kerry Bell

Organization: UL LLC

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 19 11:22:15 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1018-NFPA 13-2023

Statement: Restricted welded outlet fittings can substantially reduce the flow through a sprinkler that is attached to the fitting. While the existing text indicates that the hole cut for the welded outlet fitting is not to be less than the inside diameter of the fitting, these revisions provide additional clarification that the fitting's inside diameter is not to be reduced as a result of the process for attaching the fitting to the pipe. The new annex text provides information regarding the impact of a reduced inside diameter on the flow through the sprinkler.



Public Comment No. 219-NFPA 13-2023 [Section No. 7.7.2]

7.7.2*

Electrical waterflow alarm devices shall be listed for the service and so constructed and installed that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler of the smallest K-factor installed on the system will result in an audible alarm on the premises within 100 seconds after such flow begins- ~~and until such flow steps .~~

Statement of Problem and Substantiation for Public Comment

Electrical water flow are a latching alarm and expected until acknowledged or reset.

Related Item

• 0

Submitter Information Verification

Submitter Full Name: Joshua McDonald

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 16:36:15 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: Flow switches do not latch so the current language is appropriate. In addition, the public comment is new material not related to a first draft action.

**Public Comment No. 185-NFPA 13-2023 [New Section after 7.8.3]****7.8.3*****A.7.8.3**

Requiring additives to be listed is not intended to preclude increasing the level of nitrogen in sprinkler systems to reduce corrosion potential. Use vapor phase corrosion inhibitor added to an air supply should not trigger a need for a reduced-pressure zone backflow preventer when mixed with water in a concentration that does not reach regulatory limits (classification as a contaminant) requiring a need for a reduced-pressure zone backflow preventer.

Statement of Problem and Substantiation for Public Comment

There is no feasible scenario that would result in an air supply additive contaminating the water supply. The residual vapor inhibitor in a dry pipe or preaction system and an air supply piping would discharge with water through open sprinklers after a valve trips. Upon nuisance tripping, the concentration of vapor inhibitor when mixed with water would not be in concentration to elevate from pollutant (the normal classification of sprinkler water) to contaminant. The toxicological evaluation as part of the product listing identified that release into the potable water was not assessed due to the physical form of the product. The toxicological evaluation also indicated that consideration of release into water supply is not relevant for a vapor-phase corrosion inhibitor used in dry pipe or preaction sprinkler systems.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 181-NFPA 13-2023 [New Section after 3.3.241]	
Public Comment No. 182-NFPA 13-2023 [New Section after A.3.3.241.2]	
Public Comment No. 183-NFPA 13-2023 [New Section after 5.1.4.3]	

Related Item

- PI-348

Submitter Information Verification

Submitter Full Name: Mark Hopkins
Organization: Terpconsulting
Affiliation: General Air Products
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 30 14:52:54 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee	Rejected
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Action:

Resolution: Backflow prevention requirements are established in AWWA M-14 and/or local plumbing codes.



Public Comment No. 82-NFPA 13-2023 [New Section after 7.9]

7.10 Air Supplies

Where an air compressor is dedicated for the sprinkler system, the air compressor shall be listed for fire protection use in accordance with UL 1450 Motor-Operated Air Compressors, Vacuum Pumps, and Painting Equipment.

Statement of Problem and Substantiation for Public Comment

Air compressors are essential to system performance. Without durability and reliability resting that comes with listing against a product standard, sprinkler systems that rely on a dedicated air supply need to have listed compressors to ensure they operate as intended.

Related Public Comments for This Document

Related Comment

Public Comment No. 1-NFPA 13-2023 [New Section after 8.2.7.5.1]

Public Comment No. 1-NFPA 13-2023 [New Section after 8.2.7.5.1]

Relationship

Alternate location for the requirements

Related Item

- PI-21

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Mon May 01 12:28:36 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1019-NFPA 13-2023

Statement: Air compressors are essential to system performance. Without durability and reliability testing that comes with listing against a product standard, sprinkler systems that rely on a dedicated air supply need to have listed compressors to ensure they operate as intended. A "shop air compressor" would not be held to the same requirements as an air compressor dedicated to a fire sprinkler system. UL has updated UL 1450 Motor-Operated Air Compressors, Vacuum Pumps, and Painting Equipment to include the specific testing parameters for compressors used for fire protection.



Public Comment No. 171-NFPA 13-2023 [New Section after 7.9.5]

7.10 Flexible Sprinkler Hose

Flexible sprinkler hose shall be permitted to be used in accordance with manufacturers instructions and with section 7.10.1 and 7.10.2.

7.10.1 Flexible sprinkler hose feeding sprinkler drops located above easily removable ceiling materials shall be limited to 6 ft. in length

7.10.2 Flexible sprinkler hose feeding sprinkler drops located above solid ceilings or walls shall be limited to 12 ft. in length

Statement of Problem and Substantiation for Public Comment

Although not referenced in NFPA 13, the listing requirements for flexible sprinkler hose is currently limited to 6 ft in length. The purpose of this length requirement is to attempt to prevent untrained personnel from relocating a sprinkler (on a flexible hose) without regard to the spacing requirement of the sprinkler. This makes sense when the sprinkler and flexible hose is located above an easily removable or accessed ceiling such as an ACT suspended ceiling. In situations where the flexible sprinkler hose is not easily accessed (such as above a hard ceiling or wall) this concern is mitigated, and greater lengths of flexible hose should be permitted. Similar requirements are to be submitted to ul 2443.

Related Item

- PI-4

Submitter Information Verification

Submitter Full Name: Roland Asp

Organization: National Fire Sprinkler Association

Affiliation: NFSA Engineering and Standards Committee

Street Address:

City:

State:

Zip:

Submittal Date: Mon May 29 22:26:20 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1059-NFPA 13-2023

Statement: This provides a maximum length for flexible sprinkler hose based on different ceiling types.



Public Comment No. 187-NFPA 13-2023 [New Section after 8.2]

8.2.11 Vapor phase corrosion inhibitor for Increase C Value.

8.2.11.1 Where vapor phase corrosion inhibitor is included in the air supply to control corrosion, the C value taken from Table 28.2.4.8.1 for dry pipe and preaction systems shall be permitted to be increased to 120.

8.2.11.2 The vapor phase corrosion inhibitor equipment shall be installed per the manufacturer's instructions.

8.2.11.3 The vapor phase corrosion inhibitor equipment shall be maintained in accordance with Chapter 32.

Statement of Problem and Substantiation for Public Comment

Vapor phase corrosion inhibitor is effective at mitigating corrosion in dry pipe and preaction sprinkler systems. The technology has been available for many years and is now available as a listed product for use in dry pipe and preaction sprinkler systems. Testing has demonstrated that VCI technology provides excellent corrosion protection. Reports show that nano particle vapor phase corrosion inhibitors provide excellent corrosion inhibiting ability (VIA) and have properties allowing for excellent migration into systems.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 181-NFPA 13-2023 [New Section after 3.3.241]	
Public Comment No. 182-NFPA 13-2023 [New Section after A.3.3.241.2]	
Public Comment No. 188-NFPA 13-2023 [Section No. 16.4.2.5]	
Public Comment No. 189-NFPA 13-2023 [Section No. 28.3.4.8.1]	

Related Item

- PI-350

Submitter Information Verification

Submitter Full Name: Mark Hopkins
Organization: Terpconsulting
Affiliation: General Air Products
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 30 15:09:12 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Rejected but see related SR

Action:**Resolution:** [SR-1062-NFPA 13-2023](#)**Statement:** The technology has been available for many years and is now available as a listed product for use in dry pipe and preaction sprinkler systems.



Public Comment No. 22-NFPA 13-2023 [Section No. 8.2]

8.2 *

~~Dry~~

~~Dry Pipe Systems.~~

8.2.

~~1 Gridded Dry Pipe Systems.~~

~~Gridded dry pipe systems shall not be installed.~~

8.2.2 – Components

1 Pressure Gauges.

Approved pressure gauges in accordance with Section 16.13 shall be connected as follows:

- (1) On the water side and air side of the dry pipe valve
- (2) At the air pump supplying the air receiver where one is provided
- (3) At the air receiver where one is provided
- (4) In each independent pipe from air supply to dry pipe system
- (5) At quick-opening devices

8.2.2 Sprinklers .

8.2.2.

~~1 Sprinklers~~

~~1~~

Residential sprinklers installed on dry pipe systems shall be listed for dry pipe applications .

8.2.2.

~~1.1~~

~~2~~

The following sprinkler orientations and arrangements shall be permitted for dry pipe systems:

- (1) Upright sprinklers
- (2) ~~1~~ * Listed dry sprinklers
- (3) Pendent sprinklers and sidewall sprinklers installed on return bends, where the sprinklers, return bend, and branch line piping are in an area maintained at or above 40°F (4°C)
- (4) Horizontal sidewall sprinklers installed so that water is not trapped
- (5) Pendent sprinklers and sidewall sprinklers , where the sprinklers and branch line piping are in an area maintained at or above 40°F (4°C), the water supply is potable, and the piping for the dry pipe system is copper or CPVC specifically listed for dry pipe applications

8.2.

~~2.1.2~~

Residential sprinklers installed on dry pipe systems shall be listed for dry pipe applications.

8.2.2.2 – Pressure Gauges.

Approved pressure gauges in accordance with Section 16.13 shall be provided as follows:

- (1) On the water side and pneumatic side of the dry pipe valve
- (2) At the air compressor supplying the system, where one is provided
- (3) At the air, nitrogen, or other approved gas receiver, where one is provided
- (4) In each independent pipe from the pneumatic source to the dry pipe system
- (5) At mechanical quick opening devices

8.2.3 * – Location and Protection of Dry Pipe Valve**3* Size of Systems .****8.2.3.1 * –****General.**

The system capacity (volume) controlled by a dry pipe valve

and supply pipe

shall be

protected against freezing and mechanical injury.

8.

determined by 8.2.3.2

– Valve Rooms. 8.

, 8.2.3.

2.1

Valve rooms shall be lighted and heated.

8.2.3.2.2 –

The source of heat shall be of a permanently installed type.

8.2.3.2.3 –

Heat tape shall not be used in lieu of heated valve enclosures to protect the dry pipe valve and supply pipe against freezing.

8.2.3.3 – Enclosure Protection.

The valve enclosure shall be protected with a sprinkler or sprinklers supplied from the dry system or from a wet pipe system that protects the area where the enclosure is located.

8.2.3.4 – High Water Level Prevention.

Protection against accumulation of water above the clapper shall be provided for dry pipe valves in accordance with

3, 8.2.3.4, 8.2.3.5, or 8.2.3.7.

8.2.3.

4.

1 .

8.2.3.4.1 –

An automatic high water level signaling device, an automatic drain, or a means to manually drain shall be permitted.

8.2.4 * – Dry Pipe System Water Delivery.

8.2.4.1 –1

For dry pipe systems protecting dwelling unit portions of any occupancy, system size shall be such that initial water

shall be

is discharged from the system test connection in not more than

15 seconds

15 seconds, starting at the normal air pressure on the system and at the time of fully opened inspection test connection.

8.2.

4.2–

For dry

3.1.1.1

Dry pipe systems protecting

areas other than

dwelling unit portions of any occupancy

, initial water

shall not be

discharged from the system test connection in accordance with 8

permitted to use the options outlined in 8.2.

4.

3

,8

.2

.4.4

,

8

8.2.

4

3.

5

3,

8

or 8.2.

4.6, or 8.2.

3.4.

7.

8.2.

4

3.

3

2

System size shall be such that initial water is discharged from the system test connection in not more than

60 seconds

60 seconds , starting at the normal air pressure on the system and at the time of fully opened inspection test connection.

8.2.

4

3

4 *

3

A system size of not more than

500 gal

500 gal (

1900 L

1900 L) shall be permitted without a quick-opening device and shall not be required to meet any specific water delivery requirement to the inspection test connection.

8.2.

4

3

5

4

A system size of not more than

750 gal

750 gal (

2850 L

2850 L) shall be permitted with a quick-opening device and shall not be required to meet any specific water delivery requirement to the inspection test connection.

8.2.

4.6 Water Delivery Calculations

3.5

System size shall be based on dry pipe systems being calculated for water delivery in accordance with 8.2.3.6 .

8.2.

4.6.1

Initial water shall be discharged from the system test connection based on calculations using a program listed by a nationally recognized testing laboratory.

3.6 Dry Pipe System Water Delivery.

8.2.

4

3 .6.

2

Water delivery calculation for each

1

Calculations for dry pipe system water delivery shall be based on the hazard shown in Table 8.2.

4

3.6.

2

1.

Table 8.2.

4

3.6.

2-Dry

1 Dry Pipe System Water Delivery

<u>Hazard</u>	<u>Number of Most Remote Sprinklers Initially Open</u>	<u>Maximum Time of Water Delivery (seconds)</u>
<u>Dwelling unit</u>	<u>1</u>	<u>15</u>
<u>Light</u>	<u>1</u>	<u>60</u>
<u>Ordinary I</u>	<u>2</u>	<u>50</u>
<u>Ordinary II</u>	<u>2</u>	<u>50</u>
<u>Extra I</u>	<u>4</u>	<u>45</u>
<u>Extra II</u>	<u>4</u>	<u>45</u>
<u>High</u>		

-

<u>piled</u>	<u>4</u>	<u>40</u>
--------------	----------	-----------

8.2.

3.6.

3-

Water delivery calculation

2.

The calculation program and method shall be listed by a nationally recognized testing laboratory.

8.2.3.6.3

Calculations of water delivery time shall be based on the time interval between the calculated

following:

(1) Calculated point in time when the selected most remote sprinkler(s) open and the calculated

(1)

(2) Calculated point in time when the minimum design

(1) pressure at the most remote sprinkler

~~is reached~~

(1) reaches or

~~surpassed and maintained.~~

(1) surpasses and maintains the design pressure

8.2.3.6.4

For dry pipe systems protecting dwelling unit portions of any occupancy, the sprinklers in the dwelling unit shall have a maximum water delivery time of 15 seconds to the single most remote sprinkler.

8.2.

4

3.7 *

—

Manifold Test Connection.

8.2.

4

3.7.

1—

1

System size shall be such that initial water discharge from the system

manifold

trip test connection or manifold outlets is not more than the maximum time of water delivery specified

in Table

in Table 8.2.

4

3.6.

2

1, starting at

the

normal air pressure on the system and at the time of fully opened

inspection

test connection.

8.2.

4

3.7.

2—

2

When flow is from four sprinklers, the test manifold shall be arranged to simulate two sprinklers on the most remote sprinkler branch line and two sprinklers on the next adjacent branch line.

8.2.

4

3.7.

3—

3

When flow is from three sprinklers, the test manifold shall be arranged to simulate two

sprinklers on the most remote branch line and one sprinkler on the next adjacent branch line.

8.2.3.7.4

When flow is from two sprinklers, the test manifold shall be arranged to simulate two sprinklers on the most remote

sprinkler

branch line.

8.2.

4

3.7.

4

5

When flow is from one sprinkler, the test manifold shall be installed as per the requirements for a trip test connection in accordance with 16.14.2.

8.2.3.7.6

A system meeting the requirements of this section shall not be required to also meet the requirements

of 8

of 8.2.

4.

3

, 8

.

2.4.4, 8.

2 or 8.2.

4

3.5

, or 8

.

2.4.6.

8.2.

4

3.

8— Dry Pipe System Subdivision.

8.2.4.8.1 —

Subdivision of dry pipe systems using check valves to facilitate water delivery shall be permitted when all the conditions in 8.2.4.8.2 through 8.2.4.8.5 are met.

8

Dry pipe systems with water delivery times other than 8.2.3.2, 8.2.3.5, and 8.2.3.7 shall be acceptable where listed by a nationally recognized testing laboratory.

8.2.

4.8.2—

Check valves shall be located

3.9 Dry Pipe System Subdivision.

Unless installed in a heated enclosure , check valves shall not be used to subdivide the dry pipe systems .

8.2.

4

3 .

8

9 .

3—

A ~~1~~ **1/8** in. (3 mm) diameter hole

1

When check valves are used to subdivide dry pipe systems in accordance with 8.2.3.9, a hole 1/8 in. (3 mm) in diameter shall be drilled in the clapper of each check valve to permit equalization of air

or nitrogen

pressure among the various parts of the system.

8.2.

4

3 .

8

9 .

4—

Auxiliary drains shall be provided for each subdivided section of the system.

8.2.4.8.5 —

2

Where auxiliary drains are not provided for each subdivided section, an approved indicating drain valve supervised in the closed position in accordance with 16.9.3.3, connected to a bypass around each check valve

incorporating an approved and supervised normally closed indicating control valve

, shall be provided as a means

to drain the subdivided section

for draining the system .

8.2.

4

3 .

9—

10

Dry

Gridded dry pipe systems

with water delivery times other than 8.2.4 shall be acceptable where listed by a nationally recognized testing laboratory

shall not be installed .

8.2.

5 Quick

4 Quick -Opening Devices.

8.2.

5
4.
1—
1—

A listed quick-opening device shall be permitted to help meet the requirements

of 8

of 8 .2.

4.

8

3.2, 8 .2, 3.5, 8 .2

—

.3.7, or 8.2.3.8.

8.2.4.2

The quick-opening device shall be located as close as practical to the dry pipe valve.

8.2.

5

4.

3—

~~Where a valve is installed in the connection between a dry pipe valve and the inlet of a quick-opening device, it shall be a supervised normally open indicating type valve.~~

8.2.5.4 —

To protect

3

To protect the restriction orifice and other operating parts of the quick-opening device against submergence, the connection to the riser shall be above the point at which water (priming water and back drainage) is expected when the

device is

dry pipe valve and quick-opening device are set,

unless the

except where design features of the particular quick-opening device

or dry pipe valve make this requirement

make these requirements unnecessary.

8.2.

5

4.

5—

~~To protect the quick-opening device against submergence upon operation, a~~

4

Where a valve is installed in the connection between a dry pipe sprinkler riser and a quick-opening device, it shall be an indicating-type valve that is sealed, locked, or electrically supervised in the open position.

8.2.4.5

A check valve shall be installed between the quick-opening device and the intermediate chamber of the dry pipe valve,

unless

where the
design features of the
quick-opening device
make this requirement unnecessary
requires protection against submergence after system operation .

8.2.

5

4 .

6

6

If the quick-opening device requires pressure feedback from the intermediate chamber, a
supervised normally open indicating type valve
valve type that will clearly indicate whether it is opened or closed shall be permitted in place of
the
that check valve .

8.2.4.7

Where a valve is utilized in accordance with 8.2.4.6, the valve shall be constructed so that it
can be locked or sealed in the open position.

8.2.

5

4 .

5

8 Antiflooding Device .

8.2.

5.7

Unless the quick-opening device has a built-in antiflooding device or is listed or approved for
use without an antiflooding device, a listed anti-flooding device

4.8.1

Unless the requirements of 8.2.4.8.2 are met, a listed antiflooding device shall be installed in
the connection between the dry pipe

valve

sprinkler riser and the quick-opening device.

8.2.

6 System Pneumatic Pressure

4 .

8.

2.6.1

System pneumatic pressure shall be maintained in accordance with the instruction sheet
furnished with the dry pipe valve, or in the absence of manufactures data system pneumatic
pressure shall be 20 psi (1.4 bar) in excess of the calculated trip pressure of the dry pipe valve,
based on the highest normal water pressure of the system supply

8.2.6.5 –

The high pressure signal shall be set at a minimum of 5 psi (0.3 bar) above the system
pneumatic pressure specified in 8.2.6.1 or per the manufacturer's instructions.

2.

A listed antiflooding device shall not be required where the quick-opening device has built-in antiflooding design features or the quick-opening device is listed or approved without the use of an antiflooding device.

8.2.5* Location and Protection of Dry Pipe Valve.8.2.5.1* General.

The dry pipe valve and supply pipe shall be protected against freezing and mechanical injury .

8.2.6.2

~~The permitted rate of pressure leakage shall be as specified in 29.2.2 .~~

~~**8.2.6.3 –**~~

~~Each dry pipe valve shall have a low/high supervisory pressure switch that provides a supervisory signal when the pneumatic pressure within the system is out of the ranges specified in 8.2.6.4 and 8.2.6.5 .~~

~~**8.2.6.4 –**~~

~~The low pressure signal shall be set at a minimum of 5 psi (0.3 bar) above the trip pressure of the dry pipe valve or per the manufacturer's instructions.~~

5.2 Valve Rooms.

8.2.5.2.1

Valve rooms shall be lighted and heated.

8.2.5.2.2

The source of heat shall be of a permanently installed type.

8.2.5.2.3

Heat tape shall not be used in lieu of heated valve enclosures to protect the dry pipe valve and supply pipe against freezing.

8.2.5.3 Supply.

The supply for the sprinkler in the dry pipe valve enclosure shall be either from the dry side of the system or from a wet pipe sprinkler system that protects the area where the dry pipe valve is located.

8.2.5.4 High Water Level Protection.

8.2.5.4.1

Where it is possible to reseal the dry valve after actuation without first draining the system, a high water level device in accordance with 8.2.5.4.3 shall be provided.

8.2.5.4.2 Differential Dry Pipe Valve.

Protection against accumulation of water above the clapper shall be provided for differential dry pipe valves in accordance with 8.2.5.4.3.

8.2.5.4.3 High Water Level Device.

An automatic high water level signaling device or an automatic drain shall be permitted.

8.2.6 Air Pressure and Supply.

8.2.6.

6—

~~When a low or high pneumatic pressure condition is detected, notification shall be by either of the following:~~

- ~~(1) An audible signal at a location that will be heard by building maintenance staff~~
- ~~(2) Through the fire alarm control unit as a supervisory condition~~

8.2.7 * Air, Nitrogen, or Other Approved Gas Supply

1

Where the term *air* is used throughout this standard, it shall also include the use of nitrogen or other approved gas .

8.2.

7.1—

6.2 Maintenance of Air Pressure.

Air

7

or nitrogen

7

or other approved gas

under

pressure shall be maintained on dry pipe systems throughout the year.

8.2.

7
6 .
2
3 *
_
—

~~The air, nitrogen, or other approved gas shall be supplied from a permanent~~

Air Supply.

8.2.6.3.1

The compressed air supply shall be from a source available at all times.

8.2.

7
6 .3 .2 * _ _

The air

, nitrogen, or other approved gas

supply shall

be

have a capacity capable of restoring normal air pressure in the system within

30 minutes

30 minutes .

8.2.

7.4

The requirement of

6.3.3

The requirements of 8 .2.

7

6 .3

shall

.2 shall not apply in refrigerated spaces maintained below 5°F (

-15°C

-15°C), where

the air, nitrogen, or other approved gas supply is capable of restoring normal pressure in the system within 30 minutes.

normal system air pressure shall be permitted to be restored within 60 minutes.

8.2.6.4 Air Supply Connections.

8.2.6.4.1*

The connection from the air supply to the dry pipe valve shall not be less than ½ in. (15 mm) in diameter and shall enter the system above the priming water level of the dry pipe valve.

8.2.6.4.2

A check valve shall be installed in the air filling connection.

8.2.6.4.2.1

A listed or approved shutoff valve of either the renewable disc or ball valve type shall be installed on the supply side of this check valve.

8.2.6.5 Relief Valve.

An approved relief valve shall be provided between the air supply and the shutoff valve and shall be set to relieve pressure no less than 10 psi (0.7 bar) in excess of system air pressure provided in 8.2.6.7.1 and shall not exceed the manufacturer's limitations.

8.2.

7

6.

5-Compressed

6 Automatic Air Maintenance .

8.2.

7

6.

5

6.1 * _ _

Air supply

Unless the requirements of 8.2.6.6.2 are met, where the air supply to a dry pipe system is maintained automatically, the air supply shall be from a dependable plant

compressed air

system or an air compressor with an air receiver , and shall utilize an air maintenance device specifically listed for such service and capable of controlling the required air pressure on, and maximum airflow to, the dry pipe system .

8.2.

7

6.

5

6.

2

2

Where the air compressor supplying a single dry pipe system has a capacity

of

less than 5.

5 ft

5 ft³ /min (

160 L

160 L /min)

at 10 psi

,

the

an air receiver or air maintenance device shall not be required.

8.2.

7

6.

5

6.

3

Where an air compressor is the dedicated air supply, it shall be installed in accordance with NFPA 70 , Article 430

3

The automatic air supply to more than one dry pipe system shall be connected to enable individual maintenance of air pressure in each system .

8.2.

7

6 .

5.4

~~The disconnecting means for an automatic air compressor shall not be a general use switch or a cord-and-plug connection~~

6.3.1

Each dry pipe system shall have a dedicated air maintenance device .

8.2.

7.

6

~~Compressed Nitrogen~~

~~.~~

~~8.2.7.~~

6.

1

~~Nitrogen supply shall be from a dependable nitrogen generator or from one or more industrial cylinders or containers~~

8.2.7.6.3 –

~~Where a nitrogen generator is the dedicated nitrogen~~

4

A check valve or other positive backflow prevention device shall be installed in the air supply to each system to prevent airflow or waterflow from one system to another .

8.2.

7.

6.

2

~~A minimum leak rate of 1.5 psi (0.1 bar) per hour shall be used to determine the size of the compressed nitrogen supply.~~

6.5

Where an air compressor is the dedicated air supply, it shall be installed in accordance with NFPA 70

with NFPA 70 , Article 430.

8.2.

7

6 .6.

4

5.1

The disconnecting means for

a nitrogen generator

an automatic air compressor shall not be a general - use light switch or a cord-and-plug connection

connected motor .

8.2.

7.6.5—

~~Where nitrogen or other approved gas stored in high-pressure industrial cylinders is used, the gas shall be introduced through an approved regulator on the supply side of the pressure maintenance device(s)~~

6.7 System Air Pressure.

8.2.6.7.1

The system air pressure shall be maintained in accordance with the instruction sheet furnished with the dry pipe valve, or shall be 20 psi (1.4 bar) in excess of the calculated trip pressure of the dry pipe valve, based on the highest normal water pressure of the system supply .

8.2. 6. 7.

6.6—

~~A low pressure alarm shall be provided between the regulator in 8.2.7.6.4 and the air maintenance device(s) to notify the need for refilling cylinder(s).~~

2

Each dry pipe valve shall have a low/high supervisory pressure switch that provides a supervisory signal when the air pressure within the system is out of the ranges specified in 8.2.6.7.2.1 and 8.2.6.7.2.2.

8.2. 6. 7.

7—

~~Combinations of approved sources of air, nitrogen, or other gas supplies shall be permitted.~~

2.1

The low pressure signal shall be set at a minimum of 5 psi (0.3 bar) above the calculated trip pressure of the dry pipe valve.

8.2.

8— Automatic Pressure Maintenance. 8

6.7 .2.

8.1—

~~The air, nitrogen, or other approved gas supply to more than one dry pipe system shall be connected to enable individual maintenance of pressure in each system.~~

2

The high pressure signal shall be set at 5 psi (0.3 bar) above the system air pressure specified in 8.2.6.7.1.

8.2.

8.2 * —

~~Unless the requirements of 8.2.10.4 are met, each dry pipe system shall have a dedicated pressure maintenance device capable of controlling the required pressure on the system and the maximum flow of air, nitrogen, or other approved gas into the system.~~

6.7.2.3

When a low or high air pressure condition is detected, notification shall be by either of the following:

- (1) An audible signal at a location that will be heard by building maintenance staff
- (2) Through the fire alarm control unit as a supervisory condition

8.2.

8.3—

~~Where the air compressor supplying a single dry pipe system has a capacity of less than 5.5 ft³/min (160 L/min), an air maintenance device shall not be required.~~

6.7.3

The permitted rate of air leakage shall be as specified in 29.2.2.

8.2.

~~9 Connections.~~

6.8 Nitrogen or Other Approved Gas.

8.2.

~~9~~

6.8.1 *

~~The connection from the air, nitrogen,~~

Where nitrogen or other approved gas

source

is used, the supply shall

~~not be less than 1/2 in. (15 mm) in diameter and shall enter the system above the priming water level of the dry pipe valve, or as otherwise specified by the manufacturer.~~

be from a reliable source.

8.2.6.8.2

Where stored nitrogen or other approved gas is used, the gas shall be introduced through a pressure regulator and shall be in accordance with 8.2.6.6.

8.2.

~~9.2~~

~~A check valve shall be installed in the pneumatic supply connection~~

6.8.3

A low pressure alarm shall be provided on gas storage containers to notify the need for refilling .

8.2.

~~9.3~~

6.8.4*

~~A listed~~

When nitrogen or

~~approved shutoff valve of either the renewable disc or ball valve type shall be installed on the supply side of the check valve in~~

other approved gas is the only source of gas for pressurizing a system, it shall have a capacity capable of restoring normal gas pressure in the system within 30 minutes.

8.2.

~~9~~

~~6 .~~

~~28.~~

8 . 5

~~8~~

The requirements of 8 .2.

~~9.4~~

~~An approved relief valve shall be provided between the pneumatic supply and shutoff valve~~

~~required in 8.2.9.3 and shall be set to relieve pressure no less than 10 psi (0.7 bar) in excess of the system pneumatic air pressure provided in~~

6.8.4 shall not apply in refrigerated spaces maintained below 5°F (–15°C), where normal system air pressure shall be permitted to be restored within 60 minutes.

8.2.6.

1.

8.2.10 * –Nitrogen

9* Nitrogen Supply for Increased C Value.

8.2.6.9.1

Where nitrogen is used to allow for increased C value in

hydraulic calculations in

accordance

with Table

with Table 28.

3

2.4.8.1, the nitrogen supply shall be in accordance

with 8

with 8.2.

10

6.

1 through 8

9.2 through 8.2.

10

6.

5

9.6.

8.2.

10.1

6.9.2

Nitrogen shall be from a listed nitrogen generator permanently installed.

8.2.

10.2

6.9.3

The generator shall be capable of supplying and maintaining at least

98 percent

98 percent nitrogen concentration throughout the system at a minimum leakage rate of 1.

5 psi

5 psi (0.1 bar) per hour.

8.2.

10.3

6.9.4

A means of verifying nitrogen concentration shall be provided for each system where increased C value is used.

8.2.

10.4

6.9.5

The nitrogen generator shall be installed per the manufacturer's instructions

instruction .

8.2.

10.5

6.9.6

The nitrogen generator shall be maintained in accordance with Chapter 32 .

Statement of Problem and Substantiation for Public Comment

FR-1129 contained so many errors, omissions, and unintended consequences that it is almost too large to tackle at the second draft stage.

Specific issues include:

Repetitive use of "air, nitrogen, or other approved gas"

Removal of AMD terminology

Oversized refill rates for systems using nitrogen NOT increasing the C Value

Omission of dwelling units from water delivery time table

This public comment simply returns section 8.2 to the 2022 edition.

Related Item

- FR-1129

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

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Submittal Date: Wed Mar 08 17:04:48 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1190-NFPA 13-2023

Statement: When the Dry Pipe Systems section was revised, the calculation option for dwelling units was dropped. This clarifies that the dwelling units can also be calculated for pneumatic delivery.



Public Comment No. 22-NFPA 13-2023 [Section No. 8.2]

8.2* Dry Pipe Systems.

8.2.1 Pressure Gauges.

Approved pressure gauges in accordance with Section 16.13 shall be connected as follows:

- (1) On the water side and air side of the dry pipe valve
- (2) At the air pump supplying the air receiver where one is provided
- (3) At the air receiver where one is provided
- (4) In each independent pipe from air supply to dry pipe system
- (5) At quick-opening devices

8.2.2 Sprinklers.

8.2.2.1

Residential sprinklers installed on dry pipe systems shall be listed for dry pipe applications.

8.2.2.2

The following sprinkler orientations and arrangements shall be permitted for dry pipe systems:

- (1) Upright sprinklers
- (2) *Listed dry sprinklers
- (3) Pendent sprinklers and sidewall sprinklers installed on return bends, where the sprinklers, return bend, and branch line piping are in an area maintained at or above 40°F (4°C)
- (4) Horizontal sidewall sprinklers installed so that water is not trapped
- (5) Pendent sprinklers and sidewall sprinklers, where the sprinklers and branch line piping are in an area maintained at or above 40°F (4°C), the water supply is potable, and the piping for the dry pipe system is copper or CPVC specifically listed for dry pipe applications

8.2.3* Size of Systems.

8.2.3.1*

The system capacity (volume) controlled by a dry pipe valve shall be determined by 8.2.3.2, 8.2.3.3, 8.2.3.4, 8.2.3.5, or 8.2.3.7.

8.2.3.1.1

For dry pipe systems protecting dwelling unit portions of any occupancy, system size shall be such that initial water is discharged from the system test connection in not more than 15 seconds, starting at the normal air pressure on the system and at the time of fully opened inspection test connection.

8.2.3.1.1.1

Dry pipe systems protecting dwelling unit portions of any occupancy shall not be permitted to use the options outlined in 8.2.3.2, 8.2.3.3, or 8.2.3.4.

8.2.3.2

System size shall be such that initial water is discharged from the system test connection in not more than 60 seconds, starting at the normal air pressure on the system and at the time of fully opened inspection test connection.

8.2.3.3

A system size of not more than 500 gal (1900 L) shall be permitted without a quick-opening device and shall not be required to meet any specific water delivery requirement to the inspection test connection.

8.2.3.4

A system size of not more than 750 gal (2850 L) shall be permitted with a quick-opening device and shall not be required to meet any specific water delivery requirement to the inspection test connection.

8.2.3.5

System size shall be based on dry pipe systems being calculated for water delivery in accordance with 8.2.3.6.

8.2.3.6 Dry Pipe System Water Delivery.

8.2.3.6.1

Calculations for dry pipe system water delivery shall be based on the hazard shown in Table 8.2.3.6.1.

Table 8.2.3.6.1 Dry Pipe System Water Delivery

<u>Hazard</u>	<u>Number of Most Remote Sprinklers Initially Open</u>	<u>Maximum Time of Water Delivery (seconds)</u>
Dwelling unit	1	15
Light	1	60
Ordinary I	2	50
Ordinary II	2	50
Extra I	4	45
Extra II	4	45
High piled	4	40

8.2.3.6.2

The calculation program and method shall be listed by a nationally recognized testing laboratory.

8.2.3.6.3

Calculations of water delivery time shall be based on the time interval between the following:

- (1) Calculated point in time when the selected most remote sprinkler(s) open
- (2) Calculated point in time when pressure at the most remote sprinkler reaches or surpasses and maintains the design pressure

8.2.3.6.4

For dry pipe systems protecting dwelling unit portions of any occupancy, the sprinklers in the dwelling unit shall have a maximum water delivery time of 15 seconds to the single most remote sprinkler.

8.2.3.7* Manifold Test Connection.

8.2.3.7.1

System size shall be such that initial water discharge from the system trip test connection or manifold outlets is not more than the maximum time of water delivery specified in Table 8.2.3.6.1, starting at normal air pressure on the system and at the time of fully opened test connection.

8.2.3.7.2

When flow is from four sprinklers, the test manifold shall be arranged to simulate two sprinklers on the most remote sprinkler branch line and two sprinklers on the next adjacent branch line.

8.2.3.7.3

When flow is from three sprinklers, the test manifold shall be arranged to simulate two sprinklers on the most remote branch line and one sprinkler on the next adjacent branch line.

8.2.3.7.4

When flow is from two sprinklers, the test manifold shall be arranged to simulate two sprinklers on the most remote branch line.

8.2.3.7.5

When flow is from one sprinkler, the test manifold shall be installed as per the requirements for a trip test connection in accordance with 16.14.2.

8.2.3.7.6

A system meeting the requirements of this section shall not be required to also meet the requirements of 8.2.3.2 or 8.2.3.5.

8.2.3.8

Dry pipe systems with water delivery times other than 8.2.3.2, 8.2.3.5, and 8.2.3.7 shall be acceptable where listed by a nationally recognized testing laboratory.

8.2.3.9 Dry Pipe System Subdivision.

Unless installed in a heated enclosure, check valves shall not be used to subdivide the dry pipe systems.

8.2.3.9.1

When check valves are used to subdivide dry pipe systems in accordance with 8.2.3.9, a hole 1/8 in. (3 mm) in diameter shall be drilled in the clapper of each check valve to permit equalization of air pressure among the various parts of the system.

8.2.3.9.2

Where auxiliary drains are not provided for each subdivided section, an approved indicating drain valve supervised in the closed position in accordance with 16.9.3.3, connected to a bypass around each check valve, shall be provided as a means for draining the system.

8.2.3.10

Gridded dry pipe systems shall not be installed.

8.2.4 Quick-Opening Devices.

8.2.4.1

A listed quick-opening device shall be permitted to help meet the requirements of 8.2.3.2, 8.2.3.5, 8.2.3.7, or 8.2.3.8.

8.2.4.2

The quick-opening device shall be located as close as practical to the dry pipe valve.

8.2.4.3

To protect the restriction orifice and other operating parts of the quick-opening device against submergence, the connection to the riser shall be above the point at which water (priming water and back drainage) is expected when the dry pipe valve and quick-opening device are set, except where design features of the particular quick-opening device make these requirements unnecessary.

8.2.4.4

Where a valve is installed in the connection between a dry pipe sprinkler riser and a quick-opening device, it shall be an indicating-type valve that is sealed, locked, or electrically supervised in the open position.

8.2.4.5

A check valve shall be installed between the quick-opening device and the intermediate chamber of the dry pipe valve, where the quick-opening device requires protection against submergence after system operation.

8.2.4.6

If the quick-opening device requires pressure feedback from the intermediate chamber, a valve type that will clearly indicate whether it is opened or closed shall be permitted in place of that check valve.

8.2.4.7

Where a valve is utilized in accordance with 8.2.4.6, the valve shall be constructed so that it can be locked or sealed in the open position.

8.2.4.8 Antiflooding Device.

8.2.4.8.1

Unless the requirements of 8.2.4.8.2 are met, a listed antiflooding device shall be installed in the connection between the dry pipe sprinkler riser and the quick-opening device.

8.2.4.8.2

A listed antiflooding device shall not be required where the quick-opening device has built-in antiflooding design features or the quick-opening device is listed or approved without the use of an antiflooding device.

8.2.5* Location and Protection of Dry Pipe Valve.

8.2.5.1* General.

The dry pipe valve and supply pipe shall be protected against freezing and mechanical injury.

8.2.5.2 Valve Rooms.

8.2.5.2.1

Valve rooms shall be lighted and heated.

8.2.5.2.2

The source of heat shall be of a permanently installed type.

8.2.5.2.3

Heat tape shall not be used in lieu of heated valve enclosures to protect the dry pipe valve and supply pipe against freezing.

8.2.5.3 Supply.

The supply for the sprinkler in the dry pipe valve enclosure shall be either from the dry side of the system or from a wet pipe sprinkler system that protects the area where the dry pipe valve is located.

8.2.5.4 High Water Level Protection.

8.2.5.4.1

Where it is possible to reseal the dry valve after actuation without first draining the system, a high water level device in accordance with 8.2.5.4.3 shall be provided.

8.2.5.4.2 Differential Dry Pipe Valve.

Protection against accumulation of water above the clapper shall be provided for differential dry pipe valves in accordance with 8.2.5.4.3.

8.2.5.4.3 High Water Level Device.

An automatic high water level signaling device or an automatic drain shall be permitted.

8.2.6 Air Pressure and Supply.

8.2.6.1

Where the term *air* is used throughout this standard, it shall also include the use of nitrogen or other approved gas.

8.2.6.2 Maintenance of Air Pressure.

Air or nitrogen or other approved gas pressure shall be maintained on dry pipe systems throughout the year.

8.2.6.3* Air Supply.

8.2.6.3.1

The compressed air supply shall be from a source available at all times.

8.2.6.3.2*

The air supply shall have a capacity capable of restoring normal air pressure in the system within 30 minutes.

8.2.6.3.3

The requirements of 8.2.6.3.2 shall not apply in refrigerated spaces maintained below 5°F (–15°C), where normal system air pressure shall be permitted to be restored within 60 minutes.

8.2.6.4 Air Supply Connections.

8.2.6.4.1*

The connection from the air supply to the dry pipe valve shall not be less than 1/2 in. (15 mm) in diameter and shall enter the system above the priming water level of the dry pipe valve.

8.2.6.4.2

A check valve shall be installed in the air filling connection.

8.2.6.4.2.1

A listed or approved shutoff valve of either the renewable disc or ball valve type shall be installed on the supply side of this check valve.

8.2.6.5 Relief Valve.

An approved relief valve shall be provided between the air supply and the shutoff valve and shall be set to relieve pressure no less than 10 psi (0.7 bar) in excess of system air pressure provided in 8.2.6.7.1 and shall not exceed the manufacturer's limitations.

8.2.6.6 Automatic Air Maintenance.

8.2.6.6.1*

Unless the requirements of 8.2.6.6.2 are met, where the air supply to a dry pipe system is maintained automatically, the air supply shall be from a dependable plant system or an air compressor with an air receiver, and shall utilize an air maintenance device specifically listed for such service and capable of controlling the required air pressure on, and maximum airflow to, the dry pipe system.

8.2.6.6.2

Where the air compressor supplying a single dry pipe system has a capacity less than 5.5 ft³/min (160 L/min), an air receiver or air maintenance device shall not be required.

8.2.6.6.3

The automatic air supply to more than one dry pipe system shall be connected to enable individual maintenance of air pressure in each system.

8.2.6.6.3.1

Each dry pipe system shall have a dedicated air maintenance device.

8.2.6.6.4

A check valve or other positive backflow prevention device shall be installed in the air supply to each system to prevent airflow or waterflow from one system to another.

8.2.6.6.5

Where an air compressor is the dedicated air supply, it shall be installed in accordance with *NFPA 70*, Article 430.

8.2.6.6.5.1

The disconnecting means for an automatic air compressor shall not be a general-use light switch or a cord-and-plug connected motor.

8.2.6.7 System Air Pressure.

8.2.6.7.1

The system air pressure shall be maintained in accordance with the instruction sheet furnished with the dry pipe valve, or shall be 20 psi (1.4 bar) in excess of the calculated trip pressure of the dry pipe valve, based on the highest normal water pressure of the system supply.

8.2.6.7.2

Each dry pipe valve shall have a low/high supervisory pressure switch that provides a supervisory signal when the air pressure within the system is out of the ranges specified in 8.2.6.7.2.1 and 8.2.6.7.2.2.

8.2.6.7.2.1

The low pressure signal shall be set at a minimum of 5 psi (0.3 bar) above the calculated trip pressure of the dry pipe valve.

8.2.6.7.2.2

The high pressure signal shall be set at 5 psi (0.3 bar) above the system air pressure specified in 8.2.6.7.1.

8.2.6.7.2.3

When a low or high air pressure condition is detected, notification shall be by either of the following:

- (1) An audible signal at a location that will be heard by building maintenance staff
- (2) Through the fire alarm control unit as a supervisory condition

8.2.6.7.3

The permitted rate of air leakage shall be as specified in 29.2.2.

8.2.6.8 Nitrogen or Other Approved Gas.

8.2.6.8.1*

Where nitrogen or other approved gas is used, the supply shall be from a reliable source.

8.2.6.8.2

Where stored nitrogen or other approved gas is used, the gas shall be introduced through a pressure regulator and shall be in accordance with 8.2.6.6.

8.2.6.8.3

A low pressure alarm shall be provided on gas storage containers to notify the need for refilling.

8.2.6.8.4*

When nitrogen or other approved gas is the only source of gas for pressurizing a system, it shall have a capacity capable of restoring normal gas pressure in the system within 30 minutes.

8.2.6.8.5

The requirements of 8.2.6.8.4 shall not apply in refrigerated spaces maintained below 5°F (–15°C), where normal system air pressure shall be permitted to be restored within 60 minutes.

8.2.6.9* Nitrogen Supply for Increased C Value.

8.2.6.9.1

Where nitrogen is used to allow for increased C value in accordance with Table 28.2.4.8.1, the nitrogen supply shall be in accordance with 8.2.6.9.2 through 8.2.6.9.6.

8.2.6.9.2

Nitrogen shall be from a listed nitrogen generator permanently installed.

8.2.6.9.3

The generator shall be capable of supplying and maintaining at least 98 percent nitrogen concentration throughout the system at a minimum leakage rate of 1.5 psi (0.1 bar) per hour.

8.2.6.9.4

A means of verifying nitrogen concentration shall be provided for each system where increased C value is used.

8.2.6.9.5

The nitrogen generator shall be installed per the manufacturer's instruction.

8.2.6.9.6

The nitrogen generator shall be maintained in accordance with Chapter 32.

Statement of Problem and Substantiation for Public Comment

FR-1129 contained so many errors, omissions, and unintended consequences that it is almost too large to tackle at the second draft stage. Specific issues include:
Repetitive use of "air, nitrogen, or other approved gas"
Removal of AMD terminology
Oversized refill rates for systems using nitrogen NOT increasing the C Value
Omission of dwelling units from water delivery time table
This public comment simply returns section 8.2 to the 2022 edition.

Related Item

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

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State:

Zip:

Submittal Date: Wed Mar 08 17:04:48 EST 2023

Committee: AUT-SSI

Copyright Assignment

I, Kevin Hall, hereby irrevocably grant and assign to the National Fire Protection Association (NFPA) all and full rights in copyright in this Public Comment (including both the Proposed Change and the Statement of Problem and Substantiation). I understand and intend that I acquire no rights, including rights as a joint author, in any publication of the NFPA in which this Public Comment in this or another similar or derivative form is used. I hereby warrant that I am the author of this Public Comment and that I have full power and authority to enter into this copyright assignment.

☒ By checking this box I affirm that I am Kevin Hall, and I agree to be legally bound by the above Copyright Assignment and the terms and conditions contained therein. I understand and intend that, by checking this box, I am creating an electronic signature that will, upon my submission of this form, have the same legal force and effect as a handwritten signature



Public Comment No. 37-NFPA 13-2023 [Section No. 8.2.2.2]

8.2.2.2 Pressure Gauges.

Approved pressure gauges in accordance with Section 16.13 shall be provided as follows:

- (1) On the water side and pneumatic side of the dry pipe valve
- (2) At the air compressor supplying the system, where one is provided
- (3) At the ~~air, nitrogen, or other approved gas receiver,~~ air receiver, where one is provided
- (4) In each independent pipe from the pneumatic source to the dry pipe system
- (5) At mechanical quick opening devices

Statement of Problem and Substantiation for Public Comment

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Related Item

- FR-1129

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

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Submittal Date: Thu Mar 09 17:34:24 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1189-NFPA 13-2023

Statement: The term "air" is used for consistency throughout the standard. It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8.



Public Comment No. 21-NFPA 13-2023 [Section No. 8.2.4]

8.2.4* Dry Pipe System Water Delivery.

Dry pipe systems shall be sized such that water will be discharged from the system test connection within the time required by 8.2.4.1 for dwelling units and 8.2.4.

1.

2, 8.2.4.3, 8.2.4.4, or 8.2.4.5 for all other occupancies.

8.2.4.1 Dwelling Units

8.2.4.1.1

For dry pipe systems protecting dwelling unit portions of any occupancy, initial water shall be discharged from the system test connection in not more than 15 seconds, starting at the normal air pressure on the system at the time of fully opened inspection test connection.

8.2.4.1.2

—

For dry

Dry pipe systems protecting

areas other than

dwelling unit portions of any occupancy

, initial water

shall not be

discharged from the system test connection in accordance with 8

permitted to use the options outlined in 8.2.

4.

3

, 8

.2 or 8.

4

2.

4, 8

3.

2.

4.

5,

8.2.4.

6, or

1.3

Water delivery calculations in accordance with 8.2.4.

7

3 shall be permitted.

8.2.4.

3—

2 _ Single Orifice Test Connection

System size shall be such that initial water is discharged from a single orifice at the system test connection in not more than 60 seconds, starting at the normal air pressure on the system at the time of fully opened inspection test connection.

8.2.4.

4

2.1 * _

A system size of not more than 500 gal (1900 L)

~~shall be permitted~~

with or without a quick-opening device and shall not be required to meet any specific water delivery requirement to the inspection test connection.

8.2.4.

5

2.2 _

A system size of not more than 750 gal (2850 L)

~~shall be permitted with~~

with a quick-opening

~~device and shall~~

device shall not be required to meet any specific water delivery requirement to the inspection test connection.

8.2.4.

6

3 _ Water Delivery Calculations.

8.2.4.

6

3.1 _

Initial water shall be discharged from the system test connection based on calculations using a program listed by

~~a nationally recognized testing~~

an approved testing laboratory.

8.2.4.

6

3.2 _

Water delivery calculation for each dry pipe system shall be based on the hazard shown in Table 8.2.4.

6

3.2 _**Table 8.2.4.**

6

3.2 Dry Pipe System Water Delivery

Hazard	Number of Most Remote Sprinklers Initially Open	Maximum Time of Water Delivery (seconds)
Dwelling Unit	1	15
Light	1	60
Ordinary I	2	50
Ordinary II	2	50
Extra I	4	45
Extra II	4	45
High-piled	4	40

8.2.4.

6

3.3 _

Water delivery calculation shall be based on the time interval between the calculated point in time when the selected most remote sprinkler(s) open and the calculated point in time when the minimum design pressure at the most remote sprinkler is reached or surpassed and maintained.

8.2.4.

7 * _

4 * _ Manifold Test Connections**8.2.4.**

7

4.1 _

System size shall be such that initial water discharge from the system manifold test connection is not more than the maximum time of water delivery specified in Table 8.2.4.6.2, starting at the normal air pressure on the system at the time of fully opened inspection test connection.

8.2.4.

7

4.2 _

When flow is from four sprinklers, the test manifold shall be arranged to simulate two sprinklers on the most remote sprinkler branch line and two sprinklers on the next adjacent branch line.

8.2.4.

7

4.3 _

When flow is from two sprinklers, the test manifold shall be arranged to simulate two sprinklers on the most remote sprinkler branch line.

8.2.4.

7.4

A system meeting the requirements of this section shall not be required to also meet the requirements of

5 _

Dry pipe systems with water delivery times other than 8.2.4

.3,

shall be acceptable where listed by an approved testing laboratory.

8.2.4.

4, 8.2.4.5, or 8.2.4.

6

7

8.2.4.8

_ Dry Pipe System Subdivision.

8.2.4.

8

6.1 _

Subdivision of dry pipe systems using check valves to facilitate water delivery shall be permitted when all the conditions in 8.2.4.8.2 through 8.2.4.8.5 are met.

8.2.4.

8

6.2 _

Check valves shall be located in a heated enclosure.

8.2.4.

8

6.3 _

A $\frac{1}{8}$ in. (3 mm) diameter hole shall be drilled in the clapper of each check valve to permit equalization of

air or nitrogen pressure

air pressure among various parts of the system.

8.2.4.

8

6.4 _

Auxiliary drains shall be provided for each subdivided section of the system.

8.2.4.

8

6.5 –

Where auxiliary drains are not provided for each subdivided section, a bypass around each check valve incorporating an approved and supervised normally closed indicating control valve shall be provided as a means to drain the subdivided section.

8.2.4.9 –

~~Dry pipe systems with water delivery times other than 8.2.4 shall be acceptable where listed by a nationally recognized testing laboratory.~~

Statement of Problem and Substantiation for Public Comment

Based on the discussions at the First Draft meeting, PI-129 was supposed to be incorporated into this reorganization, but it wasn't. Additionally, the line item for dwelling units was lost in the water delivery table. The first draft section has been restructured to align with the original proposal and reinserted language to permit water delivery time calculations for dwelling units.

For convenience, here is the original substantiation from PI-129:

Users of this document often apply the requirements of Table 8.2.3.6.1 for all delivery time requirements. Table 8.2.3.6.1 is an option when test connections are manifolded; however, the options permitted in 8.2.3.2 only apply when a single orifice is used. Additionally the requirements for system capacities less than 500 gal and 750 gal should be subordinate to the requirements of 8.2.3.2.

Related Item

- PI-129

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

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Submittal Date: Wed Mar 08 16:51:05 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1190-NFPA 13-2023

Statement: When the Dry Pipe Systems section was revised, the calculation option for dwelling units was dropped. This clarifies that the dwelling units can also be calculated for pneumatic delivery.

**Public Comment No. 215-NFPA 13-2023 [Section No. 8.2.4.6.2]****8.2.4.6.2**

Water delivery calculation for each dry pipe system shall be based on the hazard shown in Table 8.2.4.6.2.

Table 8.2.4.6.2 Dry Pipe System Water Delivery

<u>Hazard</u>	<u>Number of Most Remote Sprinklers Initially Open</u>	<u>Maximum Time of Water Delivery (seconds)</u>
Light	1	60
Ordinary I	2	50
Ordinary II	2	50
Extra I	4	45
Extra II	4	45
<u>High-piled</u>		
<u>Dwelling</u>	<u>4</u>	<u>40</u>
<u>unit</u>	<u>1</u>	<u>15</u>

Statement of Problem and Substantiation for Public Comment

When the Dry Pipe Systems section was revised, the calculation option for dwelling units was dropped. This clarifies that the dwelling units can also be calculated for pneumatic delivery.

Related Item

- FR 1129

Submitter Information Verification

Submitter Full Name: Mark Fessenden

Organization: Johnson Controls

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 14:49:10 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1190-NFPA 13-2023

Statement: When the Dry Pipe Systems section was revised, the calculation option for dwelling units was dropped. This clarifies that the dwelling units can also be calculated for pneumatic delivery.



Public Comment No. 38-NFPA 13-2023 [Section No. 8.2.4.8.3]

8.2.4.8.3

A 1/8 in. (3 mm) diameter hole shall be drilled in the clapper of each check valve to permit equalization of air ~~or nitrogen~~ pressure among various parts of the system.

Statement of Problem and Substantiation for Public Comment

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Related Item

- PI-14

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Thu Mar 09 17:38:05 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1190-NFPA 13-2023](#)

Statement: When the Dry Pipe Systems section was revised, the calculation option for dwelling units was dropped. This clarifies that the dwelling units can also be calculated for pneumatic delivery.



Public Comment No. 39-NFPA 13-2023 [Section No. 8.2.7]

8.2.7* ~~Air, Nitrogen, or Other Approved Gas Supply~~ Air Supply .

8.2.7.1

~~Air, nitrogen, or other approved gas~~ under pressure shall be maintained on dry pipe systems throughout the year.

8.2.7.2*

The ~~air, nitrogen, or other approved gas~~ shall be supplied from a permanent source available at all times.

8.2.7.3*

The ~~air, nitrogen, or other approved gas~~ supply shall be capable of restoring normal pressure in the system within 30 minutes.

8.2.7.4

The requirement of 8.2.7.3 shall not apply in refrigerated spaces maintained below 5°F (-15°C), where the ~~air, nitrogen, or other approved gas~~ supply is capable of restoring normal pressure in the system within 30 minutes.

8.2.7.5 Compressed Air.

8.2.7.5.1

Air supply shall be from a dependable plant compressed air system or an air compressor with an air receiver.

8.2.7.5.2

Where the air compressor supplying a single dry pipe system has a capacity of less than 5.5 ft³/min (160 L/min) at 10 psi, the air receiver shall not be required.

8.2.7.5.3

Where an air compressor is the dedicated air supply, it shall be installed in accordance with *NFPA 70*, Article 430.

8.2.7.5.4

The disconnecting means for an automatic air compressor shall not be a general use switch or a cord-and-plug connection.

8.2.7.6 Compressed Nitrogen.

8.2.7.6.1

Nitrogen supply shall be from a dependable nitrogen generator or from one or more industrial cylinders or containers.

8.2.7.6.2

A minimum leak rate of 1.5 psi (0.1 bar) per hour shall be used to determine the size of the compressed nitrogen supply.

8.2.7.6.3

Where a nitrogen generator is the dedicated nitrogen supply, it shall be installed in accordance with *NFPA 70*, Article 430.

8.2.7.6.4

The disconnecting means for a nitrogen generator shall not be a general use switch or a cord-and-plug connection.

8.2.7.6.5

Where nitrogen or other approved gas stored in high-pressure industrial cylinders is used, the gas shall be introduced through an approved regulator on the supply side of the pressure maintenance device(s).

8.2.7.6.6

A low pressure alarm shall be provided between the regulator in 8.2.7.6.4 and the air maintenance device(s) to notify the need for refilling cylinder(s).

8.2.7.7

Combinations of approved sources of air, nitrogen, or other gas supplies shall be permitted.

Statement of Problem and Substantiation for Public Comment

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Related Item

- FR-1129

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

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Submittal Date: Thu Mar 09 17:39:44 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1198-NFPA 13-2023](#)

Statement: The term "air, nitrogen, or other approved gas" has been revised to read "air" for consistency throughout the document.



Public Comment No. 59-NFPA 13-2023 [Section No. 8.2.7.4]

8.2.7.4

The requirement of 8.2.7.3 shall not apply in refrigerated spaces maintained below 5°F (-15°C), where the air, ~~nitrogen, or other approved gas~~ supply is capable of restoring normal pressure in the system within ~~30- 60~~ minutes.

Statement of Problem and Substantiation for Public Comment

The fill time requirement for refrigerated spaces is 60 minutes, not 30 minutes. Also stating the other types of air is not necessary.

Related Item

- FR-1129

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

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State:

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Submittal Date: Mon Mar 20 10:16:45 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1198-NFPA 13-2023](#)

Statement: The term "air, nitrogen, or other approved gas" has been revised to read "air" for consistency throughout the document.



Public Comment No. 1-NFPA 13-2023 [New Section after 8.2.7.5.1]

8.2.7.5.2

Where an air compressor is dedicated for the sprinkler system, the air compressor shall be listed for fire protection use in accordance with UL 1450 *Motor-Operated Air Compressors, Vacuum Pumps, and Painting Equipment*.

Statement of Problem and Substantiation for Public Comment

Air compressors are essential to system performance. Without durability and reliability resting that comes with listing against a product standard, sprinkler systems that rely on a dedicated air supply need to have listed compressors to ensure they operate as intended.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 82-NFPA 13-2023 [New Section after 7.9]</u>	Alternate location for requirement
<u>Public Comment No. 3-NFPA 13-2023 [Section No. A.8.2.8.2]</u>	
<u>Public Comment No. 82-NFPA 13-2023 [New Section after 7.9]</u>	

Related Item

- PI-21

Submitter Information Verification

Submitter Full Name: Kevin Hall
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Affiliation: American Fire Sprinkler Association
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Submittal Date: Wed Mar 08 15:02:49 EST 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1199-NFPA 13-2023
Statement: Air compressors are essential to system performance. Without durability and reliability testing that comes with listing against a product standard, sprinkler systems that rely on a dedicated air supply need to have listed compressors to ensure they operate as intended. Annex material has been added to address situations where an air compressor listed for fire protection is not readily available allowing the system to be

placed in service.



Public Comment No. 40-NFPA 13-2023 [Section No. 8.2.7.6]

8.2.7.6 Compressed Nitrogen.

8.2.7.6.1

Nitrogen supply shall be from a dependable nitrogen generator or from one or more industrial cylinders or containers.

8.2.7.6.2 –

~~A minimum leak rate of 1.5 psi (0.1 bar) per hour shall be used to determine the size of the compressed nitrogen supply.~~

~~8.2.7.6.3~~

~~Where a nitrogen generator is the dedicated nitrogen supply, it shall be installed in accordance with NFPA 70, Article 430.~~

8.2.7.6.4

The disconnecting means for a nitrogen generator shall not be a general use switch or a cord-and-plug connection.

8.2.7.6.5

~~Where nitrogen or other approved gas stored~~ nitrogen stored in high-pressure industrial cylinders is used, the gas shall be introduced through an approved regulator on the supply side of the pressure maintenance device(s).

8.2.7.6.6

A low pressure alarm shall be provided between the regulator in 8.2.7.6.4 and the air maintenance device(s) to notify the need for refilling cylinder(s).

Statement of Problem and Substantiation for Public Comment

It is not necessary to reference the leakage rate in this section as that is only required if the C Value is being increased to 120. Additionally, "other gases" do not need to be referenced in the nitrogen section.

Related Item

- FR-1129

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

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Zip:

Submittal Date: Thu Mar 09 17:42:47 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1191-NFPA 13-2023

Statement: It is not necessary to reference the leakage rate in this section as it is only required if the C Value is being increased to 120. Additionally, "other gases" do not need to be referenced in the nitrogen section.



Public Comment No. 41-NFPA 13-2023 [Section No. 8.2.7.7]

8.2.7.7

Combinations of approved sources of ~~air, nitrogen, or other gas supplies~~ air supplies shall be permitted.

Statement of Problem and Substantiation for Public Comment

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Related Item

- FR-1129

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

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Submittal Date: Thu Mar 09 17:46:46 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1191-NFPA 13-2023

Statement: It is not necessary to reference the leakage rate in this section as it is only required if the C Value is being increased to 120. Additionally, "other gases" do not need to be referenced in the nitrogen section.



Public Comment No. 42-NFPA 13-2023 [Section No. 8.2.8]

8.2.8 ~~Automatic Pressure~~ Air Maintenance Devices .

8.2.8.1–

~~The air, nitrogen, or other approved gas supply to more than one dry pipe system shall be connected to enable individual maintenance of pressure in each system.~~

8.2.8.2 *

~~Unless the requirements of 8.2.40 8.4 are 2 are met, each dry pipe system shall have a dedicated pressure air maintenance device capable of controlling the required pressure on the system and the maximum flow of air, nitrogen, or other approved gas into air into the system.~~

8.2.8.3 – 32 _

Where the air compressor supplying a single dry pipe system has a capacity of less than 5.5 ft³/min (160 L/min) at 10 psi (0.7 bar) , an air maintenance device shall not be required.

Statement of Problem and Substantiation for Public Comment

The charging statement is redundant and not necessary as the remaining two requirements clearly state when air maintenance devices are required. Additionally, the rated pressure where 5.5 cfm is determined was omitted from the first draft revision.

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Related Item

- FR-1129

Submitter Information Verification

Submitter Full Name: Kevin Hall

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Affiliation: American Fire Sprinkler Association

Street Address:

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Submittal Date: Thu Mar 09 17:47:38 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1192-NFPA 13-2023

Statement: The charging statement is not necessary as the remaining two requirements state when air maintenance devices are required. Additionally, the rated pressure where 5.5 cfm is determined was omitted from the first draft revision. This also corrects the first draft

revision where it appeared that the requirement for Air Maintenance Devices to be listed was lost.



Public Comment No. 161-NFPA 13-2023 [Section No. 8.2.8.2]

8.2.8.2*

Unless the requirements of 8.2.40 8.4.3 are met, each dry pipe system shall have a dedicated pressure maintenance device capable of controlling the required pressure on the system and the maximum flow of air, nitrogen, or other approved gas into the system.

Statement of Problem and Substantiation for Public Comment

This comment is in response to CN-18 which was issued to FR 1129, Section 8.2) stating that it appears that the requirement for the requirement for the pressure maintenance device (air maintenance device), "to be listed" has been lost.

The dry system rewrite was based upon an E&S submittal, and it was not the intent that air maintenance devices are not required to be listed and this comment reflects this.

Related Item

- PI-1129 • CN-18

Submitter Information Verification

Submitter Full Name: Roland Asp

Organization: National Fire Sprinkler Association

Affiliation: NFSA Engineering and Standards Committee

Street Address:

City:

State:

Zip:

Submittal Date: Mon May 29 17:24:10 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1192-NFPA 13-2023

Statement: The charging statement is not necessary as the remaining two requirements state when air maintenance devices are required. Additionally, the rated pressure where 5.5 cfm is determined was omitted from the first draft revision. This also corrects the first draft revision where it appeared that the requirement for Air Maintenance Devices to be listed was lost.



Public Comment No. 52-NFPA 13-2023 [Section No. 8.2.8.3]

8.2.8.3

Where the air compressor supplying a single dry pipe system has a capacity of less than 5.5 ft³/min (160 L/min) at 10 psi (0.7 bar), an air maintenance device shall not be required.

Statement of Problem and Substantiation for Public Comment

This was to be addressed in the reorganized 8.2 but was incorporated in the first revision.

Related Item

- PI-22

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Tue Mar 14 21:31:44 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1192-NFPA 13-2023

Statement: The charging statement is not necessary as the remaining two requirements state when air maintenance devices are required. Additionally, the rated pressure where 5.5 cfm is determined was omitted from the first draft revision. This also corrects the first draft revision where it appeared that the requirement for Air Maintenance Devices to be listed was lost.



Public Comment No. 43-NFPA 13-2023 [Section No. 8.2.9.1]

8.2.9.1*

The connection from the air , ~~nitrogen, or other approved gas~~ source shall not be less than ½ in. (15 mm) in diameter and shall enter the system above the priming water level of the dry pipe valve, or as otherwise specified by the manufacturer.

Statement of Problem and Substantiation for Public Comment

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Related Item

- FR-1129

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Thu Mar 09 17:49:32 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1193-NFPA 13-2023](#)

Statement: It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8



Public Comment No. 44-NFPA 13-2023 [Section No. 8.3.2.5]

8.3.2.5 Air Pressure

Except as provided by 8.3.2.5.1 through 8.3.2.5.3, ~~air or nitrogen supervising pressure~~ supervisory air pressure for preaction systems shall be installed in conformance with the dry pipe system air pressure and supply rules of 8.2.6.

8.3.2.5.1

The relief valves required by 8.2.6 shall be permitted to be omitted for the type of preaction system described in 8.3.2.1(1) when the air pressure is supplied from a source that is not capable of developing pressures in excess of 15 psi (1.0 bar).

8.3.2.5.2

A preaction system type described in 8.3.2.1(2) and 8.3.2.1(3) shall maintain a minimum supervising ~~air or nitrogen pressure~~ air pressure of 7 psi (0.5 bar).

8.3.2.5.3

The air pressure values for the type of preaction system described in 8.3.2.1(1) shall be set in accordance with the manufacturer's installation instructions.

Statement of Problem and Substantiation for Public Comment

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Related Item

• PI-14 • PI-15

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

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City:

State:

Zip:

Submittal Date: Thu Mar 09 17:51:00 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1020-NFPA 13-2023](#)

Statement: It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8.



Public Comment No. 45-NFPA 13-2023 [Section No. 8.8.2.4]

8.8.2.4* ~~Air or Nitrogen~~ Supply.

~~Air or nitrogen~~ supply for systems shall be one of the following:

- (1) Air from the room of lowest temperature to reduce the moisture content
- (2) Air compressor/dryer package listed for the application utilizing ambient air
- (3) Compressed nitrogen gas from cylinders used in lieu of compressed air

Statement of Problem and Substantiation for Public Comment

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Is it the intent of this section for nitrogen generators to be prohibited in refrigerated spaces below 32 degrees???

Related Item

- PI-14 • PI-15

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Thu Mar 09 17:54:34 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1021-NFPA 13-2023](#)

Statement: It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8.



Public Comment No. 46-NFPA 13-2023 [Section No. 8.8.2.7.1 [Excluding any Sub-Sections]]

The air or ~~nitrogen~~ supply piping entering the freezer area shall be as stated in 8.8.2.7.1.1 and 8.8.2.7.1.2.

Statement of Problem and Substantiation for Public Comment

It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8

Related Item

• PI-14 • PI-15

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

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City:

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Submittal Date: Thu Mar 09 17:58:33 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1022-NFPA 13-2023

Statement: It is not necessary to repeat "air, nitrogen, or other approved gas" throughout the standard. This is already covered in Chapter 4 section 4.8.



Public Comment No. 48-NFPA 13-2023 [Sections 8.8.2.7.1.1, 8.8.2.7.1.2]

Sections 8.8.2.7.1.1, 8.8.2.7.1.2

8.8.2.7.1.1—Air Supply.

The

Supply Piping

(A).

For air supplies in accordance with 8.8.2.4(1), the supply piping shall be equipped with two easily removable supply lines at least 6 ft (1.8 m) long and at least 1 in. (25 mm) in diameter as shown in Figure 8.8.2.7.1.1(a) or Figure 8.8.2.7.1.1(b).

(B).

For air supplies in accordance with 8.8.2.4(2) or 8.8.2.4(3), the supply piping shall be equipped with a single easily removable supply line at least 6 ft (1.8 m) long and at least 1 in. (25 mm) in diameter.

Figure 8.8.2.7.1.1(a) Refrigerator Area Sprinkler System Used to Minimize the Chances of Developing Ice Plugs.

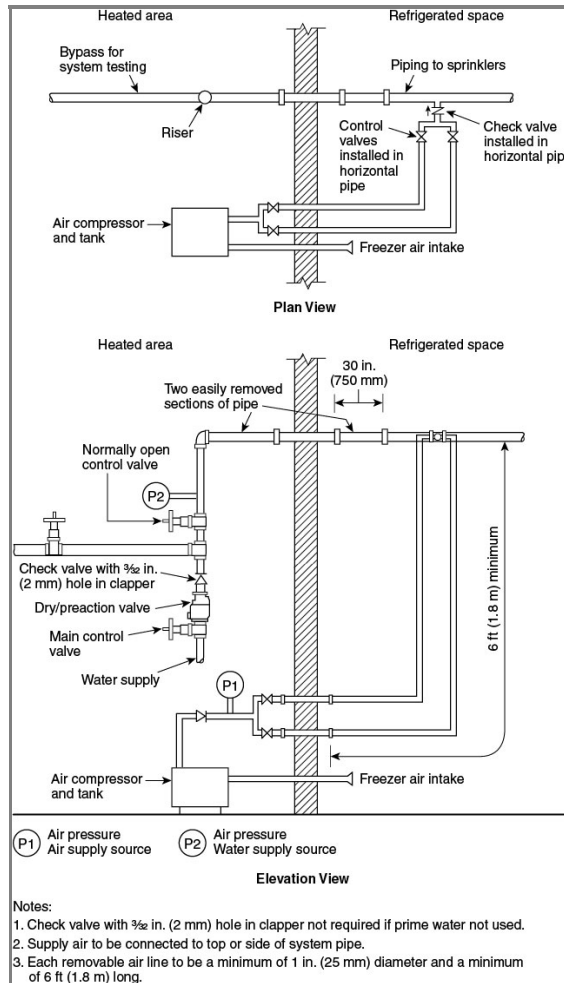
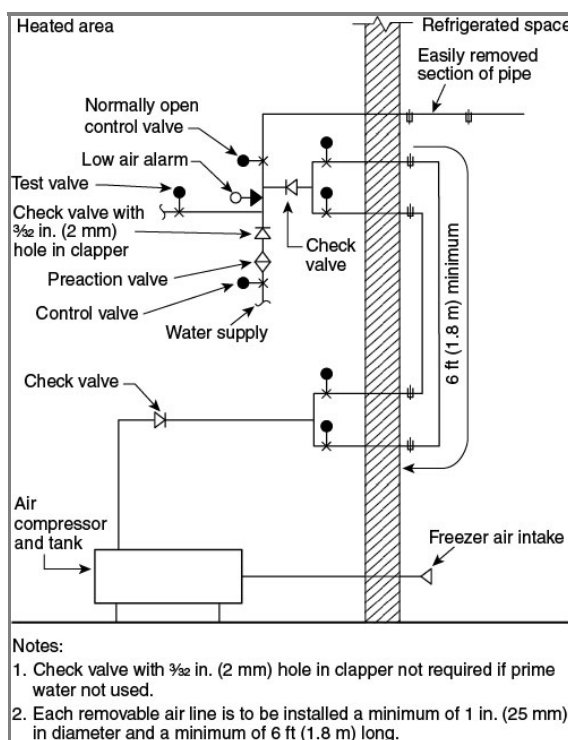


Figure 8.8.2.7.1.1(b) Preaction System Arrangement.



8.8.2.7.1.2 – Nitrogen Supply.

The supply piping shall be equipped with a single easily removable supply line at least 6 ft (1.8 m) long and at least 1 in. (25 mm) in diameter.

Statement of Problem and Substantiation for Public Comment

Only compressed air supplies need to have two removable sections of pipe in the sprinkler system. Air supplies that utilize dry air packs or nitrogen should be permitted to have only one removable section.

Additionally, the title of this section was confusing as it made it seem that the requirements referred to the air supply pipe and not the sprinkler supply pipe.

Related Item

- PI-15

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Thu Mar 09 18:01:06 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Rejected

Action:

Resolution: For other than nitrogen supplies, it is important to have the two easily removable pieces of pipe on the air supply piping to check for ice blocks. The proposed change confused the requirements for sprinkler supply piping and air supply piping. In addition, this is new material.



Public Comment No. 167-NFPA 13-2023 [Section No. 8.10.2]

8.10.2 Electrical Detection.

Electrical detection and release systems shall comply with the requirements of *NFPA 72*.

8.10.2.1 * Cross zone detection shall not be used on preaction systems.

Annex

A.8.10.2.1 Cross zoning of different types of electrical detectors unnecessarily delays the operation of preaction systems. The intent is to operate a single interlock preaction system upon activation of a single detection device, and to operate a double interlock preaction system upon activation of two devices, a fire sprinkler being one of those two devices.

Cross zoning of different types of electrical detectors should not be confused with the use of a cross-zone panel program commonly used for electric/electric release of double interlock preaction systems where the first interlock is a single type of electrical detection, and the second interlock is the signal from the system low pressure switch indicating one or more fire sprinklers has operated and system air or nitrogen pressure has been lost. It is not the intent to prohibit the use of cross-zone programs for this type of system.

Statement of Problem and Substantiation for Public Comment

NFSA E&S committee submitted the Public Inputs that led to the revised language found in 8.10. (See PI-586) This language consolidated the requirements for detection methods and was accepted as FR-1260. However, some important information on cross zone detection was not incorporated into the first draft language. The committee statement for FR-1260 gives no indication that that cross-zone detection language was intended to be removed from the accepted language. NFSA E&S committee feels that this language is important, and this comment seeks to resubmit section 8.10.2.1 and its associated annex note.

Related Item

- FR-1260 • PI-586

Submitter Information Verification

Submitter Full Name: Roland Asp

Organization: National Fire Sprinkler Association

Affiliation: NFSA Engineering and Standards Committee

Street Address:

City:

State:

Zip:

Submittal Date: Mon May 29 21:10:31 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee	Rejected
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Action:

Resolution: This is outside of the scope of NFPA 13. Cross-zone detection requirements should be submitted to NFPA 72.



Public Comment No. 127-NFPA 13-2023 [Section No. 8.11]

8.11 Negative Pressure Systems. (Reserved)

8.11.1 General.

8.11.1.1

Negative pressure systems shall be specifically listed as systems.

8.11.1.2

Negative pressure systems shall be installed in accordance with the manufacturer's installation instructions.

8.11.1.3

Sprinklers shall be specifically listed for use under vacuum conditions.

8.11.2 Vacuum Dry Pipe.

8.11.2.1

Unless modified by 8.11.2, negative pressure systems designed as vacuum dry pipe systems shall meet the requirements of 8.2.

8.11.2.2

The relief valve required by 8.2.9.4 shall be set to -3 psi (-0.21 bar) or in accordance with the manufacturer's instructions.

8.11.3 Vacuum Preaction.

8.11.3.1

Unless modified by 8.11.3, negative pressure systems designed as vacuum preaction systems shall meet the requirements of 8.3.

8.11.3.2

The relief valve required by 8.2.9.4 shall be set to -3 psi (-0.21 bar) or in accordance with the manufacturer's instructions.

Statement of Problem and Substantiation for Public Comment

Negative pressure systems are a listed system that can be utilized as a dry or preaction system. These additional requirements will allow designers another option for sprinkler protection in spaces that require dry or preaction systems.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 125-NFPA 13-2023 [Section No. 28.3.4.8.1]	
Public Comment No. 126-NFPA 13-2023 [New Section after 29.2.7.4]	

Related Item

- FR-1037

Submitter Information Verification

Submitter Full Name: Jonathan Roger

Organization: Fireflex Systems

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 19 14:38:20 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1069-NFPA 13-2023](#)

Statement: These systems are currently listed and being installed therefore NFPA 13 needed to establish installation criteria. Negative pressure was changed to Vacuum systems for consistency throughout the standard.



Public Comment No. 84-NFPA 13-2023 [New Section after 9.2.6]

Electrical Equipment Buildings

Sprinklers shall not be required in electrical equipment buildings where all of the following conditions are met:

- (1) The building is dedicated to electrical equipment only.
- (2) The building is physically separate from other occupied buildings or is separated by a 2-hour fire rated wall, including protection for penetrations.
- (3) Walls, floor and ceiling are constructed with non-combustible materials.
- (4) Continuous occupancy is not permitted in the room.
- (5) Storage is not permitted in the room.

Statement of Problem and Substantiation for Public Comment

The existing exclusion in 9.2.6 makes sense for multi-purpose buildings where there are occupancy concerns, or the loss of the building is greater than the loss of electrical equipment. The requirements become excessive when applied to industrial or utility buildings that are unoccupied and physically isolated from other structures. There also needs to be recognition that where high fault currents and large power distribution equipment is involved, the electrical hazards related to adding water are much greater than a typical commercial installation.

Where high fault currents are involved, the electrical risk is not only electrocution but also explosion (arc blast). Flexibility is needed where high fault current systems are involved and where the likelihood of monetary loss from accidental activation is greater than the loss expected from a typical arc flash or overcurrent event. These events are generally short, well contained and do not result in sustained fires where non-flammable construction is used. The problem is that in most cases these events unnecessarily set off the sprinkler system resulting in damage to everything electrical in the building. Where owners fail to replace all exposed electrical equipment, the installation often continues to experience faults, fires, and equipment trips.

The industrial and utility industries have moved towards construction of modular electrical buildings that physically separated from other structures. These buildings are usually set on elevated platforms to isolate them from flooding and process failures. They are typically constructed with prefabricated steel panels for the walls, and roof and the floor are generally 1/4" steel plate. While not being 2-hour fire rated, it is rare for these buildings to experience sustained fires. There is not enough combustible material in them to sustain a fire. The requirement for a 2-hour fire rating is impractical nor economically achievable in these modular buildings. None of the major manufacturers of modular substation or MCC buildings offer that level of protection nor do any of them offer a building with a fire rating. The 2-hour requirement makes sense where an electrical room is part of an occupied building but excessive elsewhere. In my time working on a variety of electrical standards committees, I have found that most industrial and utility companies do not install sprinklers in electrical rooms unless the rooms are wood construction or in occupied buildings. I believe the existing requirement fails to recognize the elevated risk to electrical workers in high current installations and does not give industrial facilities enough flexibility to manage risk. If forced to adhere to either sprinklers or 2-hour ratings most companies will move back to ground level cinder block construction which has many drawbacks.

Related Item

- NFPA 13 Sprinklers in electrical rooms

Submitter Information Verification

Submitter Full Name: Tim Buller

Organization: Nutrien
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 04 13:22:39 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected
Resolution: This is new material. This recommendation would be better suited for applicable building code consideration.



Public Comment No. 120-NFPA 13-2023 [Section No. 9.2.14]

9.2.14 – Elevator Hoistways and ~~Elevator Machine Rooms, Machinery Spaces, Control Rooms, Control Spaces, and Hoistways~~ .

9.2.14.1 – General.

9.2.14.1.1

Sprinklers shall not be ~~required in locations complying with 9.3.6~~ required in elevator pits.

9.2.14.1.2

Sprinklers shall not be required in elevator machine rooms, machinery spaces, control rooms, control spaces, or top of hoistways installed in accordance with the applicable provisions in NFPA 101 , or the applicable building code, where all of the following conditions are met:

- (1) The elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways are dedicated to elevator equipment only.
- (2) The elevator machinery spaces, control rooms, control spaces, or hoistways are separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire resistance rating of not less than that specified by the applicable building code.
- (3) No materials unrelated to elevator equipment are permitted to be stored in elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways.
- (4) The elevator machinery is not of the hydraulic type

9.2.14.2 Hydraulic Elevators.

9.2.14.2

–

.1

Sprinklers shall not be required in

~~elevator pits.~~

the elevator machine rooms, machinery spaces, control rooms, and control spaces where noncombustible or limited-combustible hydraulic fluid is used.

9.2.14.2.2

Sprinklers shall not be required in at the top of hoistways of hydraulic elevators.

9.2.14.3* Passenger Elevators.

Sprinklers shall not be required at the top of the hoistway where the hoistway for passenger elevators is noncombustible or limited-combustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators* .

A.9.2.14.2

Passenger elevator cars that have been constructed in accordance with ASME A17.1, *Safety Code for Elevators and Escalators*, Rule 204.2a (under A17.1a-1985 and later editions of the code) have limited combustibility. Materials exposed to the interior of the car and the hoistway, in their end-use composition, are limited to a flame spread index of 0 to 75 and a smoke-developed index of 0 to 450, when tested in accordance with ASTM E84, *Standard Test Method of Surface Burning Characteristics of Building Materials* .

Statement of Problem and Substantiation for Public Comment

Clarifies the intent of the first draft language by stating sprinklers are not required in any pits and relocates other allowable omissions that were located in section 9.3 for special situations to this section for allowable omissions which is more appropriate. Additional headers were added to clarify requirements for all elevator spaces and specific requirements for passenger elevators.

This proposal was developed by Chase Browning, Kevin Hall, and Karl Wiegand.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 121-NFPA 13-2023 [Section No. 9.3.6]	Elevators
Public Comment No. 121-NFPA 13-2023 [Section No. 9.3.6]	

Related Item

- FR-1190

Submitter Information Verification

Submitter Full Name: Kevin Hall
Organization: American Fire Sprinkler Association
Affiliation: American Fire Sprinkler Association
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 19 13:34:33 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1067-NFPA 13-2023](#)

Statement: Omitting sprinklers in elevator hoistways reduces life-safety risk that results from having to enter the hoistway for maintenance purposes. The committee does not have fire-loss data to support keeping sprinklers in elevator hoistways; hoistways are also rated assemblies. This combines the intent of PC 120 to move all the omission allowances to Section 9.2 with PCs 157, 158, 206, 95, and 96 which identify additional allowances for omission of sprinklers for suspension means using the FT-1 test method meeting the pass/fail criteria established in 9.2.14.5. The pass/fail criteria is inline with that specified for the finished construction of electrical cables as described in ANSI/UL 62, Flexible Cords and Cables.



Public Comment No. 157-NFPA 13-2023 [Section No. 9.2.14]

9.2.14 Elevator Hoistways and Machine Rooms.

9.2.14.1 –

Sprinklers shall not be required in locations complying

with 9

with 9.3.6.

9.2.14.2 –

Sprinklers shall not be required in elevator pits

3, 9.3.6.6, or 9.3.6.7.2.

Statement of Problem and Substantiation for Public Comment

This comment seeks to reject the language of FR-1190 and return to previous edition text.

The NFSA Engineering and Standards Committee is opposed to removing the existing requirements for sprinklers within elevator shafts. The existing requirements should remain. This stance is based upon NFSA's concern that life safety in sprinkler buildings will be reduced if elevator shafts are not provided with sprinkler protection.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 158-NFPA 13-2023 [Section No. 9.3.6]	
<u>Related Item</u>	
• FR-1190	

Submitter Information Verification

Submitter Full Name: Roland Asp
Organization: National Fire Sprinkler Association
Affiliation: NFSA Engineering and Standards Committee
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 29 13:58:24 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1067-NFPA 13-2023

Statement: Omitting sprinklers in elevator hoistways reduces life-safety risk that results from having to enter the hoistway for maintenance purposes. The committee does not have fire-loss data to support keeping sprinklers in elevator hoistways; hoistways are also rated assemblies. This combines the intent of PC 120 to move all the omission allowances to Section 9.2 with PCs 157, 158, 206, 95, and 96 which identify additional allowances for omission of sprinklers for suspension means using the FT-1 test method meeting the pass/fail criteria established in 9.2.14.5. The pass/fail criteria is inline with that specified for the finished construction of electrical cables as described in ANSI/UL 62, Flexible Cords and Cables.



Public Comment No. 23-NFPA 13-2023 [Section No. 9.3.4.1]

9.3.4.1 Combustible Construction.

Sprinklers shall be installed ~~beneath all stairways of~~ in stair shafts of combustible construction in accordance with 9.3.4.1.1, 9.3.4.1.2, and 9.3.4.1.3.

9.3.4.1.1

Sprinklers shall be installed at the top of combustible stair shafts to protect the entire footprint of the shaft.

9.3.4.1.2*

Sprinklers shall be installed under the landings at each floor level.

9.3.4.1.3

Sprinklers shall be installed beneath the lowest intermediate landing.

Statement of Problem and Substantiation for Public Comment

The intent of this section has been misinterpreted to require sprinklers below every level of a combustible stair shaft and not just the locations required by 9.3.4.1.1, 9.3.4.1.2, and 9.3.4.1.3.

Related Item

• FR-1314 • CN-19

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

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City:

State:

Zip:

Submittal Date: Wed Mar 08 17:50:25 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1025-NFPA 13-2023

Statement: This section has been misinterpreted to require sprinklers below every stair run of a combustible stair shaft and not just the locations required by 9.3.4.1.1, 9.3.4.1.2, and 9.3.4.1.3. This change clarifies the different requirements between combustible and non-combustible stair shafts.

CC note 19-NFPA 13-2023 [Section No. 9.3.4]

Review section 9.3.4 in its entirety to determine if the terms stairways should be

changed to "stair shafts" throughout for consistency.



Public Comment No. 29-NFPA 13-2023 [Section No. 9.3.4.2.3.1]

9.3.4.2.3.1*

Sprinklers shall be permitted to be omitted ~~from~~ under the first accessible landing above the bottom of the stairwell shaft when the space under the stairs at the bottom is blocked off so that storage cannot occur.

Statement of Problem and Substantiation for Public Comment

Modifies the section to correlate with the charging statement for sprinklers installed in stair shafts of noncombustible construction

Related Item

- CN-19

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Thu Mar 09 15:03:51 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1026-NFPA 13-2023](#)

Statement: This change in section 9.3.4.2.3.1 aligns terminology with the other sections of 9.3.4.2.



Public Comment No. 176-NFPA 13-2023 [New Section after 9.3.6]

Combustible Suspension for Elevators

9.3.6.6 Combustible Suspension for Elevators.

9.3.6.6.1

Sprinklers shall be installed at the top and bottom of elevator hoistways where elevators utilize combustible suspension means such as noncircular elastomeric-coated or polyurethane-cated steel belts.

9.3.6.6.2

The sprinklers in the elevator hoistway shall not be required when the suspension means provide not less than an FT-1 rating when tested to the vertical burn test requirements of UL 2556, *Wire and Cable Test Methods*, where the suspension means shall not continue to burn for more than 60 seconds, nor shall the indicator flag be burned more than 25 percent.

Statement of Problem and Substantiation for Public Comment

This Section was included in the 2022 Edition of the Code and there is no Specific committee statement or rationale why it is removed from the 2025 Edition. Elevator manufacturers are still manufacturing non-rated belts which can cause a fire hazard in the hoistway (there are a few cases that the non-rated belts caught fire and burn inside the hoistway) . Eliminating this requirement completely from the 2025 edition will reduce safety. This requirement was in NFPA 13 for 3 code cycles and it motivated building owners and designers to only specify Fire-Rated belts. For Example, my SFFD jurisdiction prohibits the use of non-rated belts to avoid the hoistway sprinklers and the associated shunt trip function as well as the associated hoistway detection devices.. If this requirement will be removed, it will potentially encourage elevator manufacturers to keep manufacturing non-rated belts which are much less safe than the rated belts. Some of the elevator manufacturers have already discontinued the manufacturing of non-rated belts due to the NFPA 13 requirement for hoistway sprinklers and fire AHJs enforcement and this increased the overall safety of the elevators and the building, therefore this section should not be deleted from the 2025 edition.

Related Item

- FR 1315

Submitter Information Verification

Submitter Full Name: Kevin Brinkman

Organization: National Elevator Industry, Inc.

Affiliation: NEII

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 30 12:24:10 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Rejected but see related SR

Action:**Resolution:** [SR-1186-NFPA 13-2023](#)**Statement:** This combines PC 121 to only include language requiring sprinklers in section 9.3 with PCs 94, 205, 176, 158, and 174 which include requirements for sprinkler protection of combustible suspension means in hoistways and combustible hydraulic fluid in elevator machine rooms, machinery spaces, control rooms, and control spaces as these create a greater fire risk.



Public Comment No. 121-NFPA 13-2023 [Section No. 9.3.6]

9.3.6 Elevator Machine Rooms, Machinery Spaces, Control Rooms, Control Spaces, and Hoistways.

9.3.6.1 –

~~Automatic fire sprinklers shall not be required in elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways of traction elevators installed in accordance with the applicable provisions in NFPA 101, or the applicable building code, where all of the following conditions are met:~~

- ~~(1) The elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways are dedicated to elevator equipment only.~~
- ~~(2) The elevator machinery spaces, control rooms, control spaces, or hoistways are separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire resistance rating of not less than that specified by the applicable building code.~~
- ~~(3) No materials unrelated to elevator equipment are permitted to be stored in elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways.~~

9.3.6.2 *

~~Sprinklers shall not be required in the hoistway where the hoistway for passenger elevators is noncombustible or limited-combustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.~~

9.3.6.3 – Hydraulic Fluid for Elevators.

9.3.6.3.1 –

~~Sprinklers shall be required in the elevator machine rooms, machinery spaces, control rooms, and control spaces where combustible hydraulic fluid is used.~~

9.3.6.3.2 –

~~Sprinklers shall not be required in elevator hoistways where hydraulic fluid is used.~~

9.3.6.4 * –

~~Where provided, automatic sprinklers in elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways shall be standard response.~~

9.3.6.

5

2 –

Where required, upright, pendent, or sidewall spray sprinklers shall be installed at the top of elevator hoistways.

Statement of Problem and Substantiation for Public Comment

This comment reorganized the first draft section on sprinklers in elevators. Section 9.3 is for "Special Situations" and Section 9.2 is for "Allowable Omissions." References to omission of sprinklers were removed from this section and relocated to the appropriate location in 9.2 by the PC linked to this PC. This section should only include special installation requirements which would be standard response sprinklers and the sprinkler orientation permitted.

This proposal was developed by Chase Browning, Kevin Hall, and Karl Wiegand.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 120-NFPA 13-2023 [Section No. 9.2.14]	Elevators
Public Comment No. 120-NFPA 13-2023 [Section No. 9.2.14]	
<u>Related Item</u>	
• FR-1315	

Submitter Information Verification

Submitter Full Name: Kevin Hall
Organization: American Fire Sprinkler Association
Affiliation: American Fire Sprinkler Association
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 19 13:34:45 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1186-NFPA 13-2023](#)
Statement: This combines PC 121 to only include language requiring sprinklers in section 9.3 with PCs 94, 205, 176, 158, and 174 which include requirements for sprinkler protection of combustible suspension means in hoistways and combustible hydraulic fluid in elevator machine rooms, machinery spaces, control rooms, and control spaces as these create a greater fire risk.



Public Comment No. 158-NFPA 13-2023 [Section No. 9.3.6]

9.3.6 Elevator Machine Rooms, Machinery Spaces, Control Rooms, Control Spaces, and Hoistways.

9.3.6.1*

Sidewall spray sprinklers shall be installed at the bottom of each elevator hoistway not more than 2 ft (600 mm) above the floor of the pit.

A.9.3.6.1 _

The sprinklers in the pit are intended to protect against fires caused by debris, which can accumulate over time. Ideally, the sprinklers should be located near the side of the pit below the elevator doors, where most debris accumulates. However, care should be taken that the sprinkler location does not interfere with the elevator toe guard, which extends below the face of the door opening.

9.3.6.2

The sprinkler required at the bottom of the elevator hoistway by 9.3.6.1 shall not be required for enclosed, noncombustible elevator shafts that do not contain combustible hydraulic fluid.

9.3.6.3

Automatic fire sprinklers shall not be required in elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways of traction elevators installed in accordance with the applicable provisions in NFPA 101, or the applicable building code, where all of the following conditions are met:

- (1) The elevator machine rooms room, machinery spaces space, control rooms room, control spaces space, or hoistways are dedicated hoistway of traction elevator is dedicated to elevator equipment only.
- (2) The elevator machine room, machinery spaces
- (3) space, control rooms
- (4) room, control spaces
- (5) space, or hoistways are
- (6) hoistway of traction elevators are protected by smoke detectors, or other automatic fire detection, installed in accordance with NFPA 72 or other approved fire alarm code.
- (7) The elevator machine room, machinery space, control room, control space, or hoistways of traction elevators is separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire resistance rating of not less than that specified by the applicable building code.
- (8) No materials unrelated to elevator equipment are permitted to be stored in elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways of traction elevators.
- (9) The elevator machinery is not of the hydraulic type.

9.3.6.4

Automatic sprinklers in elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways shall be standard response

9.3.6.5

Upright, pendent, or sidewall spray sprinklers shall be installed at the top of elevator hoistways.

9.3.6.2 6 *

~~Sprinklers~~ The sprinklers required at the top of the elevator hoistway by 9.3.6.5 shall not be required in the hoistway where the hoistway for passenger elevators is noncombustible or limited-combustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

9.3.6.3 ~~Hydraulic Fluid for 7~~ **Combustible Suspension in Elevators.****9.3.6.3 7 .1**

~~Sprinklers shall be required in the elevator machine rooms, machinery spaces, control rooms, and control spaces where combustible hydraulic fluid is used~~ installed at the top and bottom of elevator hoistways where elevators utilize combustible suspension means such as noncircular elastomeric-coated or polyurethane-coated steel belts .

9.3.6.3 7 .2

~~Sprinklers shall not be required in elevator hoistways where hydraulic fluid is used.~~

9.3.6.4 * ~~–~~

~~Where provided, automatic~~ The sprinklers in elevator machine rooms, machinery spaces, control rooms, control spaces, or hoistways shall be standard response.

9.3.6.5 ~~–~~

~~Where required, upright, pendent, or sidewall spray sprinklers shall be installed at the top of elevator hoistways~~ the elevator hoistway shall not be required when the suspension means provide not less than an FT-1 rating when tested to the vertical burn test requirements of UL 2556, *Wire and Cable Test Methods*, where the suspension means shall not continue to burn for more than 60 seconds, nor shall the indicator flag be burned more than 25 percent .

Statement of Problem and Substantiation for Public Comment

This comment seeks to reject the changes of FR-1315 and return to previous edition text. The NFSA Engineering and Standards Committee is opposed to removing the existing requirements for sprinklers within elevator shafts. The existing requirements should remain. This stance is based upon NFSA's concern that life safety in sprinkler buildings will be reduced if elevator shafts are not provided with sprinkler protection.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 157-NFPA 13-2023 [Section No. 9.2.14]	related
<u>Related Item</u>	
• FR-1315	

Submitter Information Verification

Submitter Full Name: Roland Asp

Organization: National Fire Sprinkler Association

Affiliation: NFSA Engineering and Standards Committee

Street Address:

City:**State:****Zip:****Submittal Date:** Mon May 29 16:26:16 EDT 2023**Committee:** AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR**Resolution:** SR-1186-NFPA 13-2023

Statement: This combines PC 121 to only include language requiring sprinklers in section 9.3 with PCs 94, 205, 176, 158, and 174 which include requirements for sprinkler protection of combustible suspension means in hoistways and combustible hydraulic fluid in elevator machine rooms, machinery spaces, control rooms, and control spaces as these create a greater fire risk.



Public Comment No. 174-NFPA 13-2023 [Section No. 9.3.6.2]

9.3.6.2*

~~Sprinklers~~ (1) A sprinkler(s) shall not be required in the hoistway where the hoistway for passenger elevators is at the top of passenger elevator hoistways where the hoistway is noncombustible or limited-combustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

(2) A sprinkler(s) shall be required at the top of freight elevator hoistways.

Statement of Problem and Substantiation for Public Comment

The intent of this proposed change is to be consistent with Section 9.3.6.5 to specifically indicate "top of hoistways" since Section 9.3.6.5 indicates "Where required" - This change will specify that sprinkler(s) protection shall only be required at the top of freight elevators (per ASME A17.1/CSA B44 Code) since freight elevator cars could be open at the top (no car ceiling) and they could potentially carry very large fuel loads compared to passenger elevators.

Related Item

- FR 1315

Submitter Information Verification

Submitter Full Name: Kevin Brinkman

Organization: National Elevator Industry, Inc.

Affiliation: NEII

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 30 12:13:21 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1186-NFPA 13-2023

Statement: This combines PC 121 to only include language requiring sprinklers in section 9.3 with PCs 94, 205, 176, 158, and 174 which include requirements for sprinkler protection of combustible suspension means in hoistways and combustible hydraulic fluid in elevator machine rooms, machinery spaces, control rooms, and control spaces as these create a greater fire risk.



Public Comment No. 206-NFPA 13-2023 [Section No. 9.3.6.2]

9.3.6.2*

9.3.6.2 * _

Sprinklers (1) Sprinkler(s) shall not be required in the hoistway at the top of passenger elevator hoistways, where the hoistway for passenger elevators is noncombustible or limited-combustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

(2) Sprinkler(s) shall be required at the top of freight elevator hoistways.

Statement of Problem and Substantiation for Public Comment

The intent of this proposed change is to be consistent with Section 9.3.6.5 to specifically indicate "top of hoistways" since Section 9.3.6.5 indicates "Where required" - This change will specify that sprinkler(s) protection shall only be required at the top of freight elevators (per ASME A17.1 Code) since freight elevator cars could be open at the top (no car ceiling) and they could potentially carry very large fuel loads compared to passenger elevators.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 206-NFPA 13-2023</u>	Public Comment No. 205-NFPA 13-2023 [New Section after 9.3.6.5]
	<u>Related Item</u>
• Public Comment No. 205-NFPA 13-2023 [New Section after 9.3.6.5]	

Submitter Information Verification

Submitter Full Name: Lawrence Taylor
Organization: Schindler Elevator Corporation
Affiliation: NEOO Representative on NFPA 13 Sprinkler Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 08:34:47 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1067-NFPA 13-2023

Statement: Omitting sprinklers in elevator hoistways reduces life-safety risk that results from having to enter the hoistway for maintenance purposes. The committee does not have fire-loss data to support keeping sprinklers in elevator hoistways; hoistways are also rated assemblies. This combines the intent of PC 120 to move all the omission allowances to Section 9.2 with PCs 157, 158, 206, 95, and 96 which identify additional allowances for omission of sprinklers for suspension means using the FT-1 test method meeting the pass/fail criteria established in 9.2.14.5. The pass/fail criteria is inline with that specified for the finished construction of electrical cables as described in ANSI/UL 62, Flexible Cords and Cables.



Public Comment No. 94-NFPA 13-2023 [Section No. 9.3.6.2]

9.3.6.2*

~~Sprinklers~~ (1) Sprinkler(s) shall not be required in ~~the hoistway~~ at the top of passenger elevator hoistways, where the hoistway for ~~passenger elevators~~ is noncombustible or limited-combustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

(2) Sprinkler(s) shall be required at the top of freight elevator hoistways.

Statement of Problem and Substantiation for Public Comment

The intent of this proposed change is to be consistent with Section 9.3.6.5 to specifically indicate "top of hoistways" since Section 9.3.6.5 indicates "Where required" - This change will specify that sprinkler(s) protection shall only be required at the top of freight elevators (per ASME A17.1 Code) since freight elevator cars could be open at the top (no car ceiling) and they could potentially carry very large fuel loads compared to passenger elevators.

Related Item

- FR 1315

Submitter Information Verification

Submitter Full Name: Sagiv Weiss-Ishai

Organization: San Francisco Fire Department

Affiliation: SFFD

Street Address:

City:

State:

Zip:

Submission Date: Thu May 11 13:19:31 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1067-NFPA 13-2023

Statement: Omitting sprinklers in elevator hoistways reduces life-safety risk that results from having to enter the hoistway for maintenance purposes. The committee does not have fire-loss data to support keeping sprinklers in elevator hoistways; hoistways are also rated assemblies. This combines the intent of PC 120 to move all the omission allowances to Section 9.2 with PCs 157, 158, 206, 95, and 96 which identify additional allowances for omission of sprinklers for suspension means using the FT-1 test method meeting the pass/fail criteria established in 9.2.14.5. The pass/fail criteria is inline with that specified for the finished construction of electrical cables as described in ANSI/UL 62, Flexible Cords and Cables.



Public Comment No. 205-NFPA 13-2023 [New Section after 9.3.6.5]

NFPA 13-2025 [New Section after 9.3.6.5]

9.3.6.6 Combustible Suspension in Elevators.

9.3.6.6.1

Sprinklers shall be installed at the top and bottom of elevator hoistways where elevators utilize combustible suspension means such as noncircular elastomeric-coated or polyurethane-coated steel belts.

9.3.6.6.2

The sprinklers in the elevator hoistway shall not be required when the suspension means provide not less than an FT-1 rating when tested to the vertical burn test requirements of UL 2556, Wire and Cable Test Methods, where the suspension means shall not continue to burn for more than 60 seconds, nor shall the indicator flag be burned more than 25 percent.

Type your content here ...

Statement of Problem and Substantiation for Public Comment

This Section was included in the 2022 Edition of the Code and there is no Specific committee statement or rationale why it is removed from the 2025 Edition. Elevator manufacturers are still manufacturing non-rated belts which can cause a fire hazard in the hoistway (there are a few cases that the non-rated belts caught fire and burn inside the hoistway) . Eliminating this requirement completely from the 2025 edition will reduce safety. This requirement was in NFPA 13 for 3 code cycles and it motivated building owners and designers to only specify Fire-Rated belts. For example, many jurisdictions prohibit the use of non-rated belts to avoid the hoistway sprinklers and the associated shunt trip function as well as the associated hoistway detection devices.. If this requirement will be removed, it will potentially encourage elevator manufacturers to keep manufacturing non-rated belts which are much less safe than the rated belts. Some of the elevator manufacturers have already discontinued the manufacturing of non-rated belts due to the NFPA 13 requirement for hoistway sprinklers and fire AHJs enforcement and this increased the overall safety of the elevators and the building, therefore this section should not be deleted from the 2025 edition.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 206-NFPA 13-2023 [Section No. 9.3.6.2]	
<u>Related Item</u>	
• Public Comment No. 206-NFPA 13-2023	

Submitter Information Verification

Submitter Full Name: Lawrence Taylor
Organization: Schindler Elevator Corporation
Affiliation: NEII Representative on NFPA 13 Sprinkler Committee
Street Address:
City:

State:**Zip:****Submittal Date:** Wed May 31 08:14:53 EDT 2023**Committee:** AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR**Resolution:** [SR-1186-NFPA 13-2023](#)

Statement: This combines PC 121 to only include language requiring sprinklers in section 9.3 with PCs 94, 205, 176, 158, and 174 which include requirements for sprinkler protection of combustible suspension means in hoistways and combustible hydraulic fluid in elevator machine rooms, machinery spaces, control rooms, and control spaces as these create a greater fire risk.



Public Comment No. 95-NFPA 13-2023 [New Section after 9.3.6.5]

9.3.6.6 Combustible Suspension in Elevators.

9.3.6.6.1

Sprinklers shall be installed at the top and bottom of elevator hoistways where elevators utilize combustible suspension means such as noncircular elastomeric-coated or polyurethane-coated steel belts.

9.3.6.6.2

The sprinklers in the elevator hoistway shall not be required when the suspension means provide not less than an FT-1 rating when tested to the vertical burn test requirements of UL 2556, Wire and Cable Test Methods, where the suspension means shall not continue to burn for more than 60 seconds, nor shall the indicator flag be burned more than 25 percent.

Statement of Problem and Substantiation for Public Comment

This Section was included in the 2022 Edition of the Code and there is no Specific committee statement or rationale why it is removed from the 2025 Edition.

Elevator manufacturers are still manufacturing non-rated belts which can cause a fire hazard in the hoistway (there are a few cases that the non-rated belts caught fire and burn inside the hoistway) . Eliminating this requirement completely from the 2025 edition will reduce safety. This requirement was in NFPA 13 for 3 code cycles and it motivated building owners and designers to only specify Fire-Rated belts. For Example, my SFFD jurisdiction prohibits the use of non-rated belts to avoid the hoistway sprinklers and the associated shunt trip function as well as the associated hoistway detection devices.. If this requirement will be removed, it will potentially encourage elevator manufacturers to keep manufacturing non-rated belts which are much less safe than the rated belts. Some of the elevator manufacturers have already discontinued the manufacturing of non-rated belts due to the NFPA 13 requirement for hoistway sprinklers and fire AHJs enforcement and this increased the overall safety of the elevators and the building, therefore this section should not be deleted from the 2025 edition.

Related Item

- FR 1315

Submitter Information Verification

Submitter Full Name: Sagiv Weiss-Ishai
Organization: San Francisco Fire Department
Affiliation: SFFD
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 11 14:25:45 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Rejected but see related SR

Action:

Resolution: [SR-1067-NFPA 13-2023](#)

Statement: Omitting sprinklers in elevator hoistways reduces life-safety risk that results from having to enter the hoistway for maintenance purposes. The committee does not have fire-loss data to support keeping sprinklers in elevator hoistways; hoistways are also rated assemblies. This combines the intent of PC 120 to move all the omission allowances to Section 9.2 with PCs 157, 158, 206, 95, and 96 which identify additional allowances for omission of sprinklers for suspension means using the FT-1 test method meeting the pass/fail criteria established in 9.2.14.5. The pass/fail criteria is inline with that specified for the finished construction of electrical cables as described in ANSI/UL 62, Flexible Cords and Cables.



Public Comment No. 96-NFPA 13-2023 [New Section after 9.3.6.5]

9.3.6.7 Combustible Suspension in Elevators.

9.3.6.7.1

Sprinklers shall be installed at the top and bottom of elevator hoistways where elevators utilize combustible

suspension means such as noncircular elastomeric-coated or polyurethane-coated steel belts.

9.3.6.7.2

The sprinklers in the elevator hoistway shall not be required when the suspension means provide not less

than an FT-1 rating when tested to the vertical burn test requirements of UL 2556, Wire and Cable Test

Methods, where the suspension means shall not continue to burn for more than 60 seconds, nor shall the

indicator flag be burned more than 25 percent.

Statement of Problem and Substantiation for Public Comment

It appears that this section was deleted during the first draft accidentally. If not, the committee did not provide any justification for deleting the section. Numbering should be adjusted as necessary.

Related Item

- FR-1315

Submitter Information Verification

Submitter Full Name: Peter Larrimer

Organization: US Department of Veterans Affa

Street Address:

City:

State:

Zip:

Submission Date: Fri May 12 10:37:46 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1067-NFPA 13-2023

Statement: Omitting sprinklers in elevator hoistways reduces life-safety risk that results from having to enter the hoistway for maintenance purposes. The committee does not have fire-loss data to support keeping sprinklers in elevator hoistways; hoistways are also rated assemblies. This combines the intent of PC 120 to move all the omission allowances to Section 9.2 with PCs 157, 158, 206, 95, and 96 which identify additional allowances for omission of sprinklers for suspension means using the FT-1 test method meeting the pass/fail criteria established in 9.2.14.5. The pass/fail criteria is inline with that specified for the finished construction of electrical cables as described in ANSI/UL 62, Flexible Cords and Cables.



Public Comment No. 73-NFPA 13-2023 [Section No. 9.4.2.5]

9.4.2.5*

The following practices shall be observed to provide sprinklers of other than ordinary-temperature classification unless other temperatures are determined or unless high-temperature sprinklers are used throughout, and temperature selection shall be in accordance with Table 9.4.2.5(a), Table 9.4.2.5(b), and Figure 9.4.2.5:

- (1) * Sprinklers in the high-temperature zone shall be of the high-temperature classification, and sprinklers in the intermediate-temperature zone shall be of the intermediate-temperature classification.
- (2) Sprinklers located within 12 in. (300 mm) to one side or 30 in. (750 mm) above an uncovered steam main, heating coil, or radiator shall be of the intermediate-temperature classification and have a temperature rating of at least 200°F (93°C).
- (3) Sprinklers within 7 ft (2.1 m) of a low-pressure blowoff valve that discharges free in a large room shall be of the high-temperature classification.
- (4) Sprinklers under glass or plastic skylights exposed to the direct rays of the sun shall be of the intermediate-temperature classification and have a temperature rating of at least 200°F (93°C).
- (5) Sprinklers in attics (peaked or flat) shall be of the intermediate-temperature classification and have a temperature rating of at least 200°F (93°C).
- (6) Sprinklers in enclosed show windows shall be of the intermediate-temperature classification and have a temperature rating of at least 200°F (93°C).
- (7) Sprinklers protecting commercial-type cooking equipment and ventilation systems shall be of the high- or extra-high-temperature classification as determined by use of a temperature-measuring device. (See 8.9.6.)
- (8) Sprinklers protecting residential areas installed near specific heat sources identified in Table 9.4.2.5(b) shall be installed in accordance with Table 9.4.2.5(b).
- (9) Ordinary-temperature sprinklers located adjacent to a heating duct that discharges air that is less than 100°F (38°C) are not required to be separated in accordance with Table 9.4.2.5(a) or Table 9.4.2.5(b).
- (10) Sprinklers in walk-in type coolers and freezers with automatic defrosting shall be of the intermediate-temperature classification or higher.
- (11) Sprinklers in closets containing ventless clothes dryers shall be of the intermediate-temperature classification or higher.

Table 9.4.2.5(a) Temperature Ratings of Sprinklers Based on Distance from Heat Sources

<u>Type of Heat Condition</u>	<u>Ordinary-Temperature Rating</u>	<u>Intermediate-Temperature Rating</u>	<u>High-Temperature Rating</u>
(1) Heating ducts	-	-	-
(a) Above	More than 2 ft 6 in. (750 mm)	2 ft 6 in. or less (750 mm)	-
(b) Side and below	More than 1 ft 0 in. (300 mm)	1 ft 0 in. or less (300 mm)	-
(c) Diffuser	Any distance except as shown under Intermediate-Temperature Rating column	<i>Downward discharge:</i> Cylinder with 1 ft 0 in. (300 mm) radius from edge extending 1 ft 0 in. (300 mm) below and 2 ft 6 in. (750 mm) above	-

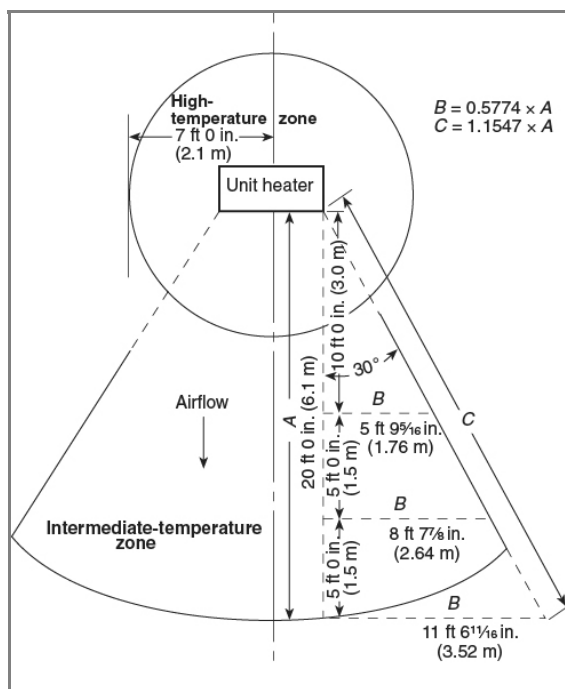
<u>Type of Heat Condition</u>	<u>Ordinary-Temperature Rating</u>	<u>Intermediate-Temperature Rating</u>	<u>High-Temperature Rating</u>	
				<i>Horizontal discharge:</i> Semicylinder or cylinder with 2 ft 6 in. (750 mm) radius from edge in direction of flow extending 1 ft 0 in. (300 mm) below and 2 ft 6 in. (750 mm) above
(2) Unit heater and radiant heater	-	-	-	
(a) Horizontal discharge	-			<i>Discharge side:</i> 7 ft 0 in. (2.1 m) to 20 ft 0 in. (6.1 m) radius pie-shaped cylinder (see Figure 9.4.2.5) extending 7 ft 0 in. (2.1 m) above and 2 ft 0 in. (600 mm) below heater; also 7 ft 0 in. (2.1 m) radius cylinder more than 7 ft 0 in. (2.1 m) above unit heater
(b) Vertical downward discharge (for sprinklers below unit heater, see Figure 9.4.2.5)	-			7 ft 0 in. (2.1 m) radius cylinder extending
(3) Steam mains (uncovered)	-	-	-	7 ft 0 in. (2.1 m) radius cylinder extending from the top of the unit heater to an elevation 7 ft 0 in. (2.1 m) above unit heater
(a) Above	More than 2 ft 6 in. (750 mm)	2 ft 6 in. or less (750 mm)	-	
(b) Side and below	More than 1 ft 0 in. (300 mm)	1 ft 0 in. or less (300 mm)	-	
(c) Blowoff valve	More than 7 ft 0 in. (2.1 m)	-		7 ft 0 in. or less (2.1 m)

Table 9.4.2.5(b) Temperature Ratings of Sprinklers in Specified Residential Areas

<u>Heat Source</u>	<u>Minimum Distance from Edge of Source to Ordinary-Temperature Sprinkler</u>		:	<u>Minimum Distance from Edge of Source to Intermediate-Temperature Sprinkler</u>	
	<u>in.</u>	<u>mm</u>		<u>in.</u>	<u>mm</u>
Side of open or recessed fireplace	36	900	-	12	300

<u>Heat Source</u>	<u>Minimum Distance from Edge of Source to Ordinary- Temperature Sprinkler</u>		-	<u>Minimum Distance from Edge of Source to Intermediate- Temperature Sprinkler</u>	
	<u>in.</u>	<u>mm</u>		<u>in.</u>	<u>mm</u>
Front of recessed fireplace	60	1500	-	36	900
Coal- or wood-burning stove	42	1050	-	12	300
Kitchen range	18	450	-	9	225
Wall oven	18	450	-	9	225
Hot air flues	18	450	-	9	225
Uninsulated heat ducts	18	450	-	9	225
Uninsulated hot water pipes	12	300	-	6	150
Side of ceiling- or wall-mounted hot air diffusers	24	600	-	12	300
Front of wall-mounted hot air diffusers	36	900	-	18	450
Hot water heater or furnace	6	150	-	3	75
Light fixture (except LED):	-	-	-	-	-
0 W–250 W	6	150	-	3	75
250 W–499 W	12	300	-	6	150

Figure 9.4.2.5 High-Temperature and Intermediate-Temperature Zones at Unit Heaters and Radiant Heaters.



Statement of Problem and Substantiation for Public Comment

The proposed changes are intended to address conditions permitted by NFPA 13 that may not be

adequate to prevent the unintended operation of sprinklers. Currently, Section 9.4.2.5 requires Intermediate Temperature classification sprinklers in certain applications, specifically in close proximity to steam systems, in attics, in enclosed show windows, and under skylights. In some instances, these applications specified by NFPA 13 for Intermediate Temperature classification sprinklers may result in surface temperatures of the sprinkler that exceed the Temperature Rating of Intermediate Temperature classification sprinklers in the cooler portion of the allowable temperature range. Intermediate Temperature classification includes sprinklers with Temperature Ratings ranging from 175°F (93°C) to 225°F (107°C). Within this range sprinklers are commonly available with Temperature Ratings of 175°F (93°C), 200°F (93°C), and 212°F (100°C). Historically, Intermediate Temperature classification sprinklers had a Temperature Rating of 212°F (100°C), which provided exceptional performance in terms of both fire protection and preventing unintended operation. However, unintended operations of sprinklers within the lower portion of the Intermediate Temperature range is possible in the applications specified by NFPA 13, which negatively impacts the widespread acceptance of fire sprinklers. This Public Comment is different from the associated Public Input because the PC allows sprinklers with a Temperature Rating of 200°F (93°C) in these application. This allows both commonly available glass bulb and fusible-link operating elements to continue to be used.

Related Item

- Public Input 112

Submitter Information Verification

Submitter Full Name: Steven Wolin

Organization: The Reliable Automatic Sprinkler Co. Inc.

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 09:16:26 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: Intermediate temperature sprinklers consist of a range of temperatures and it is up to the design professional to select the correct temperature sprinkler for the conditions that it will be installed. No support or documentation has been provided to indicate that a 200 degree F sprinkler should be the minimum temperature rating used in all intermediate installation situations.

**Public Comment No. 87-NFPA 13-2023 [Sections 9.5.4.2, 9.5.4.3]****Sections****9.5.4.****2, 9.5.4.3****9.5.4.2 – Deflector****2 Deflector Orientation.**

~~Except as required in 9.5.4.3~~

Deflectors of sprinklers shall be oriented as follows:

(1) Where ceilings have a slope of 2 in 12 or less , deflectors of sprinklers shall be aligned parallel to ceilings, roofs, or the incline of stairs

–

9.5.4.3 * –

, or parallel to the floor.

(2) Where ceilings have a slope of more than 2 in 12 and sprinklers protect non-storage hazards in accordance with Chapter 19, deflectors of sprinklers shall be aligned parallel to ceilings, roof, or the incline of stairs, or parallel to the floor.

(3) * Where sprinklers are installed under ceilings with a slope that exceeds 2 in 12 (16.7 percent) and protect storage in accordance with Chapters 20 through 26 , deflectors of sprinklers shall be aligned parallel to the floor of the storage area.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
9-5-4-2.docx	This is a clean version of the proposed section	

Statement of Problem and Substantiation for Public Comment

The work done by the FPRF project on sloped ceilings showed that positioning the sprinkler with the deflector parallel to the floor had significant advantages in helping to achieve fire control and therefore should not be prohibited by the standard if the design professional chooses this installation orientation.

This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 150-NFPA 13-2023 [New Section after 30.3.8]	
<u>Related Item</u>	
• FR 1213	

Submitter Information Verification

Submitter Full Name: Kenneth Isman

Organization: University of Maryland

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 10 22:37:41 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1185-NFPA 13-2023](#)

Statement: The work done by the FPRF project on sloped ceilings showed that positioning the sprinkler with the deflector parallel to the floor had significant advantages in helping to achieve fire control and therefore should not be prohibited by the standard if the design professional chooses this installation orientation.

9.5.4.2 Deflector Orientation.

Deflectors of sprinklers shall be oriented as follows:

- (1) Where ceilings have a slope of 2 in 12 or less, deflectors of sprinklers shall be aligned parallel to ceilings, roofs, or the incline of stairs, or parallel to the floor.
- (2) Where ceilings have a slope of more than 2 in 12 and sprinklers protect non-storage hazards in accordance with Chapter 19, deflectors of sprinklers shall be aligned parallel to ceilings, roof, or the incline of stairs, or parallel to the floor.
- (3)* Where sprinklers are installed under ceilings with a slope that exceeds 2 in 12 (16.7 percent) and protect storage in accordance with Chapters 20 through 26, deflectors of sprinklers shall be aligned parallel to the floor of the storage area.



Public Comment No. 195-NFPA 13-2023 [Section No. 9.5.5.3.3.1]

9.5.5.3.3.1

Supplemental sprinklers shall be quick response- ~~having a~~ , or have a fast-response thermal element, having a nominal ordinary temperature rating unless otherwise required by 7.2.4 or 9.4.2.5.

Statement of Problem and Substantiation for Public Comment

The intent of the proposed language in the first draft was to allow any sprinkler that is quick-response, or has a fast-response thermal element, such as an extended-coverage sprinkler, to be used as a supplemental sprinkler. The proposed language allows the extended-coverage sprinkler to be an acceptable sprinkler for use as a supplemental sprinkler.

Related Item

- FR-1209

Submitter Information Verification

Submitter Full Name: Weston Baker

Organization: FM Global

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 06:42:43 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1027-NFPA 13-2023

Statement: The intent of the proposed language in the first draft was to allow any sprinkler that is quick-response, or has a fast-response thermal element, such as an extended-coverage sprinkler, to be used as a supplemental sprinkler. The proposed language allows the extended-coverage sprinkler to be an acceptable sprinkler for use as a supplemental sprinkler.



Public Comment No. 196-NFPA 13-2023 [Section No. 9.5.5.3.4.2]

9.5.5.3.4.2

The spacing of supplemental sprinklers under obstructions shall be in accordance with one of the following:

- Where supplemental sprinklers are required below flat, solid obstructions not exceeding 2 ft. (0.6 m) in width, the maximum allowable linear spacing for the sprinklers shall be 8 ft (2.4 m).
- Where supplemental sprinklers are required below nonflat or nonsolid obstructions, the maximum allowable linear and area spacing for the sprinklers shall be 4 ft (1.2 m) and 16 ft² (1.5 m²).
- Where a flat, solid continuous horizontal barrier having the same footprint of the obstruction is installed below an obstruction not exceeding 2 ft (0.6 m) in width, the maximum allowable linear spacing for the sprinklers shall be 8 ft (2.4 m).
- Where supplemental sprinklers are required below flat, solid obstructions greater than 2 ft (0.6 m) but not exceeding 10 ft (3.0 m) in width, the maximum allowable linear spacing for the sprinklers shall be 10 ft (3.0 m).
- Where a flat, solid continuous horizontal barrier having the same footprint of the obstruction is installed below an obstruction greater than 2 ft (0.6 m) but not exceeding 10 ft (3.0 m) in width, the maximum allowable linear spacing for the sprinklers shall be 10 ft (3.0 m).
- Where supplemental sprinklers are required below flat, solid obstructions exceed 10 ft (3.0 m) in width, the sprinkler spacing for the supplemental sprinklers shall be in accordance with the requirements for the sprinklers installed under unobstructed construction.

Where a flat, solid continuous horizontal barrier having the same footprint of the obstruction is installed below an obstruction exceeding 10 ft (3.0 m) in width, the sprinkler spacing for the supplemental sprinklers shall be installed with the sprinkler's spacing requirements for when the sprinkler is installed under unobstructed construction.

Statement of Problem and Substantiation for Public Comment

The proposed requirements for supplemental sprinkler spacing in the first draft were for supplemental sprinklers installed over storage applications, which should not have been in Section 9.5.5.3.4.2, but rather in Chapter 14. This public comment sets the spacing requirements for supplemental sprinklers equal to the same spacing allowed for the sprinkler at ceiling level unless indicated otherwise. The previous requirements of Section 9.5.5.3.4.2 have been moved into Chapter 14 using a separate public comment.

Related Item

- FR-1209

Submitter Information Verification

Submitter Full Name: Weston Baker

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Submittal Date: Wed May 31 06:47:57 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1028-NFPA 13-2023](#)

Statement: This is a general requirement that allows for spacing of supplemental sprinklers to not have to follow the spacing guidelines for the sprinklers installed at the ceiling. Subsections 1 through 7 have been removed and relocated to chapter 14 as they are more restrictive and apply to ESFR sprinklers.



Public Comment No. 24-NFPA 13-2023 [Section No. 9.5.5.4]

9.5.5.4 Closets.

In all closets and compartments, including those closets housing mechanical equipment, that are not larger than 400 ft³ (11.3 m³) in size, a single sprinkler at the highest ceiling level shall be sufficient without regard to clearance,_ obstructions,_ or minimum distance to the wall.

Statement of Problem and Substantiation for Public Comment

The current section does not address clearance. Without this specific reference, the 18 in. clearance requirement for storage could be applied.

Related Item

- PI-30

Submitter Information Verification

Submitter Full Name: Kevin Hall

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Affiliation: American Fire Sprinkler Association

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Submittal Date: Wed Mar 08 17:54:42 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1029-NFPA 13-2023

Statement: The current section does not address clearance. Without this specific reference, the 18 in. clearance requirement for storage could be applied.



Public Comment No. 137-NFPA 13-2023 [Section No. 10.2.6.1.2]

10.2.6.1.2

—

Obstructed Construction

—

10.2.6.1.2.1 – Obstructed Construction for Ceilings with Slopes Not Exceeding 1 in 12.Where the slope of the ceiling does not exceed 1 in 12Under obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:Sprinklers shall be installed in each individual channel of obstructed construction(1) Installed with the deflectorslocated a minimumwithin the horizontal planes of 1 in. to 6 in. (25 mm to 150 mm) below the structural members and a maximum distance of1222 in. (300550 mm) below the ceiling/roof deck.

- Where the maximum depth of the structural members, including concrete tees, is 18 in. (450 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members.
- Where the maximum depth of the structural members, including concrete tees, is greater than 18 in. (450 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are firestopped to the full depth of the structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).
Where composite wood joists are firestopped to the full depth of the joists with material equivalent to the web construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the joists only when a maximum distance

(2) Installed with the deflectors at or above the bottom of the structural member to a maximum of 22 in. (550 mm)can be maintained between the sprinkler deflector and thebelow the ceiling/roof deck

—

where the sprinkler is installed in conformance with 10.2.67.4.2.2– Obstructed Construction for Ceilings with Slopes Not Exceeding 2 in 12.Where the slope of the ceiling is greater than 1 in 12 but does not exceed 2 in 12, the sprinkler

~~deflector shall be located in accordance with one of the following arrangements: Sprinklers shall be installed in each individual channel of obstructed construction~~

~~(3) Installed in each bay of obstructed construction, with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling~~

~~/roof deck~~

~~.~~

~~Where the maximum depth of the structural members, including concrete tees, is 12 in. (300 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding~~

~~(4) Installed with the deflectors within the horizontal planes 1 in. to 6 in. (25 mm to 150 mm)~~

~~vertically below the bottom of the structural members. Where the maximum depth of the structural members, including concrete tees, is greater than 12~~

~~below composite wood joists to a maximum distance of 22 in. (~~

~~300 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction~~

~~550 mm) below the ceiling/roof deck only where joist channels are provided with blocking to the full depth of the~~

~~structural member~~

~~joists with material at least equivalent to~~

~~or less combustible than the structural member's~~

~~the web construction so that individual channel~~

~~volumes~~

~~areas do not exceed~~

~~400~~

~~300 ft~~

~~3~~

~~2 (~~

~~11.3~~

~~28 m~~

~~3~~

~~2)~~

~~.~~

- ~~Where composite wood joists are provided with blocking to the full depth of the joists with material equivalent to or less combustible than the web construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the joists only when a maximum distance of 22 in. (550 mm) can be maintained between the sprinkler deflector and the ceiling/roof deck.~~

10.2.6.1.2.3 – Obstructed Construction for Ceilings with Slopes Not Exceeding 4 in 12.

Where the slope of the ceiling is greater than 2 in 12 but does not exceed 4 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.
- (2) Where the maximum depth of the structural members, including concrete tees, is 12 in. (300 mm) and are installed perpendicular to the ceiling slope, sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the structural member with material equivalent to or less combustible than the structural member's construction so that individual channel volumes do not exceed 300 ft^3 (8.5 m^3).

10.2.6.1.2.4 – Solid Obstructed Construction for Ceiling with Slopes Exceeding 4 in 12.

Where the slope of the ceiling is greater than 4 in 12, sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.

(5)* Installed with deflectors of sprinklers under concrete tee construction with stems spaced less than $7\frac{1}{2}$ ft (2.3 m) on centers and a maximum depth of the stems of 30 in. (750mm), located at or above a horizontal plane 1 in. (25 mm) below the bottom of the stems of the tees and complying with Table 10.2.7.2(a) or Table 10.2.7.2(b).

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
10-2-6-1-2.docx	This is what the section and its annex should look like if the comment is accepted.	

Statement of Problem and Substantiation for Public Comment

Based on the discussion at the First Draft Meeting and a re-evaluation of the information from the FPRF testing program, the Sloped Ceiling Task Group is recommending a different approach to incorporating the results of the testing into NFPA 13. This approach will be incorporated in the following steps:

1. Return the positioning of standard spray sprinklers with respect to obstructed construction to the 2022 edition rules with two changes; one change to concrete tee construction, which will be substantiated below and usage of the new term "blocking" which was defined at the First Draft.
2. Allow the user, when protecting non-storage occupancies with a sloped ceiling, to select one of two options:
 - a. Locate the sprinkler in accordance with the old rules and take the 30% increase in design area
 - b. Locate the sprinkler in accordance with new rules in order to avoid the 30% increase. The sprinkler location rules for selecting this option will be in Chapter 19.
3. Allow the user to protect a storage occupancy with a sloped ceiling with the sprinkler location information in Chapter 20 rather than Chapter 10.

This approach has a less dramatic effect on the users of NFPA 13 and is still supported by the data of the test program. Ultimately, this approach is more likely to be more user friendly to the typical design professional and will provide options that were not permitted under the 2022 and previous editions of the standard while retaining the status quo for those familiar with the older rules and still wanting to select sprinkler protection using those parameters.

The one change to the 2022 edition rules that is being proposed here is the limit on the depth of the stems of concrete tees. Previous editions of the standard have permitted sprinklers to be installed under the concrete tees, regardless of the depth, which causes questions regarding the response of sprinklers under particularly deep tees. This comment proposes a limit of 30 inches to the depth of the tees in order to eliminate the concept of allowing an unlimited depth. The 30 inch depth limit is considered practical given the knowledge of common types of construction that have been protected successfully with fire sprinklers for decades and given some individual manufacturer's experience with fire tests to achieve a listing for specific products.

This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 85-NFPA 13-2023 [Section No. 11.2.4.1.2]	
Public Comment No. 138-NFPA 13-2023 [New Section after A.10.2.5.2.3]	

Related Item

- FR 1217

Submitter Information Verification

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Submittal Date: Fri May 26 11:18:54 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1034-NFPA 13-2023](#)

Statement: Based on information from the FPRF testing program, the results of the testing incorporates the following into NFPA 13:

1. Return the positioning of standard spray sprinklers with respect to obstructed construction to the 2022 edition rules with two changes; one change to concrete tee construction, which will be substantiated below and usage of the new term "blocking" which was defined at the First Draft.
2. Allow the user, when protecting non-storage occupancies with a sloped ceiling, to select one of two options:
 - a. Locate the sprinkler in accordance with the old rules and take the 30% increase in design area

b. Locate the sprinkler in accordance with new rules in order to avoid the 30% increase. The sprinkler location rules for selecting this option will be in Chapter 19.

3. Allow the user to protect a storage occupancy with a sloped ceiling with the sprinkler location information in Chapter 20 rather than Chapter 10.

This approach has a less dramatic effect on the users of NFPA 13 and is still supported by the data of the test program. Ultimately, this approach is more likely to be more user friendly to the typical design professional and will provide options that were not permitted under the 2022 and previous editions of the standard while retaining the status quo for those familiar with the older rules and still wanting to select sprinkler protection using those parameters.

The one change to the 2022 edition rules that is being proposed here is the limit on the depth of the stems of concrete tees. Previous editions of the standard have permitted sprinklers to be installed under the concrete tees, regardless of the depth, which causes questions regarding the response of sprinklers under particularly deep tees. This comment proposes a limit of 30 inches to the depth of the tees in order to eliminate the concept of allowing an unlimited depth. The 30 inch depth limit is considered practical given the knowledge of common types of construction that have been protected successfully with fire sprinklers for decades and given some individual manufacturer's experience with fire tests to achieve a listing for specific product



Public Comment No. 26-NFPA 13-2023 [Section No. 10.2.7.2]

10.2.7.2* Obstructions to At or Above the Deflector Affecting Sprinkler Discharge Pattern Development.

~~Sprinklers shall~~ Where the top of the obstruction is level with or above the plane of the deflector, sprinklers shall be arranged to comply with one of the following arrangements:

- (1) Subsection 9.5.5.2, Table 10.2.7.2(a) or Table 10.2.7.2(b), and Figure 10.2.7.2(a) shall be followed.
- (2) Sprinklers shall be permitted to be spaced on opposite sides of obstructions not exceeding 4 ft (1.2 m) in width, provided the distance from the centerline of the obstruction to the sprinklers does not exceed one-half the allowable distance permitted between sprinklers.
- (3) Obstructions located against the wall and that are not over 30 in. (750 mm) in width shall be permitted to be protected in accordance with Figure 10.2.7.2(b).
- (4) Obstructions located against the wall and that are not over 24 in. (600 mm) in width shall be permitted to be protected in accordance with Figure 10.2.7.2(c). The maximum distance between the sprinkler and the wall shall be measured from the sprinkler to the wall behind the obstruction and not to the face of the obstruction.
- (5) Obstructions no greater than 12 in. (300 mm) in width in hallways up to 6 ft (1.8 m) in width shall be permitted in accordance with Figure 10.2.7.2(d) when the sprinkler is located within the allowable obstruction zone and the closest edge of the obstruction is a minimum of 12 in. (300 mm) away from the centerline of the sprinkler.
- (6) Sprinklers shall be installed below fixed obstructions over 4 ft (1.2 m) wide.
- (7) Sprinklers shall not be required under obstructions 4 ft. (1.2 m) or less wide when the provisions of Table 10.2.7.2(a) or Table 10.2.7.2(b) and Figure 10.2.7.2(a) are maintained.

Table 10.2.7.2(a) Positioning of Sprinklers to Avoid Obstructions to Discharge [Standard Spray Upright/Standard Spray Pendent (SSU/SSP)]

<u>Distance from Sprinkler to Side of Obstruction (A) (ft)</u>	<u>Allowable Distance of Deflector Above Bottom of Obstruction (B) (in.)</u>
Less than 1	0
1 or more	2½ or less
1½ or more	3½ or less
2 or more	5½ or less
2½ or more	7½ or less
3 or more	9½ or less
3½ or more	12 or less
4 or more	14 or less
4½ or more	16½ or less
5 or more	18 or less
5½ or more	20 or less
6 or more	24 or less
6½ or more	30 or less
7 or more	35 or less

Note: For A and B, refer to Figure 10.2.7.2(a).

Table 10.2.7.2(b) Positioning of Sprinklers to Avoid Obstructions to Discharge [Standard Spray Upright/Standard Spray Pendent (SSU/SSP)]

<u>Distance from Sprinkler to Side of Obstruction (A) (mm)</u>	<u>Allowable Distance of Deflector Above Bottom of Obstruction (B) (mm)</u>
Less than 300	0
300 or more	65 or less
450 or more	90 or less

<u>Distance from Sprinkler to Side of Obstruction (A) (mm)</u>	<u>Allowable Distance of Deflector Above Bottom of Obstruction (B) (mm)</u>
600 or more	140 or less
750 or more	190 or less
900 or more	240 or less
1100 or more	300 or less
1200 or more	350 or less
1400 or more	420 or less
1500 or more	450 or less
1700 or more	510 or less
1800 or more	600 or less
2000 or more	750 or less
2100 or more	875 or less

Note: For A and B, refer to Figure 10.2.7.2(a).

Figure 10.2.7.2(a) Positioning of Sprinkler to Avoid Obstruction to Discharge (SSU/SSP).

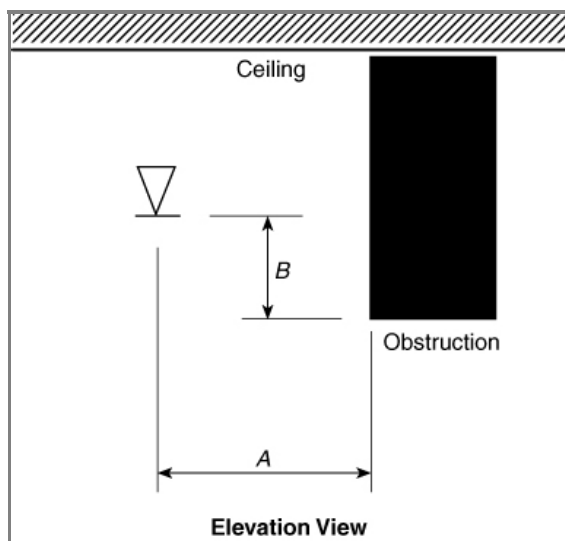


Figure 10.2.7.2(b) Obstruction Against Wall (SSU/SSP).

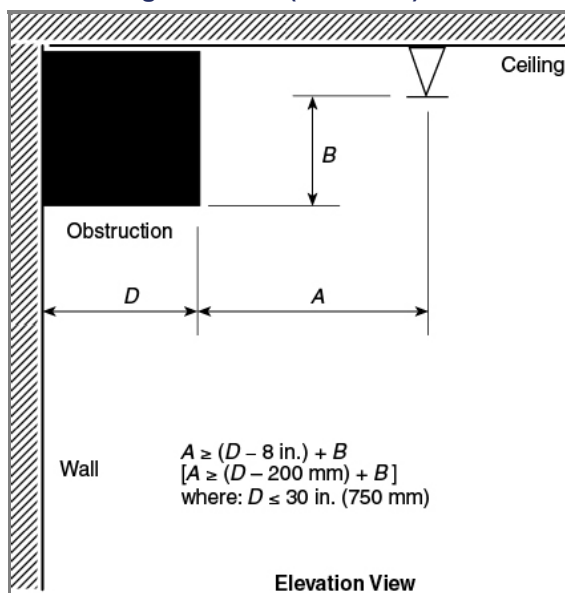
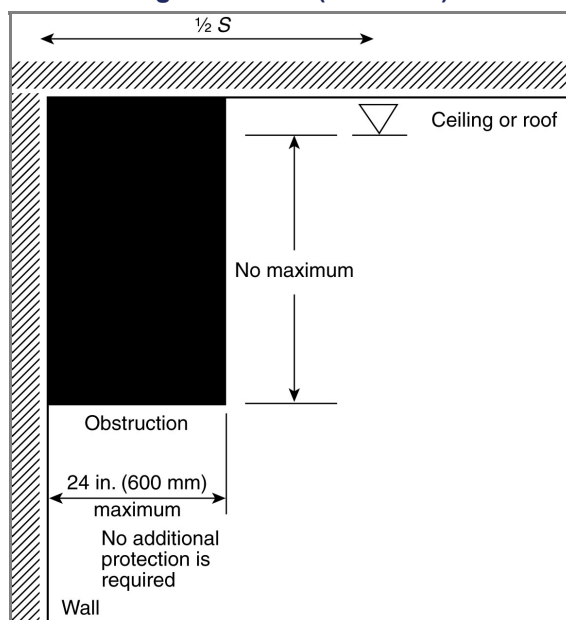
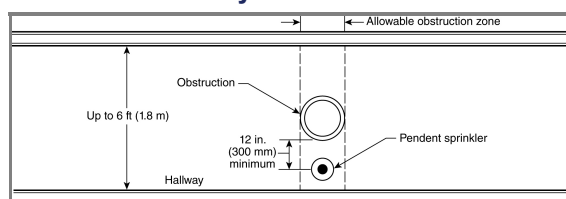


Figure 10.2.7.2(c) Obstructions Against Walls (SSU/SSP).**Figure 10.2.7.2(d) Obstruction in Hallway.**

Statement of Problem and Substantiation for Public Comment

This is a resubmission of PI-195 that has been split into two proposals for clarity.

Sections 10.2.7.2 and 10.2.7.3 have the same titles and can confuse the user when applying the beam rules and three times rule to obstructions. This change in title would make it clear that the beam rule applies to obstructions within 18 in. of the deflector that extends to the level of the deflector or above. The change to section 10.2.7.2 would make it clear that the three times rule applies to obstructions within 18 in. of the deflector that are completely below the level of the deflector.

Related Item

- PI-195

Submitter Information Verification

Submitter Full Name: Kevin Hall

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Submission Date: Wed Mar 08 18:01:42 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1058-NFPA 13-2023](#)

Statement: Sections 10.2.7.2 and 10.2.7.3 have the same titles and can confuse the user when applying the beam rules and three times rule to obstructions. This change in title makes it clear that the beam rule applies to obstructions within 18 in. of the deflector that extends to the level of the deflector or above. The change to section 10.2.7.2 and 10.2.7.3 makes it clear that the three times rule applies to obstructions within 18 in. of the deflector that are completely below the level of the deflector.



Public Comment No. 27-NFPA 13-2023 [Section No. 10.2.7.3]

10.2.7.3 Obstructions to Sprinkler Below the Deflector Affecting Sprinkler Discharge Pattern Development.

10.2.7.3.1 General.

10.2.7.3.1.1

Continuous or noncontinuous obstructions less than or equal to 18 in. (450 mm) below the sprinkler deflector that prevent the pattern from fully developing shall comply with 10.2.7.3.

10.2.7.3.1.2

Regardless of the rules of 10.2.7.3, solid continuous obstructions, where the top of the obstruction is level with or above the plane of the deflector, shall meet the applicable requirements of 10.2.7.2.

10.2.7.3.1.3* Clearance Below Sprinklers in Alcoves and Below Soffits.

In light hazard occupancies, obstructions below pendent sprinklers in alcove ceilings and under soffits shall not be required to maintain an 18 in. (450 mm) clearance to the sprinkler deflector as long as all of the following conditions are met:

- (1) The height of the alcove ceiling or bottom of the soffit doesn't exceed 10 ft (3 m) above the finished floor.
- (2) The floor area of the alcove or the protection area below the soffit doesn't exceed 50 ft² (4.5 m²).
- (3) The top of the obstruction is at least 1 in. (25 mm) below the plane of the sprinkler deflector.

10.2.7.3.1.4* Minimum Distance from Obstructions.

Unless the requirements of 10.2.7.3.1.5 through 10.2.7.3.1.10 are met, sprinklers shall be positioned away from obstructions a minimum distance of three times the maximum dimension of the obstruction (e.g., structural members, pipe, columns, and fixtures) in accordance with Figure 10.2.7.3.1.4(a) and Figure 10.2.7.3.1.4(b).

Figure 10.2.7.3.1.4(a) Minimum Distance from an Obstruction in the Vertical Orientation (SSU/SSP).

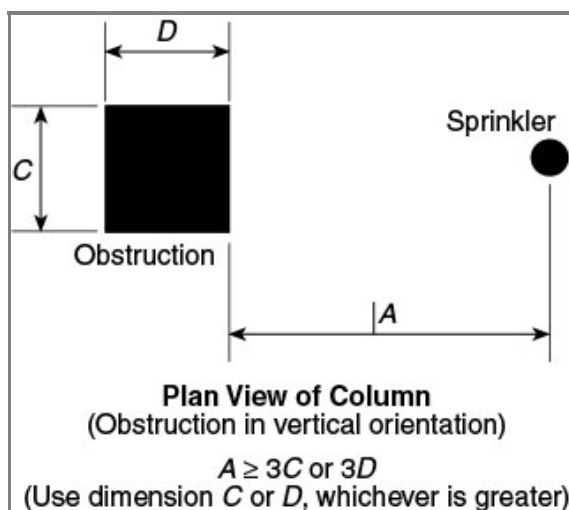
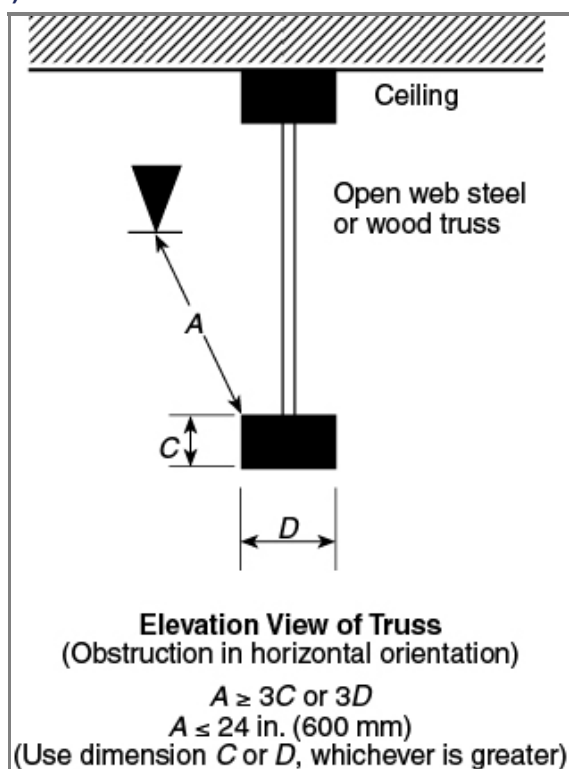


Figure 10.2.7.3.1.4(b) Minimum Distance from an Obstruction in the Horizontal Orientation (SSU/SSP).



(A)

The maximum clear distance required shall be 24 in. (600 mm).

(B)

The maximum clear distance shall not be applied to obstructions in the vertical orientation (e.g., columns).

10.2.7.3.1.5

For light and ordinary hazard occupancies, structural members only shall be considered when applying the requirements of 10.2.7.3.1.4.

10.2.7.3.1.6

Sprinklers shall be permitted to be spaced on opposite sides of the obstruction not exceeding 4 ft (1.2 m) in width, where the distance from the centerline of the obstruction to the sprinklers does not exceed one-half the allowable distance between sprinklers.

10.2.7.3.1.7

Sprinklers shall be permitted to be located one-half the distance between the obstructions where the obstruction consists of open trusses 20 in. (500 mm) or greater apart [24 in. (600 mm) on center], provided that all truss members are not greater than 4 in. (100 mm) (nominal) in width.

10.2.7.3.1.8

Sprinklers shall be permitted to be installed on the centerline of a truss or bar joist or directly above a beam, provided that the truss chord or beam dimension is not more than 8 in. (200 mm) and the sprinkler deflector is located at least 6 in. (150 mm) above the structural member and where the sprinkler is positioned at a distance three times greater than the maximum dimension of the web members away from the web members.

10.2.7.3.1.9

The requirements of 10.2.7.3.1.4 shall not apply to sprinkler system piping less than 3 in. (80 mm) in diameter.

10.2.7.3.1.10

The requirements of 10.2.7.3.1.4 shall not apply to sprinklers positioned with respect to obstructions in accordance with 10.2.7.2.

10.2.7.3.1.11*

Sprinklers shall be permitted to be placed without regard to the blades of ceiling fans less than 60 in. (1.5 m) in diameter, provided the plan view of the fan is at least 50 percent open.

10.2.7.3.2 Suspended or Floor-Mounted Vertical Obstructions.

10.2.7.3.2.1

The distance from sprinklers to privacy curtains, freestanding partitions, room dividers, and similar obstructions in light hazard occupancies shall be in accordance with Table 10.2.7.3.2.1(a) or Table 10.2.7.3.2.1(b) and Figure 10.2.7.3.2.1.

Table 10.2.7.3.2.1(a) Suspended or Floor-Mounted Obstructions in Light Hazard Occupancies Only (SSU/SSP)

<u>Horizontal Distance (A) (in.)</u>	<u>Minimum Vertical Distance Below Deflector (B) (in.)</u>
6 or less	3 or more
9 or less	4 or more
12 or less	6 or more
15 or less	8 or more
18 or less	9½ or more
24 or less	12½ or more
30 or less	15½ or more
More than 30	18 or more

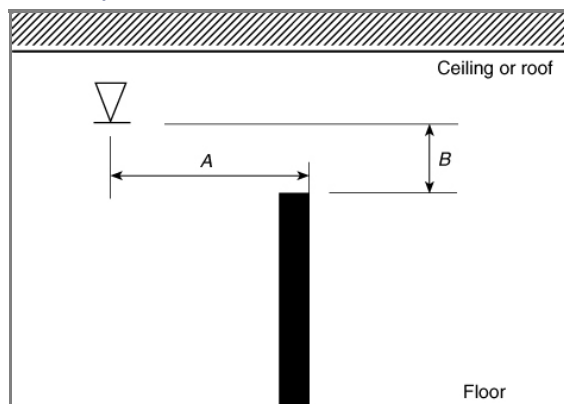
Note: For A and B, refer to Figure 10.2.7.3.2.1.

Table 10.2.7.3.2.1(b) Suspended or Floor-Mounted Obstructions in Light Hazard Occupancies Only (SSU/SSP)

<u>Horizontal Distance (A) (mm)</u>	<u>Minimum Vertical Distance Below Deflector (B) (mm)</u>
150 or less	75 or more
225 or less	100 or more
300 or less	150 or more
375 or less	200 or more
450 or less	240 or more
600 or less	315 or more
750 or less	390 or more
More than 750	450 or more

Note: For A and B, refer to Figure 10.2.7.3.2.1.

Figure 10.2.7.3.2.1 Suspended or Floor-Mounted Obstruction in Light Hazard Occupancies Only (SSU/SSP).



10.2.7.3.2.2*

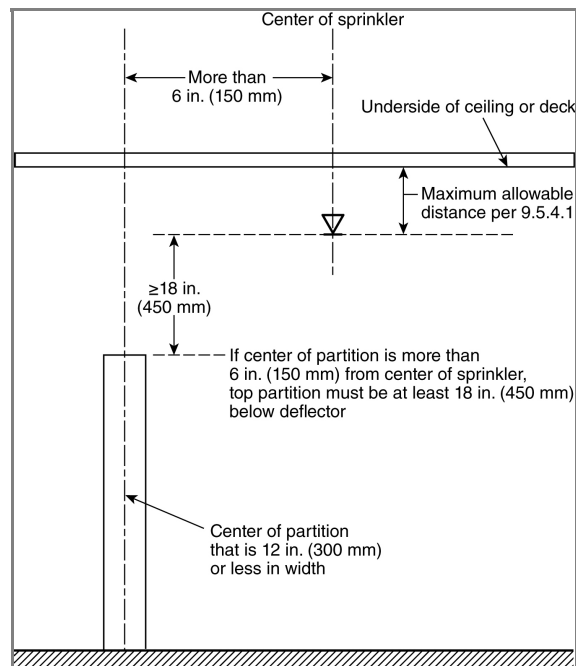
In light hazard occupancies, privacy curtains, as shown in Figure 10.2.7.3.2.1, shall not be considered obstructions where all of the following are met:

- (1) The curtains are supported by fabric mesh on ceiling track.
- (2) Openings in the mesh are equal to 70 percent or greater.
- (3) The mesh extends a minimum of 22 in. (550 mm) down from ceiling.

10.2.7.3.2.3

In ordinary hazard occupancies, where sprinklers are installed above freestanding partitions, room dividers, and similar obstructions, the distance from the sprinkler deflector to the top of the obstruction shall be 18 in. (450 mm) or greater per Figure 10.2.7.3.2.3.

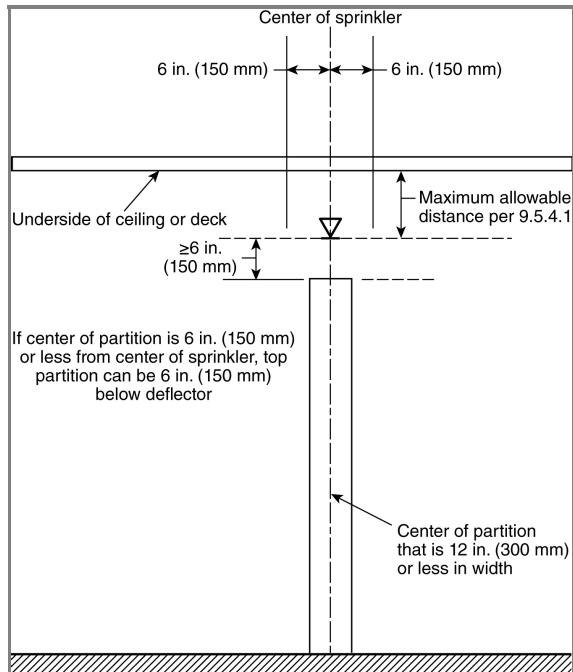
Figure 10.2.7.3.2.3 Location of Suspended or Floor-Mounted Obstruction in Ordinary Hazard Occupancies (Sprinkler Located to the Side) (SSU/SSP).



10.2.7.3.2.4

In ordinary hazard occupancies, where sprinklers are installed within 6 in. (150 mm) horizontally of the centerline of freestanding partitions, room dividers, and similar obstructions no greater than 12 in. (300 mm) in width, the distance from the sprinkler deflector to the top of the obstruction shall be permitted to be installed 6 in. (150 mm) or greater vertically per Figure 10.2.7.3.2.4.

Figure 10.2.7.3.2.4 Location of Suspended or Floor-Mounted Obstruction in Ordinary Hazard Occupancies (Sprinkler Located Directly Above) (SSU/SSP).

**Statement of Problem and Substantiation for Public Comment**

This is a resubmission of PI-195 that has been split into two proposals for clarity. This proposal only includes a title change to 10.2.7.3

Sections 10.2.7.2 and 10.2.7.3 have the same titles and can confuse the user when applying the beam rules and three times rule to obstructions. This change in title would make it clear that the beam rule applies to obstructions within 18 in. of the deflector that extends to the level of the deflector or above. The change to section 10.2.7.2 and 10.2.7.3 would make it clear that the three times rule applies to obstructions within 18 in. of the deflector that are completely below the level of the deflector.

Related Item

- PI-195

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Wed Mar 08 18:05:41 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1116-NFPA 13-2023](#)

Statement: 10.2.7.2 and 10.2.7.3 have the same titles and can confuse the user when applying the beam rules and three times rule to obstructions. This change in title makes it clear that the beam rule applies to obstructions within 18 in. of the deflector that extends to the level of the deflector or above. The change to 10.2.7.2 and 10.2.7.3 makes it clear that the three times rule applies to obstructions within 18 in. of the deflector that are completely below the level of the deflector.

**Public Comment No. 149-NFPA 13-2023 [Section No. 10.2.7.3.2.2]****10.2.7.3.2.2***

In light hazard occupancies, privacy curtains, as shown in Figure 10.2.7.3.2.1, shall not be considered obstructions where all of the following are met:

- (1) The curtains are supported by fabric mesh on ceiling track.
- (2) Openings in the mesh are equal to 70 percent or greater.
- (3) The mesh extends a minimum of ~~22 in. (550 mm)~~ 20 in (500 mm) down from ~~ceiling~~ the sprinkler deflector .

Statement of Problem and Substantiation for Public Comment

After reviewing the July 26, 2004 NIST report "The Effect of Privacy Curtains on Sprinkler Spray" and the resulting NFPA Report on Proposals A2006 13-235 Log #442 AUT-SSI, it is evident that the original intent was to provide an exception to the section on Suspended or Floor-Mounted Vertical Obstructions. However, the technical committee at that time erroneously qualified item (3). Based on the NIST testing and the original first revision, item (3) should state the mesh must extend 20 inches down from the sprinkler deflector, not 22 inches down from the ceiling.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 151-NFPA 13-2023 [Section No. 10.3.6.2.2.1]	
Public Comment No. 152-NFPA 13-2023 [Section No. A.10.2.7.3.2.2]	

Related Item

- PI-543

Submitter Information Verification

Submitter Full Name: Terry Victor
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submission Date: Fri May 26 14:42:43 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1032-NFPA 13-2023](#)
Statement: The required distance to the mesh of privacy curtains has been modified to a distance related to the deflector versus the ceiling to align with the 2004 NIST test, "The Effect of Privacy Curtains on Sprinkler Spray" outcome.

**Public Comment No. 151-NFPA 13-2023 [Section No. 10.3.6.2.2.1]****10.3.6.2.2.1***

In light hazard occupancies, privacy curtains, as shown in Figure 10.3.6.2.2, shall not be considered obstructions where all of the following are met:

- (1) The curtains are supported by fabric mesh on ceiling track.
- (2) Openings in the mesh are equal to 70 percent or greater.
- (3) The mesh extends a minimum of ~~22 in. (550 mm)~~ 20 in (500 mm) down from ~~ceiling~~, the sprinkler deflector

Statement of Problem and Substantiation for Public Comment

After reviewing the July 26, 2004 NIST report "The Effect of Privacy Curtains on Sprinkler Spray" and the resulting NFPA Report on Proposals A2006 13-235 Log #442 AUT-SSI, it is evident that the original intent was to provide an exception to the section on Suspended or Floor-Mounted Vertical Obstructions. However, the technical committee at that time erroneously qualified item (3). Based on the NIST testing and the original first revision, item (3) should state the mesh must extend 20 inches down from the sprinkler deflector, not 22 inches down from the ceiling.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 149-NFPA 13-2023 [Section No. 10.2.7.3.2.2]	
Public Comment No. 153-NFPA 13-2023 [Section No. A.10.3.6.2.2.1]	
<u>Related Item</u>	
• PI-569	

Submitter Information Verification

Submitter Full Name: Terry Victor
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 26 14:50:44 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1033-NFPA 13-2023](#)
Statement: The required distance to the mesh of privacy curtains has been modified to a distance related to the deflector versus the ceiling to align with the 2004 NIST test, "The Effect of Privacy Curtains on Sprinkler Spray" outcome.



Public Comment No. 85-NFPA 13-2023 [Section No. 11.2.4.1.2]

11.2.4.1.2 Obstructed Construction.

11.2.4.1.2.1 – ~~Obstructed Construction for Ceilings with Slopes Not Exceeding 1 in 12.~~

~~Where the slope of the ceiling does not exceed 1 in 12 under~~

~~Under obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:~~

~~Sprinklers shall be installed in each individual channel of obstructed construction~~

~~(1) Installed with the deflectors~~

~~located a minimum~~

~~within the horizontal planes of 1 in.~~

~~(25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck. Where the maximum depth of the noncombustible structural members is 18 in. (450 mm), sprinkler deflectors shall be permitted~~

~~to~~

~~be installed within a horizontal plane not exceeding~~

~~6 in. (~~

~~150 mm) vertically below the bottom of the noncombustible structural members. Where the maximum depth of the noncombustible structural members is greater than 18 in. (450 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (~~

~~25 mm to 150 mm)~~

~~vertically~~

~~below~~

~~the bottom of the~~

~~noncombustible structural members~~

~~only when the channels formed by obstructed construction are firestopped to the full depth of the structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).~~

- ~~• Sprinkler deflectors shall be installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances~~

~~11.2.4.1.2.2 – Obstructed Construction for Ceilings with Slopes Not Exceeding 2 in 12 with Solid Structural Members.~~

~~Where the slope of the ceiling is greater than 1 in 12 but does not exceed 2 in 12 under solid obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements: Sprinklers shall be installed in each individual channel of solid obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300~~

~~and a maximum distance of 22 in. (550 mm) below the ceiling/roof deck~~

~~7~~

- ~~• Where the maximum depth of the noncombustible solid structural members is 12 in. (300 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.~~
- ~~• Where the maximum depth of the noncombustible solid structural members is greater than 12 in. (300 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are firestopped to the full depth of the structural member with material equivalent~~

to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).

- Sprinkler deflectors shall be installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances.

11.2.4.1.2.3 – Obstructed Construction for Ceilings with Slopes Not Exceeding 4 in 12 with Solid Structural Members.

Where the slope of the ceiling is greater than 2 in 12 but does not exceed 4 in 12 under solid obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements: Sprinklers shall be installed in each individual channel of solid obstructed construction with the

(2) Installed with the deflectors at or above the bottom of noncombustible structural member to a maximum of 22 in. (550 mm) below the noncombustible ceiling/roof deck where the sprinkler is installed in conformance with 11.2.5.1.2

(3) Installed in each bay of combustible or noncombustible obstructed construction, with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling

/roof deck. Sprinkler deflectors shall be installed in

- Where the maximum depth of the noncombustible solid structural members is 12 in. (300 mm) and are installed perpendicular to the ceiling slope, sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are firestopped to the full depth of the structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 300 ft³ (8.5 m³).

(4) Installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances

-

11.2.4.1.2.4 – Obstructed Construction for Ceiling Slopes Exceeding 4 in 12 with Solid Structural Members.

Where the slope of the ceiling is greater than 4 in 12 under solid obstructed construction, sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.

11.2.4.1.2.5 – Obstructed Construction with Nonsolid Structural Members.

Where the slope of the ceiling is greater than 1 in 12 under nonsolid obstructed construction, sprinklers shall be installed in accordance with the rules for unobstructed construction with the sprinkler deflector above the bottom of the structural member.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
11-2-4-1-2.docx	This is what the section should look like when it is cleaned up.	

Statement of Problem and Substantiation for Public Comment

Based on the discussion at the First Draft Meeting and a re-evaluation of the information from the FPRF testing program, the Sloped Ceiling Task Group is recommending a different approach to incorporating the results of the testing into NFPA 13. This approach will be incorporated in the

following steps:

1. Return the positioning of extended coverage sprinklers with respect to obstructed construction to the 2022 edition rules
2. Allow the user, when protecting non-storage occupancies with a sloped ceiling, to select one of two options:
 - a. Locate the sprinkler in accordance with the old rules and take the 30% increase in design area
 - b. Locate the sprinkler in accordance with new rules in order to avoid the 30% increase. The sprinkler location rules for selecting this option will be in Chapter 19.
3. Allow the user to protect a storage occupancy with a sloped ceiling with the sprinkler location information in Chapter 20 rather than Chapter 10.

This approach has a less dramatic effect on the users of NFPA 13 and is still supported by the data of the test program. Ultimately, this approach is more likely to be more user friendly to the typical design professional and will provide options that were not permitted under the 2022 and previous editions of the standard while retaining the status quo for those familiar with the older rules and still wanting to select sprinkler protection using those parameters.

This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 137-NFPA 13-2023 [Section No. 10.2.6.1.2]	
<u>Related Item</u>	
• FR 1225	

Submitter Information Verification

Submitter Full Name: Kenneth Isman
Organization: University of Maryland
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 10 21:37:43 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1038-NFPA 13-2023](#)
Statement: Based on the discussion at the First Draft Meeting and a re-evaluation of the information from the FPRF testing program, the following changes are recommended:

1. Return the positioning of standard spray sprinklers with respect to obstructed construction to the 2022 edition rules with two changes; one change to concrete tee construction, which will be substantiated below and usage of the new term “blocking”

which was defined at the First Draft.

2. Allow the user, when protecting non-storage occupancies with a sloped ceiling, to select one of two options:

- a. Locate the sprinkler in accordance with the old rules and take the 30% increase in design area
- b. Locate the sprinkler in accordance with new rules in order to avoid the 30% increase. The sprinkler location rules for selecting this option will be in Chapter 19.

3. Allow the user to protect a storage occupancy with a sloped ceiling with the sprinkler location information in Chapter 20 rather than Chapter 10.

This approach has a less dramatic effect on the users of NFPA 13 and is still supported by the data of the test program. Ultimately, this approach is more likely to be more user friendly to the typical design professional and will provide options that were not permitted under the 2022 and previous editions of the standard while retaining the status quo for those familiar with the older rules and still wanting to select sprinkler protection using those parameters.

11.2.4.1.2 Obstructed Construction.

Under obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Installed with the deflectors within the horizontal planes of 1 in. to 6 in. (25 mm to 150 mm) below noncombustible structural members and a maximum distance of 22 in. (550 mm) below the ceiling/roof deck
- (2) Installed with the deflectors at or above the bottom of noncombustible structural member to a maximum of 22 in. (550 mm) below the noncombustible ceiling/roof deck where the sprinkler is installed in conformance with 11.2.5.1.2
- (3) Installed in each bay of combustible or noncombustible obstructed construction, with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling
- (4) Installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances

~~11.2.4.1.2.1 Obstructed Construction for Ceilings with Slopes Not Exceeding 1 in 12.~~

~~Where the slope of the ceiling does not exceed 1 in 12 under obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:~~

- ~~(1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.~~
- ~~(2) Where the maximum depth of the noncombustible structural members is 18 in. (450 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.~~
- ~~(3) Where the maximum depth of the noncombustible structural members is greater than 18 in. (450 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are firestopped to the full depth of the structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).~~
- ~~(4) Sprinkler deflectors shall be installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances~~

11.2.4.1.2.2 Obstructed Construction for Ceilings with Slopes Not Exceeding 2 in 12 with Solid Structural Members.

Where the slope of the ceiling is greater than 1 in 12 but does not exceed 2 in 12 under solid obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of solid obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.
- (2) Where the maximum depth of the noncombustible solid structural members is 12 in. (300 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.
- (3) Where the maximum depth of the noncombustible solid structural members is greater than 12 in. (300 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are firestopped to the full depth of the structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).
- (4) Sprinkler deflectors shall be installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances.

11.2.4.1.2.3 Obstructed Construction for Ceilings with Slopes Not Exceeding 4 in 12 with Solid Structural Members.

Where the slope of the ceiling is greater than 2 in 12 but does not exceed 4 in 12 under solid obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of solid obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.
- (2) Where the maximum depth of the noncombustible solid structural members is 12 in. (300 mm) and are installed perpendicular to the ceiling slope, sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are firestopped to the full depth of the structural member with material equivalent to

the structural member's construction so that individual channel volumes do not exceed 300 ft³ (8.5 m³).

(3) Sprinkler deflectors shall be installed in accordance with their listing where sprinklers are listed for use under other ceiling construction features or for different distances.

~~11.2.4.1.2.4 Obstructed Construction for Ceiling Slopes Exceeding 4 in 12 with Solid Structural Members.~~

Where the slope of the ceiling is greater than 4 in 12 under solid obstructed construction, sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.

~~11.2.4.1.2.5 Obstructed Construction with Nonsolid Structural Members.~~

Where the slope of the ceiling is greater than 1 in 12 under nonsolid obstructed construction, sprinklers shall be installed in accordance with the rules for unobstructed construction with the sprinkler deflector above the bottom of the structural member.

**Public Comment No. 190-NFPA 13-2023 [Section No. 12.1.8.8]****12.1.8.8** Deflector Orientation (Residential Sidewall Sprinklers).

Residential sidewall sprinklers, where installed under a sloped ceiling with a slope exceeding 2 in 12, shall be located in accordance with one of the following:

- (1) At the high point of the slope and positioned to discharge downward along the slope
- (2) Along slopes not exceeding 8 in 12 with the deflector installed parallel to the slope and positioned to discharge across the slope

Add Figure 12.1.8.8

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
SW_for_NFPA_13.jpg	Figure 12.1.8.8	

Statement of Problem and Substantiation for Public Comment

This comment simply adds a figure to help illustrate the new concept for positioning sidewall sprinklers under sloped ceilings found in Section 12.1.8.8. Similar comments have been submitted to both NFPA 13D and NFPA 13R

Related Item

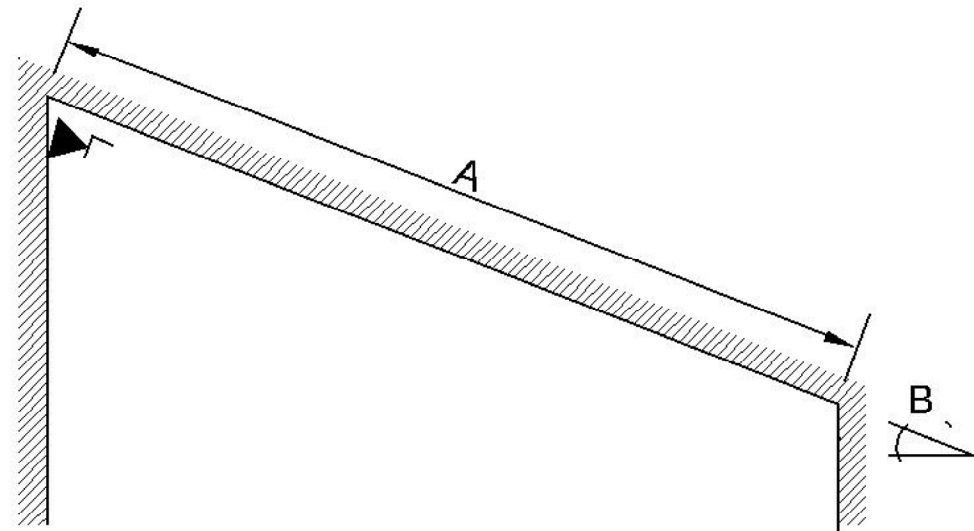
- FR-1054

Submitter Information Verification

Submitter Full Name: Roland Asp
Organization: National Fire Sprinkler Association
Affiliation: NFSA E&S Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 30 21:20:01 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1039-NFPA 13-2023
Statement: The new figures illustrate the concept for positioning sidewall sprinklers under sloped ceilings.

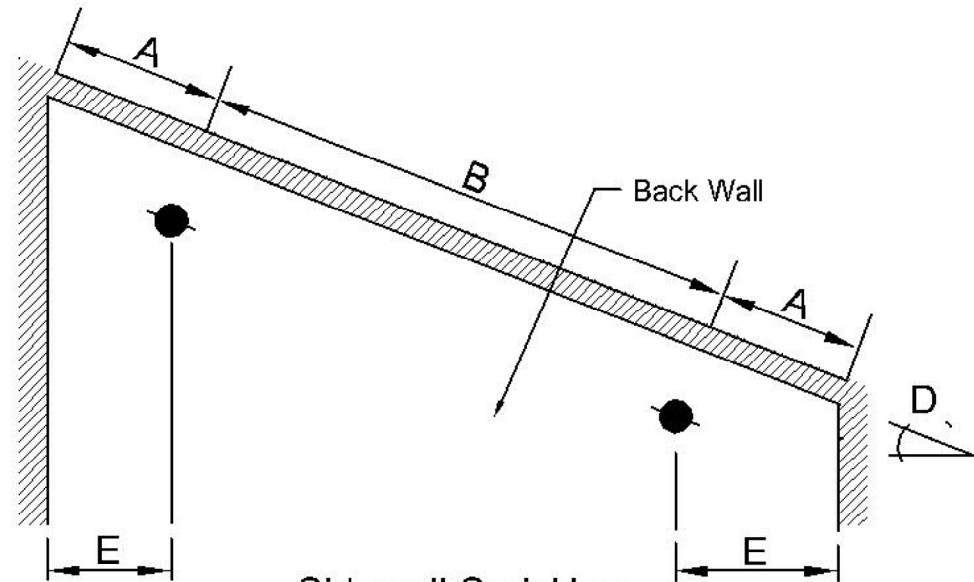


Sidewall Sprinklers

Elevation

A - Maximum: Up to the maximum sprinkler coverage area length for the coverage are being hydraulically calculated

B - Slope: 2 in 12 to 8 in 12



Sidewall Sprinklers

Elevation

A - Maximum: One half the maximum sprinkler coverage area length for the coverage are being hydraulically calculated

B - Maximum: The maximum sprinkler coverage area length for the coverage are being hydraulically calculated

Minimum: 8'-0"

C - Maximum: 3'-0"

D - Slope: 2 in 12 to 8 in 12

**Public Comment No. 224-NFPA 13-2023 [Section No. 13.2.4]**

[See attached TIA_13_22_6, Log No. 1680]

13.2.4 Occupancy and Hazard.**13.2.4.1**

Quick-response CMSA sprinklers designed to meet any applicable CMSA criteria in Chapters 20, 22, 24, 25, and 26 shall be permitted to protect light and ordinary hazard occupancies.

13.2.4.2

Standard-response CMSA sprinklers designed to meet any applicable CMSA criteria in Chapters 20, 22, 24, 25, and 26 shall be permitted to protect ordinary hazard occupancies.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
TIA_13_22_6.pdf	NFPA TIA 13-22-6 Log No. 1680	

Statement of Problem and Substantiation for Public Comment

NOTE: This public comment originates from Tentative Interim Amendment No. 13-22-6 (Log 1680) issued by the Standards Council on March 21, 2023 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation: The referenced chapters were not updated when the standard was reorganized for the 2019 edition. The chapters containing CMSA designs include chapters 20, 22, 24, 25, and 26. It is necessary to insert “applicable” so that CMDA and ESFR design criteria that is also contained in Chapters 20, 24, 25, and 26 is not applied when CMSA sprinklers are installed. As currently written, the requirements of 13.2.4.1 and 13.2.4.2 could lead to inferior fire protection design and installation.

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process. Updating the chapter references in section 13.2.4 was overlooked in the last revision cycle and the current references to Chapters 12 through 20 are not appropriate.

Related Item

- TIA 13_22_6, Log No. 1680

Submitter Information Verification

Submitter Full Name: TC on AUT-SSI

Organization: NFPA

Street Address:

City:

State:

Zip:

Submittal Date: Tue Jun 06 06:31:55 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: The technical committee still agrees with the action taken by the TIA.



Tentative Interim Amendment

NFPA® 13

Standard for the Installation of Sprinkler Systems

2022 Edition

Reference: 13.2.4.1 and 13.2.4.2

TIA 22-6

(SC 23-3-6 / TIA Log #1680)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2022 edition. The TIA was processed by the Technical Committee on Sprinkler System Installation Criteria and the Correlating Committee on Automatic Sprinkler Systems, and was issued by the Standards Council on March 21, 2023, with an effective date of April 10, 2023.

1. Revise paragraphs 13.2.4.1 and 13.2.4.2 to read as follows:

13.2.4 Occupancy and Hazard.

13.2.4.1 Quick-response CMSA sprinklers designed to meet any applicable CMSA criteria in ~~Chapter 12 through Chapter 20~~ Chapters 20, 22, 24, 25, and 26 shall be permitted to protect light and ordinary hazard occupancies.

13.2.4.2 Standard-response CMSA sprinklers designed to meet any applicable CMSA criteria in ~~Chapter 12 through Chapter 20~~ Chapters 20, 22, 24, 25, and 26 shall be permitted to protect ordinary hazard occupancies.

Issue Date: March 21, 2023

Effective Date: April 10, 2023

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo)

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NATIONAL FIRE PROTECTION ASSOCIATION



Public Comment No. 35-NFPA 13-2023 [Section No. 13.2.4]

13.2.4 Occupancy and Hazard.

13.2.4.1

Quick-response CMSA sprinklers designed to meet any criteria in ~~Chapter 12 through Chapter 20 shall~~ Chapter 20, 22, 24, 25, or 26 shall be permitted to protect light and ordinary hazard occupancies.

13.2.4.2

Standard-response CMSA sprinklers designed to meet any criteria in ~~Chapter 12 through Chapter 20 -~~ Chapter 20, 22, 24, 25, or 26 shall be permitted to protect ordinary hazard occupancies.

Statement of Problem and Substantiation for Public Comment

Chapter numbers incorrectly referenced the chapters from the 2016 edition. This change aligns with the recently passed TIA.

Related Item

- FR-1139

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Thu Mar 09 17:24:15 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: The technical committee still agrees with the action taken by the TIA.



Public Comment No. 51-NFPA 13-2023 [Section No. 13.2.6.4.2]

13.2.6.4.2

Where sprinklers are installed in every channel formed by solid obstructed construction with the deflectors above the bottom of the structural members, ~~the structural members shall be considered baffles in accordance with 13.2.6.4.1~~ sprinklers in adjacent channels shall be permitted to be placed less than 8 ft (2.4 m) on center. .

Statement of Problem and Substantiation for Public Comment

The current wording only says that the structural members are considered baffles, not that the minimum spacing can be smaller.

Related Item

- FR-1063

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Tue Mar 14 21:29:22 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1040-NFPA 13-2023

Statement: The sprinklers in adjacent channels can be closer than 8 feet on center due to the solid obstructed construction between them.



Public Comment No. 93-NFPA 13-2023 [Section No. 13.2.7.1.2]

13.2.7.1.~~2 Obstructed~~**2 Obstructed Construction.****13.2.7.1.2.**~~1 Obstructed Construction~~**1 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 1 in 12.**

Where the slope of the ceiling does not exceed 1 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

(1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 6 in. (150 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.

(2) Where the maximum depth of the noncombustible structural members, including concrete tees, is 18 in. (450 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.

(3) Where the maximum depth of the noncombustible structural members, including concrete tees, is greater than 18 in. (450 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the noncombustible structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).

(4) Where wood joists or composite wood joists are provided with blocking to the full depth of the joists with material equivalent to or less combustible than the web construction so that individual channel volumes do not exceed 400

ft³ft³ (11.3m³

m³), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the joists only when a maximum distance of 22 in. (550 mm) can be maintained between the sprinkler deflector and the ceiling/roof deck.

13.2.7.1.2.~~2 Obstructed Construction~~**2 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 2 in 12.**

Where the slope of the ceiling is greater than 1 in 12, but does not exceed 2 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

(1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 6 in. (150 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.

(2) Where the maximum depth of the noncombustible structural members, including concrete tees, is 12 in. (300 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.

(3) Where the maximum depth of the noncombustible structural members, including concrete tees, is greater than 12 in. (300 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be

permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the noncombustible structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).

(4) Where wood joists or composite wood joists are provided with blocking to the full depth of the joists with material equivalent to or less combustible than the web construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the joists only when a maximum distance of 22 in. (550 mm) can be maintained between the sprinkler deflector and the ceiling/roof deck.

13.2.7.1.2.

3 Obstructed Construction

3 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 4 in 12.

Where the slope of the ceiling is greater than 2 in 12, but does not exceed 4 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

(1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 6 in. (150 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.

(2) Where the maximum depth of the structural members, including concrete tees, is 12 in. (300 mm) and are installed perpendicular to the ceiling slope, sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the structural member with material equivalent to or less combustible than the structural member's construction so that individual channel volumes do not exceed 300 ft³ (8.5 m³).

13.2.7.1.2.4 Obstructed Construction Greater than 50% Open. Where the slope of the ceiling is greater than 1 in 12 under obstructed construction that is greater than 50% open, install sprinklers in accordance with the rules for unobstructed construction with the sprinkler deflector above the bottom of the structural member.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
13-2-7-1-2.docx	This is a clean version of the proposed sections	

Statement of Problem and Substantiation for Public Comment

The reality of the physics involved in the buoyancy of fire plumes is that construction that meets the definition of "obstructed construction" that is between 50% and 69% open will allow significant heat to travel up the slope and open sprinklers remote from the fire. The 50% lower limit may seem arbitrary, but concern exists for situations where the majority of the structural member is open and yet the member meets the definition of "obstructed". Care needs to be taken in the installation of such sprinklers and they cannot be installed using the same rules as situations where the construction is more solid and will impede the flow of hot gasses up the slope.

This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Item

- FR 1265

Submitter Information Verification

Submitter Full Name: Kenneth Isman

Organization: University of Maryland

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City:

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Zip:

Submittal Date: Thu May 11 12:02:20 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1117-NFPA 13-2023](#)

Statement: The reality of the physics involved in the buoyancy of fire plumes is that construction that meets the definition of “obstructed construction” that is between 50% and 69% open will allow significant heat to travel up the slope and open sprinklers remote from the fire. The 50% lower limit may seem arbitrary, but concern exists for situations where the majority of the structural member is open and yet the member meets the definition of “obstructed”. Care needs to be taken in the installation of such sprinklers and they cannot be installed using the same rules as situations where the construction is more solid and will impede the flow of hot gasses up the slope.

13.2.7.1.2 Obstructed Construction.

13.2.7.1.2.1 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 1 in 12.

Where the slope of the ceiling does not exceed 1 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 6 in. (150 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.
- (2) Where the maximum depth of the noncombustible structural members, including concrete tees, is 18 in. (450 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.
- (3) Where the maximum depth of the noncombustible structural members, including concrete tees, is greater than 18 in. (450 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the noncombustible structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).
- (4) Where wood joists or composite wood joists are provided with blocking to the full depth of the joists with material equivalent to or less combustible than the web construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the joists only when a maximum distance of 22 in. (550 mm) can be maintained between the sprinkler deflector and the ceiling/roof deck.

13.2.7.1.2.2 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 2 in 12.

Where the slope of the ceiling is greater than 1 in 12, but does not exceed 2 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 6 in. (150 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.

(2) Where the maximum depth of the noncombustible structural members, including concrete tees, is 12 in. (300 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members.

(3) Where the maximum depth of the noncombustible structural members, including concrete tees, is greater than 12 in. (300 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the noncombustible structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the noncombustible structural member with material equivalent to the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).

(4) Where wood joists or composite wood joists are provided with blocking to the full depth of the joists with material equivalent to or less combustible than the web construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the joists only when a maximum distance of 22 in. (550 mm) can be maintained between the sprinkler deflector and the ceiling/roof deck.

13.2.7.1.2.3 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 4 in 12.

Where the slope of the ceiling is greater than 2 in 12, but does not exceed 4 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

(1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located a minimum of 6 in. (150 mm) and a maximum of 12 in. (300 mm) below the ceiling/roof deck.

(2) Where the maximum depth of the structural members, including concrete tees, is 12 in. (300 mm) and are installed perpendicular to the ceiling slope, sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the structural member with material equivalent to or less combustible than the structural member's construction so that individual channel volumes do not exceed 300 ft³ (8.5 m³).

13.2.7.1.2.4 Obstructed Construction Greater than 50% Open. Where the slope of the ceiling is greater than 1 in 12 under obstructed construction that is greater than 50% open, install sprinklers in accordance with the rules for unobstructed construction with the sprinkler deflector above the bottom of the structural member.



Public Comment No. 86-NFPA 13-2023 [Section No. 14.2.4]

14.2.4 * –

~~ESFR sprinklers shall be permitted for use in buildings with unobstructed or obstructed construction.~~

14.2.4.1 –

~~In buildings with obstructed construction where the depths of the solid structural members (beams, stem, and so forth) exceed 12 in. (300 mm), ESFR sprinklers shall be installed in each channel formed by the solid structural members.~~

14.2.4.2 –

~~In buildings with obstructed construction where ESFR sprinklers are installed in accordance with 14.2.4.1, the minimum requirements for sprinkler spacing and area of coverage shall comply with the requirements of 14.2.8 and 14.2.9.~~

14.2.4.3 –

~~In buildings with obstructed construction where ESFR sprinklers are installed in accordance with 14.2.4.1 and the sprinklers are located entirely above the bottom plane of the adjacent solid structural members (beams, stem, and so forth), the requirements for minimum sprinkler spacing per 14.2.9.4 shall apply within each channel formed by the solid structural members, but the requirements for minimum sprinkler area spacing per 14.2.8.3 and minimum sprinkler linear spacing per 14.2.9.4 for sprinklers between channels formed by the solid structural members shall not apply.~~

14.2.4.4 –

~~Where sprinklers are not located entirely above the horizontal plane created by any adjacent solid structural member, the minimum sprinkler spacing and area of coverage shall comply with the requirements of 14.2.8 and 14.2.9.~~

Statement of Problem and Substantiation for Public Comment

The information is redundant to, and conflicts with, section 14.2.10 as modified in the First Draft. This was agreed to in FR 1126, but not carried out in the First Draft.

This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 144-NFPA 13-2023 [Section No. A.14.2.4]	
<u>Related Item</u>	
• FR 1126 • PI 488	

Submitter Information Verification

Submitter Full Name: Kenneth Isman

Organization: University of Maryland
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City:
State:
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Submittal Date: Wed May 10 22:08:14 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1200-NFPA 13-2023](#)
Statement: The information was removed as it is redundant to, and conflicts with, section 14.2.10 as modified in the First Draft. Since Section 14.2.4 was deleted, A.14.2.4 was moved to A.14.2.8.2.1.

**Public Comment No. 225-NFPA 13-2023 [Section No. 14.2.7]**

[See attached TIA 13_22_7, Log No. 1681]

14.2.7* Occupancy and Hazard.

ESFR sprinklers designed to meet any applicable ESFR criteria in Chapter 20 or Chapter 23 through Chapter 26 shall be permitted to protect light and ordinary hazard occupancies.

14.2.7.1

When ESFR sprinklers are used for the protection of light or ordinary hazard occupancies, 14.2.7.1.1 through 14.2.7.1.3 shall be permitted.

14.2.7.1.1

In light hazard occupancies, the protection area limitations of ESFR sprinklers shall be permitted to meet the protection area requirements of Table 10.2.4.2.1(a).

14.2.7.1.2

In light and ordinary hazard occupancies, the sprinkler spacing of ESFR sprinklers shall be permitted to meet the sprinkler spacing requirements of 10.2.5.

14.2.7.1.3

In light and ordinary hazard occupancies, the obstruction to the sprinkler discharge pattern of ESFR sprinklers shall be permitted to meet the obstruction discharge requirements of 10.2.7.2.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
TIA_13_22_7.pdf	NFPA TIA 13-22-7 Log No. 1681	

Statement of Problem and Substantiation for Public Comment

NOTE: This public comment originates from Tentative Interim Amendment No. 13-22-7 (Log 1681) issued by the Standards Council on March 21, 2023 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation: The referenced chapters were not complete when the standard was reorganized for the 2019 edition. The chapters containing ESFR designs include chapters 20, 23, 24, 25, and 26. It is necessary to insert "applicable" so that CMDA and CMSA design criteria that is also contained in Chapters 20, 24, 25, and 26 is not applied when ESFR sprinklers are installed.

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process. Updating the chapter references in section 14.2.7 was overlooked in the last revision cycle and the current references are not complete.

Related Item

- TIA 13_22_7, Log No. 1681

Submitter Information Verification

Submitter Full Name: TC on AUT-SSI

Organization: NFPA

Street Address:

City:

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Submittal Date: Tue Jun 06 06:44:05 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: The technical committee agrees with the action of the TIA.



Tentative Interim Amendment

NFPA[®] 13

Standard for the Installation of Sprinkler Systems

2022 Edition

Reference: 14.2.7

TIA 22-7

(SC 23-3-7 / TIA Log #1681)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2022 edition. The TIA was processed by the Technical Committee on Sprinkler System Installation Criteria and the Correlating Committee on Automatic Sprinkler Systems, and was issued by the Standards Council on March 21, 2023, with an effective date of April 10, 2023.

1. *Revise paragraph 14.2.7 to read as follows:*

14.2.7* Occupancy and Hazard. ESFR sprinklers designed to meet any applicable ESFR criteria in Chapter 20 or Chapter 23 ~~or through~~ Chapter 24 26 shall be permitted to protect light and ordinary hazard occupancies.

Issue Date: March 21, 2023

Effective Date: April 10, 2023

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo)

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NATIONAL FIRE PROTECTION ASSOCIATION



Public Comment No. 30-NFPA 13-2023 [Section No. 14.2.7]

14.2.7* Occupancy and Hazard.

ESFR sprinklers designed to meet any criteria in Chapter 23 or Chapter 24 shall be permitted to protect light and ordinary hazard occupancies.

14.2.7.1

—

14.2.7.1.1 —

~~When ESFR sprinklers are used for the protection of light or ordinary hazard occupancies, 14.2.7.1.1 through 14.2.7.1.3 shall be permitted.~~

~~In light~~

~~hazard occupancies, the protection area limitations of ESFR sprinklers shall be permitted to meet the protection area requirements of Table 10.2.4.2.1(a) .~~

14.2.7.1.2 —

~~In light~~

~~and ordinary hazard occupancies, the~~

~~sprinkler spacing of ESFR sprinklers shall be permitted to meet the sprinkler spacing requirements of 10.2.5 .~~

14.2.7.1.3 —

~~In light and ordinary hazard occupancies, the~~

~~obstruction to the sprinkler discharge pattern of ESFR sprinklers shall be permitted to meet the obstruction discharge requirements of 10.2.7.2 .~~

Statement of Problem and Substantiation for Public Comment

Allowing ESFR sprinklers to be spaced based on SSU/SSP rules in light and ordinary hazard occupancies is inappropriate for new installations. A newly constructed warehouse should not be permitted to be installed with 15 ft by 15 ft ESFR sprinklers protecting a light hazard shell space. This provides false hope to the property manager believing that they have ESFR protection and would require a complete demo and reinstall when the space is fit out for a tenant.

This proposal removes the allowance for spacing, but consideration should be given to relocate these requirements to the existing system chapter. This was the original proposal at the first draft stage.

Related Item

- PI-34

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:**State:****Zip:****Submittal Date:** Thu Mar 09 15:09:03 EST 2023**Committee:** AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR**Resolution:** SR-1043-NFPA 13-2023

Statement: When ESFR sprinklers are protecting light and ordinary hazard occupancies in new systems they are permitted to follow the obstruction requirements of standard spray sprinklers. When ESFR sprinklers are used to protect light and ordinary hazard occupancies in existing system modifications, the ESFR sprinklers are allowed to follow the area, spacing, and obstruction requirements for standard spray sprinklers. The existing system modification allowances for ESFR sprinklers have been relocated to chapter 30.

**Public Comment No. 166-NFPA 13-2023 [Section No. 14.2.7.1]****14.2.7.1**

When ESFR sprinklers are used for the protection of light or ordinary hazard occupancies, 14.2.7.1.1- through 14.2.7.1.3 - shall be permitted.

14.2.7.1.1

In light hazard occupancies, the protection area limitations of ESFR sprinklers shall be permitted to meet the protection area requirements of Table 10.2.4.2.1(a) .

14.2.7.1.2 –

In light and ordinary hazard occupancies, the sprinkler spacing of ESFR sprinklers shall be permitted to meet the sprinkler spacing requirements of 10.2.5 .

14.2.7.1.3 –

In light and ordinary hazard occupancies, the obstruction to the sprinkler discharge pattern of ESFR sprinklers shall be permitted to meet the obstruction discharge requirements of 10.2.7.2.

Statement of Problem and Substantiation for Public Comment

In accordance with section 14.2.7.1 of NFPA 13, ESFR sprinklers protecting light hazard occupancies are permitted to follow the protection area requirements of standard spray sprinklers (14.2.7.1.1), and when protecting light and hazard are permitted to follow the spacing requirements of standard spray sprinklers (14.2.7.1.2). This allowance was intended to be utilized for when an existing storage occupancy was remodeled as light or ordinary hazard occupancy and as such, Public Comment 165 seeks to relocate these sections to Chapter 30 (Existing System Modifications) as this is a more appropriate location for these allowances. Assuming Public comment 165 is accepted, this comment seeks to delete sections 14.2.7.1.2 and 14.2.7.1.2 from chapter 14. . It should be noted that Section 14.2.7.1.3 which allows the standard spray obstruction rules, to be applied to ESFR sprinklers protecting light and ordinary hazard occupancies will also be copied to chapter 30 by Public Comment 165 but as this section may also be appropriate for new installations (such as a storage occupancy with an adjacent ordinary hazard area), this section will not be deleted from Chapter 14.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 165-NFPA 13-2023 [New Section after 30.6.4]	Related
<u>Related Item</u>	
• PI-34	

Submitter Information Verification

Submitter Full Name: Roland Asp

Organization: National Fire Sprinkler Association

Affiliation: NFSA Engineering and Standards Committee

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Submittal Date: Mon May 29 20:46:43 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1043-NFPA 13-2023](#)

Statement: When ESFR sprinklers are protecting light and ordinary hazard occupancies in new systems they are permitted to follow the obstruction requirements of standard spray sprinklers. When ESFR sprinklers are used to protect light and ordinary hazard occupancies in existing system modifications, the ESFR sprinklers are allowed to follow the area, spacing, and obstruction requirements for standard spray sprinklers. The existing system modification allowances for ESFR sprinklers have been relocated to chapter 30.



Public Comment No. 92-NFPA 13-2023 [Section No. 14.2.10.1.2]

14.2.10.1.

~~2 Obstructed~~

2 Obstructed Construction.**14.2.10.1.2.**

~~1 Obstructed Construction~~

1 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 1 in 12.

Where the slope of the ceiling does not exceed 1 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located below the ceiling/roof deck in accordance with 14.2.10.1.1.
- (2) Where the maximum depth of the structural members, including concrete tees, is 18 in. (450 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members.
- (3) Where the maximum depth of the structural members, including concrete tees, is greater than 18 in. (450 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the structural member with material equivalent to or less combustible than the structural member's construction so that individual channel volumes do not exceed 400 ft^3 (11.3 m^3).

14.2.10.1.2.

~~2 Obstructed Construction~~

2 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 2 in 12.

Where the slope of the ceiling is greater than 1 in 12, but does not exceed 2 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located below the ceiling/roof deck in accordance with 14.2.10.1.1.
- (2) Where the maximum depth of the structural members, including concrete tees, is 12 in. (300 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members.
- (3) Where the maximum depth of the structural members, including concrete tees, is greater than 12 in. (300 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the structural member with material equivalent to or less combustible than the structural member's construction so that individual channel volumes do not exceed 400 ft^3 (11.3 m^3).

14.2.10.1.2.

~~3 Obstructed Construction~~

3 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 4 in 12.

Where the slope of the ceiling is greater than 2 in 12, but does not exceed 4 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors

located below the ceiling/roof deck in accordance with 14.2.10.1.1 .

(2) Where the maximum depth of the structural members, including concrete tees, is 12 in. (300 mm) and are installed perpendicular to the ceiling slope, sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the structural member with material equivalent to or less combustible than the structural member's construction so that individual channel volumes do not exceed 300 ft³ (8.5 m³).

14.2.10.1.2.4 Obstructed Construction Greater than 50% Open. Where the slope of the ceiling is greater than 1 in 12 under obstructed construction that is greater than 50% open, install sprinklers in accordance with the rules for unobstructed construction with the sprinkler deflector above the bottom of the structural member.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
14-2-10-1-2.docx	Clean version of the proposed sections	

Statement of Problem and Substantiation for Public Comment

The reality of the physics involved in the buoyancy of fire plumes is that construction that meets the definition of "obstructed construction" that is between 50% and 69% open will allow significant heat to travel up the slope and open sprinklers remote from the fire. The 50% lower limit may seem arbitrary, but concern exists for situations where the majority of the structural member is open and yet the member meets the definition of "obstructed". Care needs to be taken in the installation of such sprinklers and they cannot be installed using the same rules as situations where the construction is more solid and will impede the flow of hot gasses up the slope.

This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Item

- FR 1126

Submitter Information Verification

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Submittal Date: Thu May 11 11:55:27 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1118-NFPA 13-2023

Statement: The reality of the physics involved in the buoyancy of fire plumes is that construction that meets the definition of “obstructed construction” that is between 50% and 69% open will allow significant heat to travel up the slope and open sprinklers remote from the fire. The 50% lower limit may seem arbitrary, but concern exists for situations where the majority of the structural member is open and yet the member meets the definition of “obstructed”. Care needs to be taken in the installation of such sprinklers and they cannot be installed using the same rules as situations where the construction is more solid and will impede the flow of hot gasses up the slope.



**Public Comment No. 92-NFPA 13-2023 [Section
No. 14.2.10.1.2]**

14.2.10.1.2-~~Obstructed-2~~ Obstructed Construction.

**14.2.10.1.2.1-~~Obstructed Construction-1~~ Obstructed Construction Less than
or Equal to 50% Open for Ceilings with Slopes Not Exceeding 1 in 12.**

Where the slope of the ceiling does not exceed 1 in 12, the
sprinkler deflector shall be located in accordance with one of the
following arrangements:

- (1) Sprinklers shall be installed in each individual channel of
obstructed construction with the deflectors located below the
ceiling/roof deck in accordance with 14.2.10.1.1.
- (2) Where the maximum depth of the structural members, including
concrete tees, is 18 in. (450 mm), sprinkler deflectors shall be
permitted to be installed within a horizontal plane not exceeding 6
in. (150 mm) vertically below the bottom of the structural
members.
- (3) Where the maximum depth of the structural members, including
concrete tees, is greater than 18 in. (450 mm) but does not exceed
24 in. (600 mm), sprinkler deflectors shall be permitted to be
installed within a horizontal plane not exceeding 6 in. (150 mm)
vertically below the bottom of the structural members only when
the channels formed by obstructed construction are provided with
blocking to the full depth of the structural member with material
equivalent to or less combustible than the structural member's
construction so that individual channel volumes do not exceed 400
ft³ (11.3 m³).

**14.2.10.1.2.2-~~Obstructed Construction-2~~ Obstructed Construction Less than
or Equal to 50% Open for Ceilings with Slopes Not Exceeding 2 in 12.**

Where the slope of the ceiling is greater than 1 in 12, but does not
exceed 2 in 12, the sprinkler deflector shall be located in
accordance with one of the following arrangements:

- (1) Sprinklers shall be installed in each individual channel of
obstructed construction with the deflectors located below the
ceiling/roof deck in accordance with 14.2.10.1.1.
- (2) Where the maximum depth of the structural members, including
concrete tees, is 12 in. (300 mm), sprinkler deflectors shall be
permitted to be installed within a horizontal plane not exceeding 6
in. (150 mm) vertically below the bottom of the structural
members.

(3) Where the maximum depth of the structural members, including concrete tees, is greater than 12 in. (300 mm) but does not exceed 24 in. (600 mm), sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the structural member with material equivalent to or less combustible than the structural member's construction so that individual channel volumes do not exceed 400 ft³ (11.3 m³).

14.2.10.1.2.

3 Obstructed Construction

3 Obstructed Construction Less than or Equal to 50% Open for Ceilings with Slopes Not Exceeding 4 in 12.

Where the slope of the ceiling is greater than 2 in 12, but does not exceed 4 in 12, the sprinkler deflector shall be located in accordance with one of the following arrangements:

(1) Sprinklers shall be installed in each individual channel of obstructed construction with the deflectors located below the ceiling/roof deck in accordance with 14.2.10.1.1.

(2) Where the maximum depth of the structural members, including concrete tees, is 12 in. (300 mm) and are installed perpendicular to the ceiling slope, sprinkler deflectors shall be permitted to be installed within a horizontal plane not exceeding 6 in. (150 mm) vertically below the bottom of the structural members only when the channels formed by obstructed construction are provided with blocking to the full depth of the structural member with material equivalent to or less combustible than the structural member's construction so that individual channel volumes do not exceed 300 ft³ (8.5 m³).

14.2.10.1.2.4 Obstructed Construction Greater than 50% Open. Where the slope of the ceiling is greater than 1 in 12 under obstructed construction that is greater than 50% open, install sprinklers in accordance with the rules for unobstructed construction with the sprinkler deflector above the bottom of the structural member.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
14-2-10-1-2.docx	Clean version of the proposed sections	✓

Statement of Problem and Substantiation for Public Comment

The reality of the physics involved in the buoyancy of fire plumes is that construction that meets the definition of “obstructed construction” that is between 50% and 69% open will allow significant heat to travel up the slope and open sprinklers remote from the fire. The 50% lower limit may seem arbitrary, but concern exists for situations where the majority of the structural member is open and yet the member meets the definition of “obstructed”. Care needs to be taken in the installation of such sprinklers and they cannot be installed using the same rules as situations where the construction is more solid and will impede the flow of hot gasses up the slope. This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Item

- FR 1126

Submitter Information Verification

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Organization: University of Maryland

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State:

Zip:

Submittal Date: Thu May 11 11:55:27 EDT 2023

Committee: AUT-SSI

Copyright Assignment

I, Kenneth Isman, hereby irrevocably grant and assign to the National Fire Protection Association (NFPA) all and full rights in copyright in this Public Comment (including both the Proposed Change and the Statement of Problem and Substantiation). I understand and intend that I acquire no rights, including rights as a joint author, in any publication of the NFPA in which this Public Comment in this or another similar or derivative form is used. I hereby warrant that I am the author of this Public Comment and that I have full power and authority to enter into this copyright assignment.



By checking this box I affirm that I am Kenneth Isman, and I agree to be legally bound by the above Copyright Assignment and the terms and conditions contained therein. I understand and intend that, by checking this box, I am creating an electronic signature that will, upon my submission of this form, have the same legal force and effect as a handwritten signature



Public Comment No. 197-NFPA 13-2023 [Section No. 14.2.11.2.2]

14.2.11.2.2

The requirements of 14.2.11.2.1 shall not apply where one of the following conditions is satisfied:

- (1) Sprinklers are spaced on opposite sides of an ~~an~~ obstruction less than 24 in. (600 mm) wide, provided the distance from the centerline of the obstruction to the sprinklers does not exceed one-half the allowable distance between sprinklers.
- (2) Supplemental sprinklers have been installed under the obstruction.

Statement of Problem and Substantiation for Public Comment

Grammatical correction to delete "an an"

Related Item

- FR-1068

Submitter Information Verification

Submitter Full Name: Weston Baker

Organization: FM Global

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 07:11:10 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Accepted

Resolution: SR-1046-NFPA 13-2023

Statement: Grammatical correction to delete the additional "an."



Public Comment No. 198-NFPA 13-2023 [New Section after 14.2.11.3.5]

14.2.11.3.6 Spacing of Supplemental Sprinklers

14.2.11.3.6.1* When supplemental sprinklers are required, in addition to the requirements of 9.5.5.3.3 the spacing of supplemental sprinklers under obstructions shall be in accordance with one of the following:

- (1) Where supplemental sprinklers are required below non-flat or non-solid obstructions, the sprinklers shall be located no more than 2 ft (0.6 m) horizontally from the edges of the obstruction and be installed using linear and area spacing that does not exceed 4 ft (1.2 m) and 16 ft² (1.5 m²), respectively.
- (2) Where supplemental sprinklers are required below flat, solid obstructions not exceeding 2 ft (0.6 m) in width, the maximum allowable linear spacing for the sprinklers shall be 8 ft (2.4 m).
- (3) Where a flat, solid continuous horizontal barrier having the same footprint of the obstruction is installed below an obstruction not exceeding 2 ft (0.6 m) in width, the maximum allowable linear spacing for the sprinklers shall be 8 ft (2.4 m).
- (4) Where supplemental sprinklers are required below flat, solid obstructions greater than 2 ft (0.6 m), but not exceeding 10 ft (3.0 m) in width, the maximum allowable linear spacing for the sprinklers shall be 10 ft (3.0 m).
- (5) Where a flat, solid continuous horizontal barrier having the same footprint of the obstruction is installed below an obstruction greater than 2 ft (0.6 m), but not exceeding 10 ft (3.0 m) in width, the maximum allowable linear spacing for the sprinklers shall be 10 ft (3.0 m).
- (6) Where supplemental sprinklers are required below flat, solid obstructions greater than 10 ft (3.0 m) in width, the supplemental sprinkler spacing shall be in accordance with the sprinkler's spacing requirements for when the sprinkler is installed under unobstructed construction.
- (7) Where a flat, solid continuous horizontal barrier having the same footprint of the obstruction is installed below an obstruction greater than 10 ft (3.0 m) in width, the supplemental sprinkler spacing shall be in accordance with the sprinkler's spacing requirements for when the sprinkler is installed under unobstructed construction.

Statement of Problem and Substantiation for Public Comment

The spacing requirements for supplemental sprinklers was provided within Section 9.5.5.3.4.2 at the first draft meeting, which applied to all occupancy hazards. For the second draft, the guidelines that were previously in Section 9.5.5.3.4.2 are being relocated into a new section of Chapter 14 so that the guidelines previously provided in Section 9.5.5.3.4.2 only apply to CMSA and ESFR sprinklers protecting storage occupancies.

Related Item

- FR-1068

Submitter Information Verification

Submitter Full Name: Weston Baker

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Street Address:

City:**State:****Zip:****Submittal Date:** Wed May 31 07:19:14 EDT 2023**Committee:** AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR**Resolution:** SR-1047-NFPA 13-2023

Statement: The spacing requirements for supplemental sprinklers were provided within Section 9.5.5.3.4.2 at the first draft meeting, which applied to all occupancy hazards. For the second draft, the guidelines that were previously in Section 9.5.5.3.4.2 are being relocated into a new section of Chapter 14 so that the guidelines previously provided in Section 9.5.5.3.4.2 only apply to CMSA and ESFR sprinklers protecting storage occupancies. For CMSA sprinklers chapter 13 points you to these requirements in chapter 14.

This language is being added to help clarify that water shields are not required for the supplemental sprinklers when installed in accordance with Section 14.2.11.3.6.2.

Because the installation of supplemental sprinklers could be installed on spacing that is less than that required for ceiling sprinklers, Annex language is being added to help clarify for an AHJ that having this closer spacing is acceptable as well as explaining the reason why this is the case.



Public Comment No. 202-NFPA 13-2023 [New Section after 14.2.11.3.5]

14.2.11.3.6.2

When supplemental sprinklers are installed in accordance with 14.2.11.3.6.1, supplemental sprinklers shall not be required to be equipped with water shields.

Statement of Problem and Substantiation for Public Comment

This language is being added to help clarify that water shields are not required for the supplemental sprinklers when installed in accordance with Section 14.2.11.3.6.2.

Related Item

- FR-1068

Submitter Information Verification

Submitter Full Name: Weston Baker

Organization: FM Global

Street Address:

City:

State:

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Submittal Date: Wed May 31 07:36:04 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1047-NFPA 13-2023

Statement: The spacing requirements for supplemental sprinklers were provided within Section 9.5.5.3.4.2 at the first draft meeting, which applied to all occupancy hazards. For the second draft, the guidelines that were previously in Section 9.5.5.3.4.2 are being relocated into a new section of Chapter 14 so that the guidelines previously provided in Section 9.5.5.3.4.2 only apply to CMSA and ESFR sprinklers protecting storage occupancies. For CMSA sprinklers chapter 13 points you to these requirements in chapter 14.

This language is being added to help clarify that water shields are not required for the supplemental sprinklers when installed in accordance with Section 14.2.11.3.6.2.

Because the installation of supplemental sprinklers could be installed on spacing that is less than that required for ceiling sprinklers, Annex language is being added to help clarify for an AHJ that having this closer spacing is acceptable as well as explaining the reason why this is the case.



Public Comment No. 134-NFPA 13-2023 [Section No. 16.1.3.1]

16.1.3.1

The use of reconditioned valves and ~~devices as replacement equipment in existing systems shall be permitted~~ devices shall not be permitted in new systems .

Statement of Problem and Substantiation for Public Comment

Section 30.2.1 allows the use of reconditioned equipment and devices in an existing system. The current language of 16.1.3.1 does not prohibit the use of reconditioned equipment and devices in new systems. This proposed language aligns the requirements between new and existing systems.

Related Item

- PI 501

Submitter Information Verification

Submitter Full Name: Russell Leavitt

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Submittal Date: Thu May 25 18:39:50 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1048-NFPA 13-2023

Statement: Reconditioned valves and devices are only permitted in existing systems and is covered in chapter 30. This revision makes it clear that reconditioned valves and devices are not permitted in new systems.



Public Comment No. 143-NFPA 13-2023 [Section No. 16.2.7.7.1]

16.2.7.7.1*

The list shall include the following:

- (1) Sprinkler Identification Number (SIN) if equipped; or the manufacturer, model, K-factor, deflector type, thermal sensitivity, and pressure rating
- (2) Manufacturer's sprinkler wrench model number for each sprinkler type
- (3) General description
- (4) Quantity of each type installed in the property
- (5) Quantity of each type to be contained in the cabinet
- (6) Issue or revision date of the list

Statement of Problem and Substantiation for Public Comment

Having the number and type of sprinklers installed in the property will aid when it comes time to test sprinklers as required by NFPA 25, rather than having to perform a survey to determine this information.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 145-NFPA 13-2023 [Section No. A.16.2.7.7.1]	
Public Comment No. 146-NFPA 13-2023 [Section No. A.16.2.7.7.1]	

Related Item

- FR-1078

Submitter Information Verification

Submitter Full Name: Terry Victor

Organization: Johnson Controls

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 26 14:00:40 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1049-NFPA 13-2023](#)

Statement: Having the number and type of sprinklers installed in the property will aid when it comes time to test sprinklers as required by NFPA 25, rather than having to perform a survey to determine this information. In addition some editorial corrections were made and the figure in the annex was updated to add a new column.



Public Comment No. 221-NFPA 13-2023 [Section No. 16.3]

16.3 Piping Installation.

16.3.1 General.

16.3.1.1 Black and Galvanized Steel Pipe.

~~16.3.~~

~~16.3.1.1.1~~ —

~~Black and galvanized steel pipe shall be in accordance with~~

~~2~~

~~, 16.3.3, or 16.3.4 .~~

~~16.3.1.1.2~~

Black and galvanized pipe sizes shall be no less than 1 in. (25 mm) nominal.

16.3.1.2 Copper Tube.

~~16.3.1.2.1~~ —

~~Copper tube shall be in accordance with 16.3.5 .~~

~~16.3.1.2.2~~

Copper tube shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.1.3 Nonmetallic Pipe.

~~16.3.1.3.1~~ —

~~Nonmetallic pipe shall be in accordance with 16.3.9 .~~

~~16.3.1.3.2~~

Nonmetallic pipe shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.1.4 Brass Pipe.

~~16.3.1.4.1~~ —

~~Brass pipe shall be in accordance with 16.3.6 .~~

~~16.3.1.4.2~~

Brass pipe shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.1.5 Stainless Steel Pipe.

~~16.3.1.5.1~~ —

~~Stainless steel pipe shall be in accordance with 16.3.7 .~~

~~16.3.1.5.2~~

Stainless steel pipe shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.2* Steel Pipe — Welded or Roll-Grooved.

When steel pipe referenced in Table 7.3.1.1 is used and joined by welding as referenced in 7.5.2 or by roll-grooved pipe and fittings as referenced in 7.5.3, the minimum nominal wall thickness for pressures up to 300 psi (21 bar) shall be in accordance with Schedule 10 for pipe sizes up to 5 in. (125 mm), 0.134 in. (3.4 mm) for 6 in. (150 mm) pipe, 0.188 in. (4.8 mm) for 8 in. and 10 in. (200 mm and 250 mm) pipe, and 0.330 in. (8.4 mm) for 12 in. (300 mm) pipe.

16.3.3 Steel Pipe — Threaded.

When steel pipe referenced in Table 7.3.1.1 is joined by threaded fittings referenced in 7.5.1 or by fittings used with pipe having cut grooves, the minimum wall thickness shall be in accordance with Schedule 30 pipe [in sizes 8 in. (200 mm) and larger] or Schedule 40 pipe [in sizes less than 8 in. (200 mm)] for pressures up to 300 psi (21 bar).

16.3.4 Specially Listed Steel Pipe.

Pressure limitations and wall thickness for steel pipe specially listed in accordance with 7.3.3 shall be permitted to be in accordance with the pipe listing requirements.

16.3.5* Copper Tube.

Copper tube as specified in the standards listed in Table 7.3.1.1 shall have a wall thickness of Type K, Type L, or Type M where used in sprinkler systems.

16.3.6 Brass Pipe.

Brass pipe specified in Table 7.3.1.1 shall be permitted in the standard weight in sizes up to 6 in. (150 mm) for pressures up to 175 psig (12 bar) and in the extra strong weight in sizes up to 8 in. (200 mm) for pressures up to 300 psig (21 bar).

16.3.7 Stainless Steel Pipe.

Stainless steel pipe as referenced in the standards listed in Table 7.3.1.1 shall be in accordance with Schedules 10S or 40S pipe.

16.3.8 Metallic Pipe and Tube Bending.**16.3.8.1**

Bending of Schedule 10 steel pipe, or any steel pipe of wall thickness equal to or greater than Schedule 10 and Types K and L copper tube, shall be permitted when bends are made with no kinks, ripples, distortions, or reductions in diameter or any noticeable deviations from round.

16.3.8.2

For Schedule 40 steel pipe and Types K and L copper tubing, the minimum radius of a bend shall be six pipe diameters for pipe sizes 2 in. (50 mm) and smaller and five pipe diameters for pipe sizes 2½ in. (65 mm) and larger.

16.3.8.3

For all other steel pipe, the minimum radius of a bend shall be 12 pipe diameters for all sizes.

16.3.8.4

Bending of listed pipe and tubing shall be permitted as allowed by the listing.

16.3.9 Nonmetallic Pipe and Tubing.**16.3.9.1**

Listed nonmetallic pipe shall be installed in accordance with its listing limitations, including installation instructions.

16.3.9.2

When nonmetallic pipe is used in systems utilizing steel piping internally coated with corrosion inhibitors, the steel pipe coating shall be listed for compatibility with the nonmetallic pipe materials.

16.3.9.3

When nonmetallic pipe is used in systems utilizing steel pipe that is not internally coated with corrosion inhibitors, no additional evaluations shall be required.

16.3.9.4*

When nonmetallic pipe is used in systems utilizing steel pipe, cutting oils and lubricants used for fabrication of the steel piping shall be compatible with the nonmetallic pipe materials in accordance with 16.1.2.

16.3.9.5

Fire-stopping materials intended for use on nonmetallic piping penetrations shall be compatible with the nonmetallic pipe materials in accordance with 16.1.2.

16.3.9.6

Nonmetallic pipe listed for light hazard occupancies shall be permitted to be installed in ordinary hazard rooms of otherwise light hazard occupancies where the room does not exceed 400 ft² (37 m²).

16.3.9.6.1

Nonmetallic pipe installed in accordance with 16.3.9.6 shall be permitted to be installed exposed, in accordance with the listing.

16.3.9.6.2

Where nonmetallic pipe installed in accordance with 16.3.9.6 supplies sprinklers in a private garage within a dwelling unit, and the garage does not exceed 1000 ft² (93 m²) in area, the nonmetallic piping shall be permitted to be protected from the garage compartment by not less than the same wall or ceiling sheathing that is required by the applicable building code.

16.3.9.7

Bending of listed nonmetallic pipe or tubing shall be permitted as allowed by the listing.

16.3.10 Listed Metallic Pipe and Tubing.**16.3.10.1**

Pipe or tube listed only for light hazard occupancies shall be permitted to be installed in ordinary hazard rooms of otherwise light hazard occupancies where the room does not exceed 400 ft² (37 m²).

16.3.10.1.1

Pipe or tube installed in accordance with 16.3.10.1 shall be permitted to be installed exposed, in accordance with the listing.

16.3.10.2

Bending of listed pipe and tubing shall be permitted as allowed by the listing.

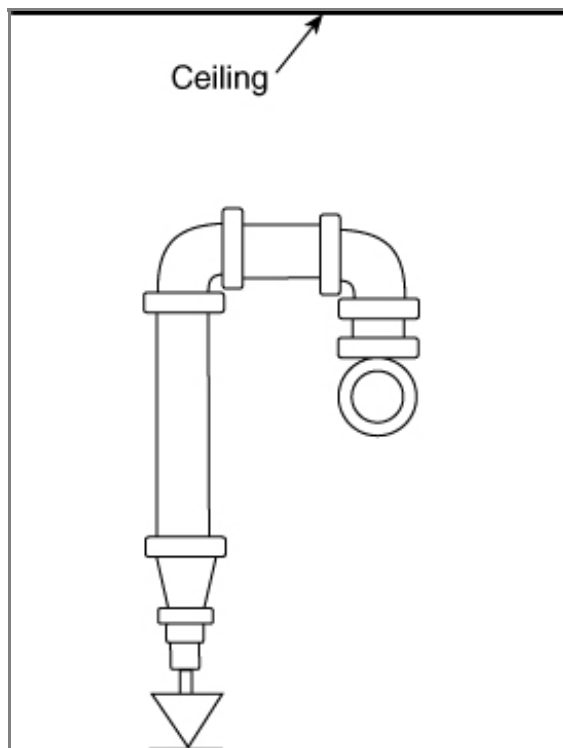
16.3.11 Return Bends.**16.3.11.1**

Unless the requirements of 16.3.11.3, 16.3.11.4, or 16.3.11.5 are met, return bends shall be used where pendent sprinklers are supplied from a raw water source, a mill pond, or open-top reservoirs.

16.3.11.2

Return bends shall be connected to the top of branch lines in order to avoid accumulation of sediment in the drop nipples in accordance with Figure 16.3.11.2.

Figure 16.3.11.2 Return Bend Arrangement.

**16.3.11.3**

Return bends shall not be required for deluge systems.

16.3.11.4

Return bends shall not be required where dry pendent sprinklers are used.

16.3.11.5

Return bends shall not be required for wet pipe systems where sprinklers with a nominal K-factor of K-11.2 (160) or larger are used.

16.3.12 Piping to Sprinklers Below Ceilings.**16.3.12.1***

In new installations expected to supply sprinklers below a ceiling utilizing black or galvanized steel piping, minimum 1 in. (25 mm) outlets shall be provided.

16.3.12.2*

In new installations, it shall be permitted to provide minimum 1 in. (25 mm) outlets with hexagonal bushings to accommodate sprinklers attached directly to branch line fittings to allow for future system modifications.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
PI_221.docx	Reformatted	

Statement of Problem and Substantiation for Public Comment

This removes the pointers and includes the requirement in the applicable section (see attached word doc). The way it currently reads is confusing as if there is a difference between the pipe types and is not friendly to the end user.

Related Item

- FR-1070

Submitter Information Verification

Submitter Full Name: Joshua McDonald

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 16:52:24 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1057-NFPA 13-2023

Statement: Section 16.3.1 through 16.3.7 have been reorganized removing pointers, combining the requirements for pipe types for ease of use. A new general requirement was added clarifying that the minimum pipe sizes are in reference to sprinkler pipe and not devices and appurtenances such as valve trim.

CC note 29-NFPA 13-2023 [Section No. 16.3.1]

Review FR-1074 modifies sections to 16.3.1, which includes adding minimum pipe sizes to Chapter 16. The statement from the public input was "Minimum pipe sizes are discussed in the plans and calculations chapter, however it would be beneficial to the user of the standard to have the information upfront in the installation of piping, valves and appurtenances chapter." Since minimum pipe sizes are only specified in the Plans and Calculation chapter for actual sprinkler line pipe sizes, the new requirements needs further coordination with other Chapter 16 sections since they technically now refer to ALL pipe, not necessarily pipe with sprinklers. This would also apply to such things as air maintenance devices, etc. that are allowed smaller galvanized pipe sizes.

16.3 Piping Installation.

16.3.1 General.

16.3.2* Steel Pipe – Welded or Roll-Grooved.

16.3.2.1 Black and galvanized pipes sizes shall be no less than 1 in. (25 mm) nominal.

16.3.2.2 When steel pipe referenced in **Table 7.3.1.1** is used and joined by welding as referenced in **7.5.2** or by roll-grooved pipe and fittings as referenced in **7.5.3**, the minimum nominal wall thickness for pressures up to 300 psi (21 bar) shall be in accordance with Schedule 10 for pipe sizes up to 5 in. (125 mm), 0.134 in. (3.4 mm) for 6 in. (150 mm) pipe, 0.188 in. (4.8 mm) for 8 in. and 10 in. (200 mm and 250 mm) pipe, and 0.330 in. (8.4 mm) for 12 in. (300 mm) pipe.

16.3.3 Steel Pipe – Threaded.

16.3.3.1 Black and galvanized pipes sizes shall be no less than 1 in. (25 mm) nominal.

16.3.3.2 When steel pipe referenced in **Table 7.3.1.1** is joined by threaded fittings referenced in **7.5.1** or by fittings used with pipe having cut grooves, the minimum wall thickness shall be in accordance with Schedule 30 pipe [in sizes 8 in. (200 mm) and larger] or Schedule 40 pipe [in sizes less than 8 in. (200 mm)] for pressures up to 300 psi (21 bar).

16.3.4 Specially Listed Steel Pipe.

Pressure limitations and wall thickness for steel pipe specially listed in accordance with **7.3.3** shall be permitted to be in accordance with the pipe listing requirements.

16.3.5* Copper Tube.

16.3.5.1 Copper tube shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.5.2 Copper tube as specified in the standards listed in **Table 7.3.1.1** shall have a wall thickness of Type K, Type L, or Type M where used in sprinkler systems.

16.3.6 Brass Pipe.

16.3.6.1 Copper tube shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.6.2 Brass pipe specified in **Table 7.3.1.1** shall be permitted in the standard weight in sizes up to 6 in. (150 mm) for pressures up to 175 psig (12 bar) and in the extra strong weight in sizes up to 8 in. (200 mm) for pressures up to 300 psig (21 bar).

16.3.7 Stainless Steel Pipe.

16.3.7.1 Stainless steel tube shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.7.2 Stainless steel pipe as referenced in the standards listed in **Table 7.3.1.1** shall be in accordance with Schedules 10S or 40S pipe.



Public Comment No. 31-NFPA 13-2023 [Section No. 16.3.1]

16.3.1* General. Sprinkler piping shall comply with the requirements of this section.

A. 16.3.1 It is not the intent of this section to apply the minimum pipe size requirements to all devices and appurtenances. Devices such as valve trim, air maintenance devices, and air hoses can have nominal sizes less than those prescribed in 16.3.1.

16.3.1.1 Black and Galvanized Steel Pipe.

16.3.1.1.1

Black and galvanized steel pipe shall be in accordance with 16.3.2, 16.3.3, or 16.3.4.

16.3.1.1.2

Black and galvanized pipe sizes shall be no less than 1 in. (25 mm) nominal.

16.3.1.2 Copper Tube.

16.3.1.2.1

Copper tube shall be in accordance with 16.3.5.

16.3.1.2.2

Copper tube shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.1.3 Nonmetallic Pipe.

16.3.1.3.1

Nonmetallic pipe shall be in accordance with 16.3.9.

16.3.1.3.2

Nonmetallic pipe shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.1.4 Brass Pipe.

16.3.1.4.1

Brass pipe shall be in accordance with 16.3.6.

16.3.1.4.2

Brass pipe shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

16.3.1.5 Stainless Steel Pipe.

16.3.1.5.1

Stainless steel pipe shall be in accordance with 16.3.7.

16.3.1.5.2

Stainless steel pipe shall be no less than $\frac{3}{4}$ in. (20 mm) nominal.

Statement of Problem and Substantiation for Public Comment

Added a general requirement to apply the new minimum pipe sizes only to sprinkler pipe. An annex note is proposed to convey the intent of the section.

Related Item

- CN-29

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submission Date: Thu Mar 09 15:19:06 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1057-NFPA 13-2023](#)

Statement: Section 16.3.1 through 16.3.7 have been reorganized removing pointers, combining the requirements for pipe types for ease of use. A new general requirement was added clarifying that the minimum pipe sizes are in reference to sprinkler pipe and not devices and appurtenances such as valve trim.

CC note 29-NFPA 13-2023 [Section No. 16.3.1]

Review FR-1074 modifies sections to 16.3.1, which includes adding minimum pipe sizes to Chapter 16. The statement from the public input was "Minimum pipe sizes are discussed in the plans and calculations chapter, however it would be beneficial to the user of the standard to have the information upfront in the installation of piping, valves and appurtenances chapter." Since minimum pipe sizes are only specified in the Plans and Calculation chapter for actual sprinkler line pipe sizes, the new requirements needs further coordination with other Chapter 16 sections since they technically now refer to ALL pipe, not necessarily pipe with sprinklers. This would also apply to such things as air maintenance devices, etc. that are allowed smaller galvanized pipe sizes.



Public Comment No. 110-NFPA 13-2023 [Section No. 16.4.2.4]

16.4.2.4

Where conditions that contribute to MIC are found known to exist , the owner(s) shall notify the sprinkler system installer and develop a plan to treat the system using one of the following methods:

- (1) Install system piping that will not be affected by the MIC microbes.
- (2) Treat all water that enters the system using a listed bacterial inhibitor.
- (3) Implement an approved plan for monitoring the interior conditions of the pipe at established time intervals and locations.
- (4) Install a corrosion monitoring station and monitor at established intervals.

Statement of Problem and Substantiation for Public Comment

How is the owner to "find" these conditions before new construction? Is the owner of every building to test their water supply for MIC and other bacteria before every sprinkler system design and install? The term "found" belongs in NFPA 25 not in in NFPA 13.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 111-NFPA 13-2023 [Section No. 16.4.2.5]	
Public Comment No. 112-NFPA 13-2023 [Section No. 16.4.2.5]	

Related Item

- 16.4.2.4

Submitter Information Verification

Submitter Full Name: Scott Futrell
Organization: KFI Engineers
Street Address:
City:
State:
Zip:
Submission Date: Thu May 18 14:17:56 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1051-NFPA 13-2023](#)
Statement: The MIC could be found as a result of a water analysis, as required in chapter 5, or could be known to exist. The owner, owner's representative, or engineer of record (representing the owner) is responsible for informing the system installer.



Public Comment No. 111-NFPA 13-2023 [Section No. 16.4.2.5]

16.4.2.5 –

Where conditions are found that contribute to unusual corrosive properties, the owner(s) shall notify the sprinkler system installer, and a plan shall be developed to treat the system using at least one of the following methods:

- (1) Install system piping that is corrosion resistant.
- (2) Treat water that enters the system using a listed corrosion inhibitor.
- (3) Implement an approved plan for monitoring the interior conditions of the pipe at established intervals and locations.
- (4) Install approved corrosion monitoring stations and monitor at established intervals.
- (5) Fill dry pipe or preaction systems with at least 98 percent pure nitrogen in lieu of air to mitigate against corrosion.
- (6) Use a listed nitrogen generator that is sized and installed in accordance with the manufacturer's instructions.

Statement of Problem and Substantiation for Public Comment

This seems to mix internal and external corrosion and also refers to finding conditions. How do you find conditions for internal corrosion prior to new construction? An owner would not know and could not be expected to know they would find internal pipe corrosion issues prior to bid documents for new construction. This would require every owner to test their water supply for every new building.

Related Public Comments for This Document

Related Comment

Public Comment No. 110-NFPA 13-2023
[Section No. 16.4.2.4]

Public Comment No. 112-NFPA 13-2023
[Section No. 16.4.2.5]

Relationship

similar language adding costs to an owner before construction

Related Item

- 16.4.2.5

Submitter Information Verification

Submitter Full Name: Scott Futrell

Organization: KFI Engineers

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 18 14:25:48 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: Chapter 5 requires a water analysis and review of environmental conditions that would indicate whether the water conditions would contribute to internal corrosion or environmental conditions would contribute to external conditions.



Public Comment No. 112-NFPA 13-2023 [Section No. 16.4.2.5]

16.4.2.5

Where conditions are ~~found~~ known to exist that contribute to unusual internal corrosive properties, the owner(s) shall notify the sprinkler system installer, and a plan shall be developed to treat the system using at least one of the following methods:

- (1) Install system piping that is corrosion resistant.
- (2) Treat water that enters the system using a listed corrosion inhibitor.
- (3) Implement an approved plan for monitoring the interior conditions of the pipe at established intervals and locations.
- (4) Install approved corrosion monitoring stations and monitor at established intervals.
- (5) Fill dry-pipe or preaction systems with at least 98 percent pure nitrogen in lieu of air to mitigate against corrosion.
- (6) Use a listed nitrogen generator that is sized and installed in accordance with the manufacturer's instructions.

Statement of Problem and Substantiation for Public Comment

How is the owner to "find" these conditions before new construction? Is the owner of every building to test their water supply for MIC and other bacteria before every sprinkler system design and install? The term "found" belongs in NFPA 25 not in NFPA 13.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 110-NFPA 13-2023 [Section No. 16.4.2.4]</u>	requires the owner to find the corrosives prior to the bid documents in new construction
<u>Public Comment No. 111-NFPA 13-2023 [Section No. 16.4.2.5]</u>	this section needs to be deleted but if it isn't then the next public comment needs to be included

Related Item

- 16.4.2.5

Submitter Information Verification

Submitter Full Name: Scott Futrell
Organization: KFI Engineers
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 18 14:30:47 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Rejected but see related SR

Action:

Resolution: [SR-1052-NFPA 13-2023](#)

Statement: Chapter 5 requires a water analysis and review of environmental conditions that would indicate whether the water conditions would contribute to internal corrosion or environmental conditions would contribute to external conditions. In addition, vapor corrosion systems were recognized in the list as this is new listed technology.



Public Comment No. 188-NFPA 13-2023 [Section No. 16.4.2.5]

16.4.2.5

Where conditions are found that contribute to unusual corrosive properties, the owner(s) shall notify the sprinkler system installer, and a plan shall be developed to treat the system using at least one of the following methods:

- (1) Install system piping that is corrosion resistant.
- (2) Treat water that enters the system using a listed corrosion inhibitor.
- (3) Implement an approved plan for monitoring the interior conditions of the pipe at established intervals and locations.
- (4) Install approved corrosion monitoring stations and monitor at established intervals.
- (5) Fill dry-pipe or preaction systems with at least 98 percent pure nitrogen in lieu of air to mitigate against corrosion.
- (6) Use a listed nitrogen generator that is sized and installed in accordance with the manufacturer's instructions.
- (7) Use a vapor phase corrosion inhibitor delivery system sized and installed in accordance with the manufacturer's instructions

Statement of Problem and Substantiation for Public Comment

Vapor phase corrosion inhibitor technology has been available for many years but had not been adapted for use in sprinkler systems. A listed vapor phase corrosion inhibitor is now available for use in dry pipe and preaction sprinkler systems. Vapor phase corrosion inhibitors have been used to protect metals from rust and corrosion in industrial and commercial applications for approximately 40 years. Vapor phase corrosion inhibitors were also used by the US to protect equipment during WWII. Vapor phase corrosion inhibitor is effective at mitigating corrosion in dry pipe and preaction sprinkler systems. Vapor phase corrosion inhibitor protecting against both anodic and cathodic reactions provide the best level of protection for applications in sprinkler systems. Testing has demonstrated that VCI technology provides excellent corrosion protection. Reports show that nano particle vapor phase corrosion inhibitors provide excellent corrosion inhibiting ability (VIA) and have properties allowing for excellent migration into systems.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 187-NFPA 13-2023 [New Section after 8.2]	
Public Comment No. 189-NFPA 13-2023 [Section No. 28.3.4.8.1]	
<u>Related Item</u>	
• PI-350 • PI-340	

Submitter Information Verification

Submitter Full Name: Mark Hopkins
Organization: Terpconsulting
Affiliation: General Air Products
Street Address:

City:**State:****Zip:****Submittal Date:** Tue May 30 15:18:35 EDT 2023**Committee:** AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR**Resolution:** SR-1052-NFPA 13-2023**Statement:** Chapter 5 requires a water analysis and review of environmental conditions that would indicate whether the water conditions would contribute to internal corrosion or environmental conditions would contribute to external conditions. In addition, vapor corrosion systems were recognized in the list as this is new listed technology.



Public Comment No. 113-NFPA 13-2023 [Section No. 16.4.4]

16.4.4 Protection of Piping Subject to Mechanical Damage.

Where concealed pipe other than steel is ~~run~~ installed through holes or notches in studs, joists, rafters, or similar members less than 1.25 in. (32 mm) from the nearest edge of the member, the following provisions shall apply:

- (1) Steel shield plates shall be provided.
- (2) Steel shield plates shall have a minimum thickness of 0.0575 in. (1.463 mm) (No. 16 gauge).
- (3) Steel shield plates shall cover the area of the pipe where the member is notched or bored.
- (4) * Steel shield plates shall extend a minimum of 2 in. (50 mm) along the member.

Statement of Problem and Substantiation for Public Comment

'is run' is not the best way to write this statement..

Related Item

- 16.4.4

Submitter Information Verification

Submitter Full Name: Scott Futrell

Organization: KFI Engineers

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 18 14:43:32 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1053-NFPA 13-2023

Statement: "Installed" is a more appropriate term than "run" for pipe installation.



Public Comment No. 222-NFPA 13-2023 [Section No. 16.11.1.3]

16.11.1.3 Documentation- Cabinet.

16.11.1.3.1 –

~~A documentation cabinet shall be installed at an approved location at the protected premises.~~

16.11.1.3.2 –

~~The documentation cabinet shall be sized so that it can contain all necessary documentation.~~

16.11.1.3.3 –

~~All record documentation shall be stored in the documentation cabinet in an electronic or hardcopy format.~~

16.11.1.3.4 –

~~The documentation cabinet shall contain at a minimum the final record of completion documents, final shop drawings, and as-builts of the fire sprinkler system.~~

Documentation shall be readily available at all times

Statement of Problem and Substantiation for Public Comment

This section references keeping the documentation in a cabinet. As an owner I have seen many times where the documents within the cabinet were ruined or unusable. I have seen this many times. The cabinet does not add any value.

Related Item

- FR 1087

Submitter Information Verification

Submitter Full Name: Joshua Brackett

Organization: Banner Health

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 18:08:22 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: The section, in its current state, allows for documentation other than paper copies (such as digital copies). This requirement ensures that documentation of the system is available for future use. As an example of storing a digital copy, such as a "thumb drive," in a spare sprinkler cabinet could satisfy this requirement.



Public Comment No. 60-NFPA 13-2023 [New Section after 16.13.3]

TITLE OF NEW CONTENT

Type your content here ...16.13.3.1 Each gauge shall be provided with a recordkeeping label that allows the recording of the date of installation and the date that the gauge needs to be tested or replaced.

Statement of Problem and Substantiation for Public Comment

NFPA 25 requires gauges to be replaced 5 years after the date of installation or tested by comparison with a calibrated gauge every 5 years. An adhesive recordkeeping label that allows the recording of the date of installation as well as the date the gauge needs to be tested or replaced will help with compliance/enforcement by the owner, the sprinkler fitter, and the AHJ.

Related Item

- FR 1089

Submitter Information Verification

Submitter Full Name: Mark Conroy

Organization: Brooks Equipment Company

Street Address:

City:

State:

Zip:

Submittal Date: Mon Mar 20 11:43:21 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: NFPA 25 already has clear guidance on documenting, testing and replacing gauges. Other means for indicating installation date are available and it is the owner's responsibility to maintain records. Additionally, the use of adhesive labels may not endure the length of time between initial installation and replacement.



Public Comment No. 164-NFPA 13-2023 [Section No. 16.17]

16.17* Signs.

(Reserved)

A copy of the information from all required signage shall be kept in the documentation cabinet in an electronic and/or hardcopy format.

Statement of Problem and Substantiation for Public Comment

Important signage (such as general information and hydraulic information sign) is often missing or illegible. Keeping a copy of this important information in the required documentation cabinet is prudent. The information from these signs could easily be stored in an electronic manner. (Note that A.16.7 has a table of required signage). It should also be noted that this section 16.17 titled Signs is currently marked as "Reserved"

Related Item

• PI-574 • FR-1087

Submitter Information Verification

Submitter Full Name: Roland Asp

Organization: National Fire Sprinkler Association

Affiliation: NFSA Engineering and Standards Committee

Street Address:

City:

State:

Zip:

Submission Date: Mon May 29 19:59:55 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1054-NFPA 13-2023

Statement: Important signage (such as general information and hydraulic information sign) is often missing or illegible. Keeping a copy of this important information in the required documentation cabinet is prudent. The information from these signs could easily be stored in an electronic manner. (Note that A.16.7 has a table of required signage).



Public Comment No. 32-NFPA 13-2023 [Section No. 29.1]

29.1* Approval of Sprinkler Systems and Private Fire Service Mains.

29.1.1 The installing contractor shall do the following:

- (1) Notify the authority having jurisdiction and the property owner or the property owner's authorized representative of the time and date testing will be performed
- (2) Perform all required acceptance tests (*see Section 29.2*)
- (3) Complete and sign the appropriate contractor's material and test certificate(s) (*see Figure A.29.1*)
- (4) Remove all caps and straps prior to placing the sprinkler system in service

29.1.2 The approval of sprinkler systems and private fire service mains shall be permitted to be performed remotely in accordance with NFPA 915.

29.1.3 The requirements of 29.2.7 shall apply when acceptance tests are automated.

-

Statement of Problem and Substantiation for Public Comment

The original proposal was rejected because NFPA 915 did not exist. At the time of the second draft meeting, the contents of the 2024 edition of NFPA 915 will be finalized. No NITMAMs were submitted.

Related Item

- PI-100

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

Affiliation: American Fire Sprinkler Association

Street Address:

City:

State:

Zip:

Submission Date: Thu Mar 09 16:27:46 EST 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1055-NFPA 13-2023

Statement: This provides AHJs a reference for remote testing should they choose this option. NFPA 915 is a new standard which provides requirements when performing remote testing. Private fire service mains have been removed from this section as they are covered under the scope of NFPA 24. For approval of private fire service mains, NFPA 24 should be consulted.



Public Comment No. 132-NFPA 13-2023 [Section No. 29.2.3.6]

~~29.2.3.6 – Wet Pipe System Air Venting Valves.~~

~~29.2.3.6.1 –~~

~~Where manual valves are installed in accordance with Section 16.7 to meet the air venting requirements of 8.1.5, they shall be operated during filling of the system.~~

~~29.2.3.6.2 –~~

~~Manual valves shall remain open until water reaches the valve and trapped air has escaped.~~

Statement of Problem and Substantiation for Public Comment

The opening of manual air vents is not an acceptance test. This is an example of adding words to the standard that do not add substance. The standard is already sufficiently unwieldy without adding superfluous information. Adding this requirement is akin to stating in chapter 29 that the low point drains shall be operated at the conclusion of the operational test for dry or preaction systems. The annex material for section 16.7 provides sufficient information regarding the purpose and use of air vents.

Related Item

- FR-1143

Submitter Information Verification

Submitter Full Name: Russell Leavitt

Organization: Telgian Corporation

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 24 17:16:11 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: It is important that this remain in the standard to ensure that during acceptance testing or filling of the system, air is being expelled from the system.



Public Comment No. 126-NFPA 13-2023 [New Section after 29.2.7.4]

29.2.8 Negative Pressure Systems

29.2.8.1 Negative pressure systems designed as vacuum dry pipe systems shall meet all of the acceptance testing requirements for dry pipe systems.

29.2.8.2 Negative pressure systems designed as vacuum preaction systems shall meet the applicable acceptance testing requirements for single, double, or noninterlock preaction systems systems.

Statement of Problem and Substantiation for Public Comment

The proposed requirements in Chapter 8 for Negative Pressure Systems will require a pointer in Chapter 29 to get to the appropriate acceptance testing requirements.

Related Public Comments for This Document

Related Comment

Relationship

[Public Comment No. 122-NFPA 13-2023 \[New Section after 8.11\]](#)

[Public Comment No. 127-NFPA 13-2023 \[Section No. 8.11\]](#)

Related Item

- FR-1037

Submitter Information Verification

Submitter Full Name: Jonathan Roger

Organization: Fireflex Systems

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 19 14:33:29 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-1066-NFPA 13-2023](#)

Statement: Acceptance requirements are needed in this Standard for Vacuum Systems.

**Public Comment No. 80-NFPA 13-2023 [Section No. 29.5]****29.5** Pipe Schedule Design Information Sign (Nameplate).**29.5.1**

The installing contractor shall identify a pipe scheduled sprinkler system with a permanently ~~marked weatherproof~~ engraved weatherproof metal or rigid plastic sign secured with corrosion-resistant wire, chain, or other approved means.

29.5.2

Such signs shall be placed at the corresponding system riser.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
engraved_plate_1.jpg	This is an engraved plate dating from 2016 that is still legible.	
engraved_plate_2.jpg	This is another engraved plate that is still legible from 2016.	
engraved_plate_2.jpg	This is a newer plate from 2022 written on by a sharpie marker. Note the ink can be rubbed off.	
Unlegible_plate_1.jpg	These are stick on plates that are not legible. The age is unknown.	
Unlegible_plate_2.jpg	This is a stick on plate that is not legible. The age is unknown.	
Unlegible_plate_3.jpg	This is a stick on plate that is not legible. The age is unknown.	

Statement of Problem and Substantiation for Public Comment

The problem is that over time marker or labels wear off of hydraulic data plates. Depending on their environment, some wear off faster. If the plates were engraved with an engraver, the information would never wear off and still be legible years later no matter the environment.

Related Item

- FR

Submitter Information Verification

Submitter Full Name: William Kelly

Organization: De State Fire Marshals Office

Street Address:

City:

State:

Zip:

Submittal Date: Thu Apr 27 14:46:25 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: This is new material that must go through the full revision cycle. The requirement already states that a permanent marking method needs to be used. There are several methods in which this can be achieved. In addition, the proposed change is solely for pipe-schedule systems and not all system types are pipe-schedule.

Hydraulically Calculated System

This system as shown on

CFFPG

company print no

10F1

dated

12-6-16

for

OFFICE AREAS

at

PLANET FITNESS

contract no

165148

is designed to discharge at a rate of

.1

gpm

(L/min) per sq ft (m2) of floor area over a maximum area of

900

sq ft (m2) when supplied

with water at the rate of

253.9

gpm (L/min)

at

36.8

psi (bars) at the base of the riser

Hose stream allowance of

100

gpm(L/min)

is included in the above.

Occupancy classification

LIGHT HAZARD

Commodity classification

Maximum storage height

Installed by

COMMONWEALTH FIRE PROT

Hydraulically Calculated

This system

Hydraulically Calculated System

This system as shown on

CFFPG

company print no

10F1

dated

12-6-16

for

OFFICE AREAS

at

PLANET FITNESS

contract no

165148

is designed to discharge at a rate of

.1

gpm

(L/min) per sq ft (m2) of floor area over a maximum area of

900

sq ft (m2) when supplied

with water at the rate of

253.9

gpm (L/min)

at

36.8

psi (bars) at the base of the riser

Hose stream allowance of

100

gpm(L/min)

is included in the above.

Occupancy classification

LIGHT HAZARD

Commodity classification

Maximum storage height

Installed by

COMMONWEALTH FIRE PROT

Hydraulically Calculated

This system

Hydraulically Calculated System

This system as shown on

CFPC

company print no

1 of 1

dated

12-6-16

for

OPEN GYM

at

PLANET FITNESS

contract no

165148

is designed to discharge at a rate of gpm

(L/min) per sq ft (m2) of floor area over a maximum area of

1500

sq ft (m2) when supplied

with water at the rate of

128.6

gpm (L/min)

at

25.7

psi (bars) at the base of the riser

Hose stream allowance of

100

gpm (L/min)

is included in the above.

Occupancy classification

LIGHT HAZARD

Commodity classification

Maximum storage height

Installed by

COMMONWEALTH FIRE PROT.









Public Comment No. 115-NFPA 13-2023 [Section No. 29.6.1.2]

29.6.1.2

Such signs shall be placed at each system riser serving a portion of a single floor of a facility or where individual floor control valves are used in a multistory building should be considered a separate sprinkler system .

Statement of Problem and Substantiation for Public Comment

System riser is open to interpretation and subsequent confusion. Multi-story, and multi-system areas all need the general information sign as it could and would be different for different floors, zones, and areas. One general information sign for a building with more than one system would not be accurate, appropriate, or thorough.

Related Item

- 29.6.1.2

Submitter Information Verification

Submitter Full Name: Scott Futrell

Organization: KFI Engineers

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 18 14:49:18 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: A system, and the components that make a system riser, are already defined in chapter 3 of NFPA 13. In addition, per the Manual of Style, the word "should" is not allowed within the standard body.



Public Comment No. 116-NFPA 13-2023 [Section No. 29.6.3]

29.6.3

Combination hydraulic design information and general information shall be permitted for each system riser serving a portion of a single floor of a facility or where individual floor control valves are used in a multistory building should be considered a separate sprinkler system ..

Statement of Problem and Substantiation for Public Comment

One combination general information hydraulic information sign for a building with multiple systems, zones, floors, design areas, and so on would not be realistic. Often there multiple hydraulic design areas for a system or zone and putting all of those on one general information sign for an entire building would be cumbersome and confusing.

Related Item

- 29.6.3

Submitter Information Verification

Submitter Full Name: Scott Futrell

Organization: KFI Engineers

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 18 14:58:26 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: A system, and the components that make a system riser, are already defined in chapter 3 of NFPA 13. In addition, per the Manual of Style, the word "should" is not allowed within the standard body.



Public Comment No. 184-NFPA 13-2023 [Section No. 30.3.3]

30.3.3

Where modifications or additions are made ~~to existing~~ in dwelling units of existing light hazard systems equipped with standard response sprinklers, new ~~standard response~~ fast response sprinklers shall be ~~permitted to be~~ used.

Statement of Problem and Substantiation for Public Comment

To improve life safety, existing standard response sprinklers with an RTI<350 in dwelling units should be replaced with fast response sprinklers with an RTI<50 during modifications or additions. This is in line with NFPA 13 since the 1996 edition for all new light hazard occupancies to provide an appropriate level of life safety.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 186-NFPA 13-2023 [Section No. 30.3.4]	
<u>Related Item</u>	
• FR-1035	

Submitter Information Verification

Submitter Full Name: Michael Joanis
Organization: National Fire Sprinkler Association
Affiliation: NFSA Engineering and Standards Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 30 14:51:42 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected
Resolution: This is a new technical change being proposed at the second draft that was based on test data not supplied to the technical committee. The test data and proposal should be submitted for the next revision cycle.



Public Comment No. 216-NFPA 13-2023 [Section No. 30.3.3]

30.3.3

Where modifications or additions are made to existing light hazard systems ~~equipped with standard response sprinklers~~, ~~new standard response sprinklers shall be permitted to be used~~ all sprinklers within the compartment shall be changed to use quick-response or residential sprinklers .

Statement of Problem and Substantiation for Public Comment

Since 1996 quick response sprinklers have been required in light hazard occupancies. When evaluating existing systems, standard response sprinkler represent a challenge to life safety. Recent testing by the National Fire Sprinkler Association highlights some of these concerns with standard response sprinklers. This is particularly concerning in commercial occupancies that are be converted for residential use.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 218-NFPA 13-2023 [Sections 30.3.3, 30.3.4, 30.3.5]	
<u>Related Item</u>	
• FR 1325	

Submitter Information Verification

Submitter Full Name: Mark Fessenden
Organization: Johnson Controls
Street Address:
City:
State:
Zip:
Submission Date: Wed May 31 15:09:13 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected
Resolution: This is a new technical change being proposed at the second draft that was based on test data not supplied to the technical committee. The test data and proposal should be submitted for the next revision cycle.



Public Comment No. 218-NFPA 13-2023 [Sections 30.3.3, 30.3.4, 30.3.5]

~~Sections 30.3.3, 30.3.4, 30.3.5~~

~~30.3.3 –~~

~~Where modifications or additions are made to existing light hazard systems equipped with standard response sprinklers, new standard response sprinklers shall be permitted to be used.~~

~~30.3.4 –~~

~~Where individual standard response sprinklers are replaced in existing light hazard systems, new standard response sprinklers shall be permitted to be used.~~

~~30.3.5 –~~

~~Where existing light hazard systems are converted to use quick-response or residential sprinklers, all sprinklers in a compartment shall be changed.~~

Statement of Problem and Substantiation for Public Comment

See PC 216.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 216-NFPA 13-2023 [Section No. 30.3.3]	
<u>Related Item</u>	
• FR 1325	

Submitter Information Verification

Submitter Full Name: Mark Fessenden
Organization: Johnson Controls
Street Address:
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Submittal Date: Wed May 31 15:40:02 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected
Resolution: This is a new technical change being proposed at the second draft that was based on test data not supplied to the technical committee. The test data and proposal should be submitted for the next revision cycle.



Public Comment No. 186-NFPA 13-2023 [Section No. 30.3.4]

30.3.4

Where individual standard response sprinklers are replaced in modifications or additions are made to existing light hazard systems, in areas other than dwelling units, equipped with standard response sprinklers, new standard response sprinklers shall be permitted to be used.

Statement of Problem and Substantiation for Public Comment

To improve life safety, existing standard response sprinklers with an RTI<350 in dwelling units should be replaced with fast response sprinklers with an RTI<50 during modifications or additions. This is in line with NFPA 13 since the 1996 edition for all new light hazard occupancies to provide an appropriate level of life safety.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 184-NFPA 13-2023 [Section No. 30.3.3]	
<u>Related Item</u>	
• FR-1035	

Submitter Information Verification

Submitter Full Name: Michael Joanis
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Affiliation: NFSA Engineering and Standards Committee
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Submittal Date: Tue May 30 15:01:17 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected
Resolution: This is a new technical change being proposed at the second draft that was based on test data not supplied to the technical committee. The test data and proposal should be submitted for the next revision cycle.



Public Comment No. 150-NFPA 13-2023 [New Section after 30.3.8]

30.3.9 Where the ceiling slope is more than 2 in 12, sprinkler deflectors shall be permitted to be aligned parallel to the floor.

Note that this only needs to be addressed by the committee if they do not adopt the change to section 9.5.4.2.

Statement of Problem and Substantiation for Public Comment

This only needs to be addressed by the committee if they do not adopt Comment 10 (change to section 9.5.4.2).

This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 87-NFPA 13-2023 [Sections 9.5.4.2, 9.5.4.3]	
<u>Related Item</u>	
• FR 1213	

Submitter Information Verification

Submitter Full Name: Kenneth Isman
Organization: University of Maryland
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Submittal Date: Fri May 26 14:49:41 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected
Resolution: A Second Revision was created for section 9.5.4. Per this public comment, no action is required since a second revision was made.



Public Comment No. 165-NFPA 13-2023 [New Section after 30.6.4]

30.6.5

For modifications to existing systems equipped with ESFR sprinklers where ESFR sprinklers are used for the protection of light or ordinary hazard occupancies, 30.6.5.1 through 30.6.5.3 shall be permitted.

30.6.5.1

In light hazard occupancies, the protection area limitations of ESFR sprinklers shall be permitted to meet the protection area requirements of Table 10.2.4.2.1(a).

30.6.5.2

In light and ordinary hazard occupancies, the sprinkler spacing of ESFR sprinklers shall be permitted to meet the sprinkler spacing requirements of 10.2.5.

30.6.5.3

In light and ordinary hazard occupancies, the obstruction to the sprinkler discharge pattern of ESFR sprinklers shall be permitted to meet the obstruction discharge requirements of 10.2.7.2.

Statement of Problem and Substantiation for Public Comment

In accordance with section 14.2.7.1 of NFPA 13, ESFR sprinklers protecting light hazard occupancies are permitted to follow the protection area requirements of standard spray sprinklers (14.2.7.1.1), and when protecting light and hazard are permitted to follow the spacing requirements of standard spray sprinklers (14.2.7.1.2). This allowance was intended to be utilized for when an existing storage occupancy was remodeled as light or ordinary hazard occupancy and as such, this comment seeks to relocate these sections to Chapter 30 (Existing System Modifications) as this is a more appropriate location for these allowances. These sections (14.2.7.1.2 and 14.2.7.1.2) are proposed to be deleted from chapter 14 in a separate comment. It should be noted that Section 14.2.7.1.3 which allows the standard spray obstruction rules, to be applied to ESFR sprinklers protecting light and ordinary hazard occupancies will also be copied to chapter 30 by this comment but as this section may also be appropriate for new installations (such as a storage occupancy with an adjacent ordinary hazard area), this section will not be deleted from Chapter 14.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 166-NFPA 13-2023 [Section No. 14.2.7.1]	
<u>Related Item</u>	
• PI-34	

Submitter Information Verification

Submitter Full Name: Roland Asp
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Affiliation: NFSA Engineering and Standards Committee
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City:**State:****Zip:****Submittal Date:** Mon May 29 20:27:51 EDT 2023**Committee:** AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR**Resolution:** SR-1044-NFPA 13-2023**Statement:** This section allows buildings that have existing ESFR designs which undergo a renovation adding light or ordinary hazard areas to utilize existing ESFR sprinkler coverage for those spaces.



Public Comment No. 141-NFPA 13-2023 [Section No. A.3.3.46.1]

A.3.3.46.1 Obstructed Construction.

The following examples of obstructed construction are provided to assist the user in determining the type of construction feature:

- (1) *Beam and Girder Construction.* The term *beam and girder construction* as used in this standard includes noncombustible and combustible roof or floor decks supported by wood beams of 4 in. (100 mm) or greater nominal thickness or concrete or steel beams spaced 3 ft to 7½ ft (900 mm to 2.3 m) on center and either supported on or framed into girders. [Where supporting a wood plank deck, this includes semi-mill and panel construction, and where supporting (with steel framing) gypsum plank, steel deck, concrete, tile, or similar material, this includes much of the so-called noncombustible construction.]
- (2) *Concrete Tee Construction.* The term *concrete tee construction* as it is used in this standard refers to solid concrete members with stems (legs) having a nominal thickness less than the nominal height. [See Figure A.3.3.46.1(a) for examples of concrete tee construction.]
- (3) *Composite Wood Joist Construction.* The term *composite wood joist construction* refers to wood beams of “I” cross section constructed of wood flanges and solid wood web, supporting a floor or roof deck. Composite wood joists can vary in depth up to 48 in. (1.2 m), can be spaced up to 48 in. (1.2 m) on centers, and can span up to 60 ft (18 m) between supports. Joist channels should be firestopped to the full depth of the joists with material equivalent to the web construction so that individual channel areas do not exceed 300 ft² (28 m²). [See Figure A.3.3.46.1(b) for an example of composite wood joist construction.]
- (4) *Panel Construction.* The term *panel construction* as used in this standard includes ceiling panels formed by members capable of trapping heat to aid the operation of sprinklers and limited to a maximum of 300 ft² (28 m²) in area. There should be no unfilled penetrations in the cross-sectional area of the bounding structural members including the interface at the roof. Beams spaced more than 7½ ft (2.3 m) apart and framed into girders qualify as panel construction, provided the 300 ft² (28 m²) area limitation is met. Panel construction could also be made of suspended ceilings (i.e. coffered ceilings) as long as all criteria for size and panel construction has been met.
- (5) *Semi-Mill Construction.* The term *semi-mill construction* as used in this standard refers to a modified standard mill construction, where greater column spacing is used and beams rest on girders.
- (6) *Wood Joist Construction.* The term *wood joist construction* refers to solid wood members of rectangular cross section, which can vary from 2 in. to 4 in. (50 mm to 100 mm) nominal width and can be up to 14 in. (350 mm) nominal depth, spaced up to 3 ft (900 mm) on centers, and can span up to 40 ft (12 m) between supports, supporting a floor or roof deck. Solid wood members less than 4 in. (100 mm) nominal width and up to 14 in. (350 mm) nominal depth, spaced more than 3 ft (900 mm) on centers, are also considered as wood joist construction. Wood joists can exceed 14 in. (350 mm) in nominal depth.
- (7) *Bar Joist Construction with Fireproofing.* In order to meet building codes, bar joists are often covered with fireproofing materials. In such an event, if greater than 30 percent of the area of the joist is obstructed, it should be considered obstructed construction.
- (8) *Steel Purlin Construction.* This term refers to clear span or multiple span buildings with straight or tapered columns and frames supporting C- or Z-type purlins greater than 4 in. (100 mm) in depth spaced up to 7½ ft (2.3 m) on center.
- (9) *Truss Construction (Wood or Steel).* The term *truss construction* refers to parallel or pitched chord members connected by open web members supporting a roof or floor deck with top and bottom members greater than 4 in. (100 mm) in depth. [See Figure A.3.3.46.1(c).]
- (10) *Bar Joist Construction (Wood or Steel).* The term *bar joist construction* refers to construction employing joists consisting of steel truss-shaped members. Wood truss-shaped members, which consist of wood top and bottom chord members with steel tube or bar webs, are also defined as bar joists. Bar joists include noncombustible or combustible roof or floor decks on bar joist construction with top and bottom chord members greater than 4 in. (100 mm) in depth. [See Figure A.3.3.46.2(a) and Figure A.3.3.46.2(b) for

examples of bar joist construction.] (AUT-SSI)

Figure A.3.3.46.1(a) Typical Concrete Tee Construction.

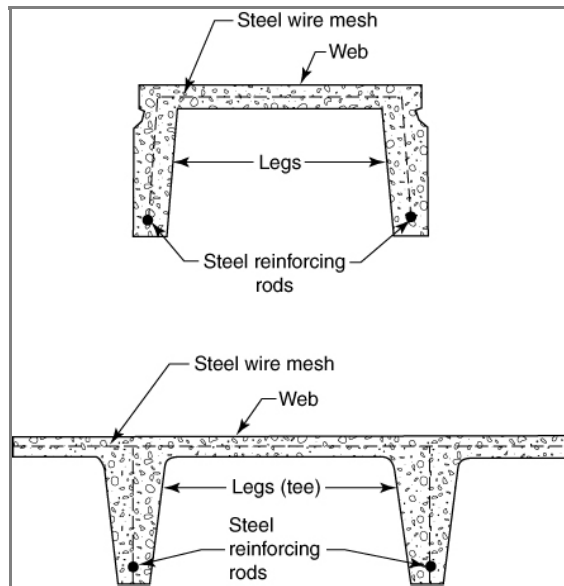


Figure A.3.3.46.1(b) Typical Composite Wood Joist Construction.

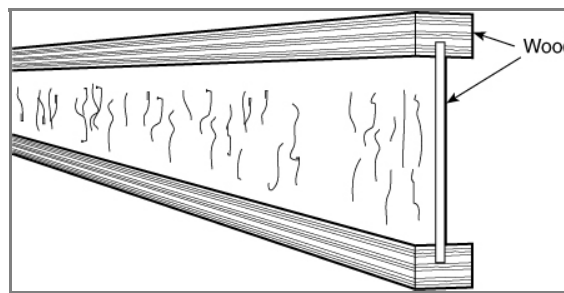
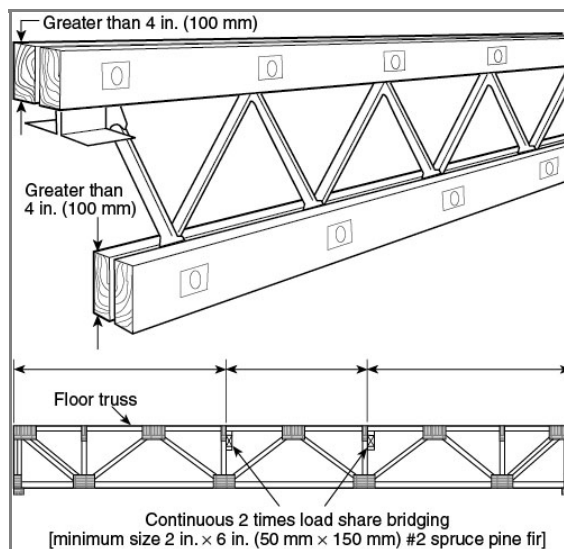


Figure A.3.3.46.1(c) Wood Truss Construction.



Statement of Problem and Substantiation for Public Comment

This change is to clarify that there are scenarios where panel construction could be created with suspended ceilings.

Related Item

- PI 469

Submitter Information Verification

Submitter Full Name: Matthew Osburn
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Affiliation: Canadian Automatic Sprinkler Association
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City:
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Submittal Date: Fri May 26 11:49:13 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected
Resolution: Panel construction defines a type of construction made up of structural elements.



Public Comment No. 139-NFPA 13-2023 [Section No. A.3.3.46.2]

A.3.3.46.2 Unobstructed Construction.

The following examples of unobstructed construction are provided to assist the user in determining the type of construction feature:

- (1) **Bar Joist Construction.** The term *bar joist construction* refers to construction employing joists consisting of steel truss-shaped members. Wood truss-shaped members, which consist of wood top and bottom chord members with steel tube or bar webs, are also defined as bar joists. Bar joists include noncombustible or combustible roof or floor decks on bar joist construction with top and bottom chord members not exceeding 4 in. (100 mm) in depth. [See Figure A.3.3.46.2(a) and Figure A.3.3.46.2(b) for examples of bar joist construction.]
- (2) **Open-Grid Ceilings.** The term *open-grid ceilings* as used in this standard refers to ceilings in which the openings are 1/4 in. (6 mm) or larger in the least dimension, the thickness of the ceiling material does not exceed the least dimension of the openings, and the openings constitute at least 70 percent of the ceiling area.
- (3) **Smooth Ceiling Construction.** The term *smooth ceiling construction* as used in this standard includes the following:
 - (4) Flat slab, pan-type reinforced concrete
 - (5) Continuous smooth bays formed by wood, concrete, or steel beams spaced more than 7 1/2 ft (2.3 m) on centers — beams supported by columns, girders, or trusses
 - (6) Smooth roof or floor decks supported directly on girders or trusses spaced more than 7 1/2 ft (2.3 m) on center
 - (7) Smooth monolithic ceilings of at least 3/4 in. (19 mm) of plaster on metal lath or a combination of materials of equivalent fire-resistive rating attached to the underside of wood joists, wood trusses, and bar joists
 - (8) Open-web-type steel beams, regardless of spacing
 - (9) Smooth shell-type roofs, such as folded plates, hyperbolic paraboloids, saddles, domes, and long barrel shells
 - (10) Smooth Suspended ceilings of combustible or noncombustible construction
 - (11) Smooth monolithic ceilings with fire resistance less than that specified under item A.3.3.46.2(3)(d) and attached to the underside of wood joists, wood trusses, and bar joists

Combustible or noncombustible floor decks are permitted in the construction specified in A.3.3.46.2(3)(b) through A.3.3.46.2(3)(f). A.3.3.46.2(3)(b) would include standard mill construction.

- (12) **Standard Mill Construction.** The term *standard mill construction* as used in this standard refers to heavy timber construction as defined in NFPA 220.
- (13) **Truss Construction (Wood or Steel).** The term *truss construction* refers to parallel or pitched chord members connected by open web members supporting a roof or floor deck with top and bottom members not exceeding 4 in. (100 mm) in depth. [See Figure A.3.3.46.2(c).] (AUT-SSI)

Figure A.3.3.46.2(a) Wood Bar Joist Construction.

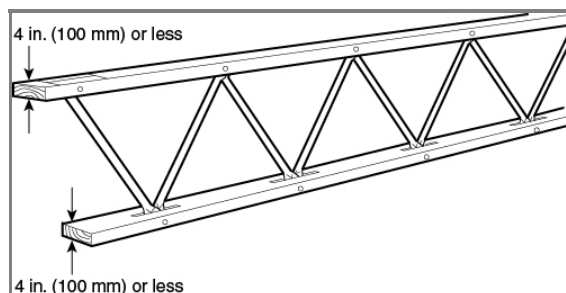
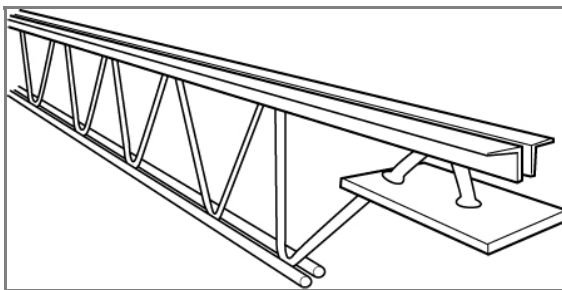
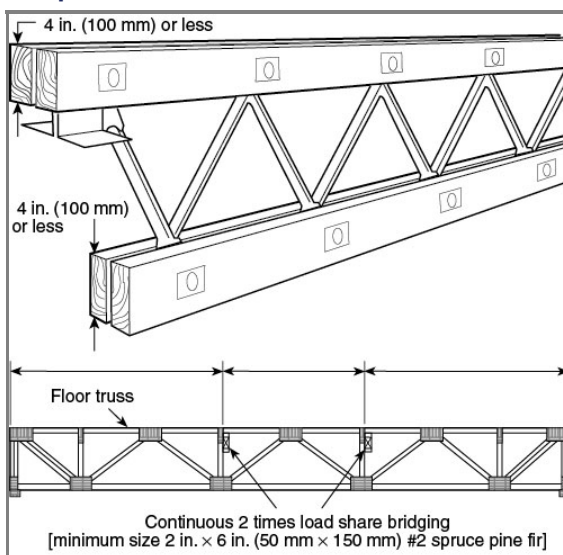


Figure A.3.3.46.2(b) Open-Web Bar Joist Construction.**Figure A.3.3.46.2(c) Examples of Wood Truss Construction.**

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CASA_Public_Comment_in_Support_of_Public_Input_474.docx	CASA Public Comment in Support of Public Input #474	

Statement of Problem and Substantiation for Public Comment

The Public Input #479 had an error with the TerraView program, which caused all the existing language found in A.3.3.43.2 to be highlighted and underlined indicating new language was proposed. The intent of our CASA proposal for Input #479 is only to change the language found in clause A3.3.43.2(3)(g) with the addition of "Smooth" at the beginning of the sentence. Please see attached correct proposed language for the committee's consideration.

Related Item

- PI 474

Submitter Information Verification

Submitter Full Name: Matthew Osburn

Organization: Canadian Automatic Sprinkler A

Affiliation: Canadian Automatic Sprinkler Association

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City:

State:

Zip:

Submittal Date: Fri May 26 11:41:01 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: Panel construction defines a type of construction made up of structural elements.

CASA Public Comment in Support of Public Input #479

The Public Input #479 had an error with the TerraView program, which caused all the existing language found in A.3.3.43.2 to be highlighted and underlined indicating new language was proposed. The intent of our CASA proposal for Input #479 is only to change the language found in clause A.3.3.43.2(3)(g). Please see below the correct proposed language for the committee's consideration.

A.3.3.43.2 Unobstructed Construction.

The following examples of unobstructed construction are provided to assist the user in determining the type of construction feature:

(1) *Bar Joist Construction*. The term *bar joist construction* refers to construction employing joists consisting of steel truss-shaped members. Wood truss-shaped members, which consist of wood top and bottom chord members with steel tube or bar webs, are also defined as bar joists. Bar joists include noncombustible or combustible roof or floor decks on bar joist construction with top and bottom chord members not exceeding 4 in. (100 mm) in depth. [See [Figure A.3.3.43.2\(a\)](#) and [Figure A.3.3.43.2\(b\)](#) for examples of bar joist construction.]

(2) *Open-Grid Ceilings*. The term *open-grid ceilings* as used in this standard refers to ceilings in which the openings are $\frac{1}{4}$ in. (6 mm) or larger in the least dimension, the thickness of the ceiling material does not exceed the least dimension of the openings, and the openings constitute at least 70 percent of the ceiling area.

(3) *Smooth Ceiling Construction*. The term *smooth ceiling construction* as used in this standard includes the following:

(a) Flat slab, pan-type reinforced concrete

(b) Continuous smooth bays formed by wood, concrete, or steel beams spaced more than $7\frac{1}{2}$ ft (2.3 m) on centers — beams supported by columns, girders, or trusses

(c) Smooth roof or floor decks supported directly on girders or trusses spaced more than $7\frac{1}{2}$ ft (2.3 m) on center

(d) Smooth monolithic ceilings of at least $\frac{3}{4}$ in. (19 mm) of plaster on metal lath or a combination of materials of equivalent fire-resistive rating attached to the underside of wood joists, wood trusses, and bar joists

(e) Open-web-type steel beams, regardless of spacing

(f) Smooth shell-type roofs, such as folded plates, hyperbolic paraboloids, saddles, domes, and long barrel shells

(g) **Smooth** Suspended ceilings of combustible or noncombustible construction

(h) Smooth monolithic ceilings with fire resistance less than that specified under item [A.3.3.43.2\(3\)\(d\)](#) and attached to the underside of wood joists, wood trusses, and bar joists. Combustible or noncombustible floor decks are permitted in the construction specified in [A.3.3.43.2\(3\)\(b\)](#) through [A.3.3.43.2\(3\)\(f\)](#). [A.3.3.43.2\(3\)\(b\)](#) would include standard mill construction.

(4) *Standard Mill Construction*. The term *standard mill construction* as used in this standard refers to heavy timber construction as defined in [NFPA 220](#).

(5) *Truss Construction (Wood or Steel)*. The term *truss construction* refers to parallel or pitched chord members connected by open web members supporting a roof or floor deck with top and bottom members not exceeding 4 in. (100 mm) in depth. [See [Figure A.3.3.43.2\(c\)](#).] (AUT-SSI)

SUBSTANTIATION

Addition of “Smooth” in sentence (g) to further clarify that not all suspended ceilings are smooth ceiling construction.



Public Comment No. 199-NFPA 13-2023 [New Section after A.3.3.136]

A.3.3.## Non-Flat Obstruction.

An example of a non-flat obstruction would be a round duct or pipe.

Statement of Problem and Substantiation for Public Comment

The proposed language is intended to help clarify for the end user examples of a non-flat obstruction.

Related Item

- FR-1209

Submitter Information Verification

Submitter Full Name: Weston Baker

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Submittal Date: Wed May 31 07:24:32 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1071-NFPA 13-2023

Statement: The term "non-flat obstruction" has been provided since the term is now used in the body of the standard. The proposed annex language is intended to help clarify for the end user examples of non-flat obstructions.



Public Comment No. 200-NFPA 13-2023 [New Section after A.3.3.136]

A.3.3.## Non-Solid Obstruction.

Examples of a non-solid obstruction would include (1) a cable tray where the number of cables provided in the tray allow for openings that constitute 30 percent or more of the tray's footprint, or (2) a grouped obstruction where the open space between the objects within the footprint of the grouped obstruction is 30 percent or more.

Statement of Problem and Substantiation for Public Comment

The proposed language is intended to help clarify for the end user examples of non-solid obstructions.

Related Item

- FR-1209

Submitter Information Verification

Submitter Full Name: Weston Baker

Organization: FM Global

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Submittal Date: Wed May 31 07:27:28 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1115-NFPA 13-2023

Statement: The term "non-solid obstruction" has been provided since the term is now used in the body of the standard. The proposed annex language is intended to help clarify for the end user examples of non-solid obstructions.



Public Comment No. 182-NFPA 13-2023 [New Section after A.3.3.241.2]

A.3.3.xxx

VCIs are also referred to as vapor phase corrosion inhibitors, volatile corrosion inhibitors, and vapor phase inhibitors (VPI). All of these terms relate to a specific class of corrosion inhibitors. Other classifications include passivating (anodic), cathodic, organic, and precipitation inhibitors. VCIs are appropriate for atmospheric or gaseous corrosion. This is corrosion happening in the air-filled portion of the sprinkler system containing water vapor. Corrosion will occur when the relative humidity is greater than 60%. VCIs can also provide protection in partially aqueous environments (partially water-filled pipes) and aqueous environments (water-filled pipes). VCIs can inhibit anodic reactors, cathodic reactions, or both. VCIs protecting against both anodic and cathodic reactions provide the best level of protection for applications in sprinkler systems.

Statement of Problem and Substantiation for Public Comment

This definition is needed to introduce new terminology to NFPA 13. The definition is also necessary to differentiate between corrosion inhibitors that enter the system in the vapor phase versus those entering as a liquid. NFPA 13 currently includes requirements for corrosion inhibitors that enter the system in a liquid form; however, there are no requirements for VCI. VCI is applied through attachment of equipment to the air supply to a dry pipe or preaction sprinkler system. This new definition is part of a series of public inputs made during the first draft stage and public comments that integrate new requirements for VCI and clarify differences from other listed and non-listed corrosion inhibitors.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 181-NFPA 13-2023 [New Section after 3.3.241]	
Public Comment No. 181-NFPA 13-2023 [New Section after 3.3.241]	
Public Comment No. 183-NFPA 13-2023 [New Section after 5.1.4.3]	
Public Comment No. 185-NFPA 13-2023 [New Section after 7.8.3]	
Public Comment No. 187-NFPA 13-2023 [New Section after 8.2]	

Related Item

- PI-339

Submitter Information Verification

Submitter Full Name: Mark Hopkins
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Submittal Date: Tue May 30 14:40:58 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action:	Rejected but see related SR
Resolution:	SR-1065-NFPA 13-2023
Statement:	This definition is needed as Vapor Corrosion Inhibitor (VCI) has been added to the body of the standard.



Public Comment No. 119-NFPA 13-2023 [Section No. A.7.5.2.4.8]

A.7.5.2.4.8

Loose welding slag or residue should be removed from piping, but a small amount should be acceptable as it is impossible to remove all the slag especially in long runs of pipe.

Chapter 28 covering plans and calculations permits the friction loss for a welded fitting directly connected to the sprinkler to be excluded from the sprinkler system's hydraulic calculation. Laboratory test data has revealed that welded outlet fittings with the inside diameter reduced as a result of the pipe fabrication process can substantially reduce the flow discharged from an attached sprinkler that has a large K-factor for a given inlet size. As an example for the 1 inch inlet size, reducing the inside diameter of the welded fitting at the entrance from the pipe will create a greater reduction in flow through a nominal K-28 sprinkler as compared to a smaller sprinkler K-factor attached to the fitting. Similarly, the reduction in flow through for a nominal K-16.8 sprinkler as a result of a reduced diameter inside diameter of 3/4 inch size welded outlet fitting will be greater compared to a sprinkler having a smaller nominal K-factor attached. Since the flow velocities created by a nominal K-5.6 sprinkler with a 1/2 inch size inlet at a given pressure is much less compared to the maximum K-factor referenced for use with the 3/4 and 1 inch size outlets, the negative impact on the flow through a nominal K-5.6 sprinkler as a result of a reduced inside diameter for a 1/2 inch size welded outlet is substantially less.

Even though the inside diameter of a welded outlet fitting is significantly greater than the orifice of an attached sprinkler, laboratory testing has indicated that a reduction in the inside diameter of a typical 3/4 and 1 inch size welded outlet by approximately 10 percent can reduce the flow through the largest sprinkler K-factor referenced for use with these outlets by 20 percent.

Statement of Problem and Substantiation for Public Comment

The new annex text provides information regarding the impact of a reduced inside diameter on the flow through the sprinkler. .

Related Item

- Committee Input 1166

Submitter Information Verification

Submitter Full Name: Kerry Bell

Organization: UL LLC

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Zip:

Submission Date: Fri May 19 13:29:57 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Rejected but see related SR

Action:**Resolution:** [SR-1018-NFPA 13-2023](#)

Statement: Restricted welded outlet fittings can substantially reduce the flow through a sprinkler that is attached to the fitting. While the existing text indicates that the hole cut for the welded outlet fitting is not to be less than the inside diameter of the fitting, these revisions provide additional clarification that the fitting's inside diameter is not to be reduced as a result of the process for attaching the fitting to the pipe. The new annex text provides information regarding the impact of a reduced inside diameter on the flow through the sprinkler.



Public Comment No. 3-NFPA 13-2023 [Section No. A.8.2.8.2]

A.8.2.8.2

Air maintenance devices are unique components within the air supply and need to be listed for use. Compressors and pressure switches are not air maintenance devices, ~~and this section does not require air compressors to be listed~~ .

Statement of Problem and Substantiation for Public Comment

There are pressure switches on the market that advertise the device as an "AMD" because it maintains the pressure in the dry system. This is not the intent of an AMD and without a restricting orifice, the device will not function as intended. This is why it is also necessary to define an "Air Maintenance Device"

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 1-NFPA 13-2023 [New Section after 8.2.7.5.1]	Listed Air Compressor
<u>Related Item</u>	
• PI-131	

Submitter Information Verification

Submitter Full Name: Kevin Hall
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Submittal Date: Wed Mar 08 15:24:46 EST 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1192-NFPA 13-2023](#)
Statement: The charging statement is not necessary as the remaining two requirements state when air maintenance devices are required. Additionally, the rated pressure where 5.5 cfm is determined was omitted from the first draft revision. This also corrects the first draft revision where it appeared that the requirement for Air Maintenance Devices to be listed was lost.

**Public Comment No. 138-NFPA 13-2023 [New Section after A.10.2.5.2.3]**

A.10.2.6.1.2(5). For concrete joists spaced less than 3 ft (900 mm) on center, the rules for obstructed construction shown in 10.2.6.1.2 apply. For concrete tee construction with stems spaced less than 7 ft 6 in. (2.3 m) on center, the sprinkler deflector can be located at or above a horizontal plane 1 in. (25 mm) below the bottom of the stems of the tees. This includes sprinklers located between the stems. [See Figure A.10.2.6.1.2(5).]

Figure A.10.2.6.1.2(5) Typical Concrete Joist Construction.

-

<insert Figure from 2022 edition here>

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
10-2-6-1-2.docx	This is what the annex text and figure should look like if the comment is accepted.	

Statement of Problem and Substantiation for Public Comment

Based on the discussion at the First Draft Meeting and a re-evaluation of the information from the FPRF testing program, the Sloped Ceiling Task Group is recommending a different approach to incorporating the results of the testing into NFPA 13. This approach will be incorporated in the following steps:

1. Return the positioning of standard spray sprinklers with respect to obstructed construction to the 2022 edition rules with two changes; one change to concrete tee construction, which will be substantiated below and usage of the new term “blocking” which was defined at the First Draft.
2. Allow the user, when protecting non-storage occupancies with a sloped ceiling, to select one of two options:
 - a. Locate the sprinkler in accordance with the old rules and take the 30% increase in design area
 - b. Locate the sprinkler in accordance with new rules in order to avoid the 30% increase. The sprinkler location rules for selecting this option will be in Chapter 19.
3. Allow the user to protect a storage occupancy with a sloped ceiling with the sprinkler location information in Chapter 20 rather than Chapter 10.

This approach has a less dramatic effect on the users of NFPA 13 and is still supported by the data of the test program. Ultimately, this approach is more likely to be more user friendly to the typical design professional and will provide options that were not permitted under the 2022 and previous editions of the standard while retaining the status quo for those familiar with the older rules and still wanting to select sprinkler protection using those parameters.

The one change to the 2022 edition rules that is being proposed here is the limit on the depth of the stems of concrete tees. Previous editions of the standard have permitted sprinklers to be installed under the concrete tees, regardless of the depth, which causes questions regarding the response of sprinklers under particularly deep tees. This comment proposes a limit of 30 inches to the depth of the tees in order to eliminate the concept of allowing an unlimited depth. The 30 inch depth limit is considered practical given the knowledge of common types of construction that have been protected successfully with fire sprinklers for decades and given some individual manufacturer’s experience with fire tests to achieve a listing for specific products.

This material was developed by the Sloped Ceiling Task Group, which was formed by the Technical

Committee on Sprinkler Systems Discharge Criteria to incorporate the results of the FPRF Project on Sprinklers Under Sloped Ceilings into NFPA 13. The Task Group consisted of Ken Isman (Chair), Wes Baker, Chase Browning, Mike Joanis, Larry Frank, Joe Noble, Abram Selim Fouad, Kevin Hall, Carry Webber, and Karl Wiegand.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 137-NFPA 13-2023 [Section No. 10.2.6.1.2]	
<u>Related Item</u>	
• FR 1217	

Submitter Information Verification

Submitter Full Name: Kenneth Isman
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Submittal Date: Fri May 26 11:35:37 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1034-NFPA 13-2023

Statement: Based on information from the FPRF testing program, the results of the testing incorporates the following into NFPA 13:

1. Return the positioning of standard spray sprinklers with respect to obstructed construction to the 2022 edition rules with two changes; one change to concrete tee construction, which will be substantiated below and usage of the new term “blocking” which was defined at the First Draft.

2. Allow the user, when protecting non-storage occupancies with a sloped ceiling, to select one of two options:

a. Locate the sprinkler in accordance with the old rules and take the 30% increase in design area

b. Locate the sprinkler in accordance with new rules in order to avoid the 30% increase. The sprinkler location rules for selecting this option will be in Chapter 19.

3. Allow the user to protect a storage occupancy with a sloped ceiling with the sprinkler location information in Chapter 20 rather than Chapter 10.

This approach has a less dramatic effect on the users of NFPA 13 and is still supported by the data of the test program. Ultimately, this approach is more likely to be more user friendly to the typical design professional and will provide options that were not permitted under the 2022 and previous editions of the standard while retaining the status quo for those familiar with the older rules and still wanting to select sprinkler protection using

those parameters.

The one change to the 2022 edition rules that is being proposed here is the limit on the depth of the stems of concrete tees. Previous editions of the standard have permitted sprinklers to be installed under the concrete tees, regardless of the depth, which causes questions regarding the response of sprinklers under particularly deep tees. This comment proposes a limit of 30 inches to the depth of the tees in order to eliminate the concept of allowing an unlimited depth. The 30 inch depth limit is considered practical given the knowledge of common types of construction that have been protected successfully with fire sprinklers for decades and given some individual manufacturer's experience with fire tests to achieve a listing for specific product

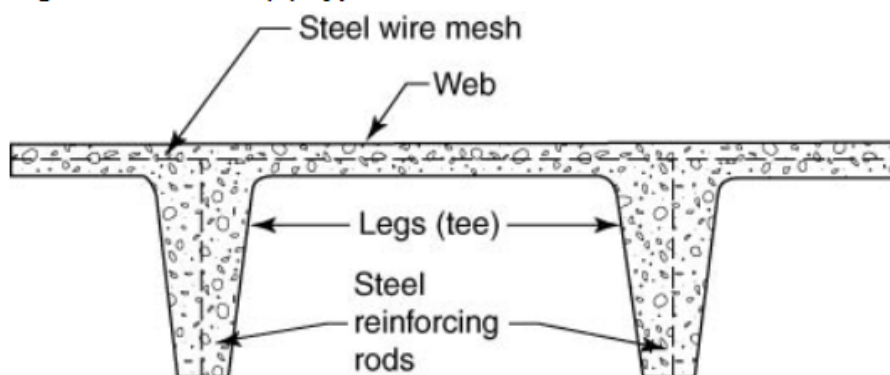
10.2.6.1.2 Obstructed Construction

Under obstructed construction, the sprinkler deflector shall be located in accordance with one of the following arrangements:

- (1) Installed with the deflectors within the horizontal planes of 1 in. to 6 in. (25 mm to 150 mm) below the structural members and a maximum distance of 22 in. (550 mm) below the ceiling/roof deck.
- (2) Installed with the deflectors at or above the bottom of the structural member to a maximum of 22 in. (550 mm) below the ceiling/roof deck where the sprinkler is installed in conformance with 10.2.7.2.
- (3) Installed in each bay of obstructed construction, with the deflectors located a minimum of 1 in. (25 mm) and a maximum of 12 in. (300 mm) below the ceiling.
- (4) Installed with the deflectors within the horizontal planes 1 in. to 6 in. (25 mm to 150 mm) below composite wood joists to a maximum distance of 22 in. (550 mm) below the ceiling/roof deck only where joist channels are provided with blocking to the full depth of the joists with material at least equivalent to the web construction so that individual channel areas do not exceed 300 ft² (28 m²)
- (5)* Installed with deflectors of sprinklers under concrete tee construction with stems spaced less than 7 1/2 ft (2.3 m) on centers and a maximum depth of the stems of 30 in. (750mm), located at or above a horizontal plane 1 in. (25 mm) below the bottom of the stems of the tees and complying with Table 10.2.7.2(a) or Table 10.2.7.2(b).

A.10.2.6.1.2(5) For concrete joists spaced less than 3 ft (900 mm) on center, the rules for obstructed construction shown in 10.2.6.1.2 apply. For concrete tee construction with stems spaced less than 7 ft 6 in. (2.3 m) on center, the sprinkler deflector can be located at or above a horizontal plane 1 in. (25 mm) below the bottom of the stems of the tees. This includes sprinklers located between the stems. [See Figure A.10.2.6.1.2(5).]

Figure A.10.2.6.1.2(5) Typical Concrete Joist Construction.





Public Comment No. 152-NFPA 13-2023 [Section No. A.10.2.7.3.2.2]

A.10.2.7.3.2.2

This is an exception to section [10.2.7.3.2 Suspended or Floor-Mounted Vertical Obstructions](#) , therefore [Table 10.2.7.3.2.1\(a\)](#) , [Table 10.2.7.3.2.1\(b\)](#) , and [Figure 10.2.7.3.2.1](#) do not apply to privacy curtains that meet the criteria of 10.2.7.3.2.2. Testing has shown that privacy curtains supported from the ceiling by mesh fabric do not obstruct the distribution pattern in a negative way as long as the mesh is 70 percent or more open and extends down from the ceiling-sprinkler deflector a minimum of 22 in 20 in . (550 mm) 500 mm. Regardless of where a sprinkler is located horizontally from the curtain, as long as the curtain is suspended by mesh that meets the requirements of 10.2.7.3.2.2 the sprinkler discharge is not considered to be obstructed.

Statement of Problem and Substantiation for Public Comment

After reviewing the July 26, 2004 NIST report “The Effect of Privacy Curtains on Sprinkler Spray” and the resulting NFPA Report on Proposals A2006 13-235 Log #442 AUT-SSI, it is evident that the original intent was to provide an exception to the section on Suspended or Floor-Mounted Vertical Obstructions. However, the technical committee at that time erroneously qualified item (3). Based on the NIST testing and the original first revision, item (3) should state the mesh must extend 20 inches down from the sprinkler deflector, not 22 inches down from the ceiling. This revised annex text explains the intent.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 149-NFPA 13-2023 [Section No. 10.2.7.3.2.2]	
Related Item	
• PI-243	

Submitter Information Verification

Submitter Full Name: Terry Victor
Organization: Johnson Controls
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Submittal Date: Fri May 26 14:58:21 EDT 2023
Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-1032-NFPA 13-2023](#)

Statement: The required distance to the mesh of privacy curtains has been modified to a distance related to the deflector versus the ceiling to align with the 2004 NIST test, "The Effect of Privacy Curtains on Sprinkler Spray" outcome.

**Public Comment No. 153-NFPA 13-2023 [Section No. A.10.3.6.2.2.1]**

A.10.3.6.2.2.1 — This is an exception to section ~~10.3.6.2.2 Suspended or Floor-Mounted Vertical Obstructions~~, therefore ~~Table 10.3.6.2.2(a)~~, ~~Table 10.3.6.2.2(b)~~, and ~~Figure 10.3.6.2.2~~ do not apply to privacy curtains that meet the criteria of 10.2.7.3.2.2. - Testing has shown that privacy curtains supported from the ceiling by mesh fabric do not obstruct the distribution pattern in a negative way as long as the mesh is 70 percent or more open and extends down from the

ceiling

sprinkler deflector a minimum of

22 in

20 in . (

550 mm).

500 mm). Regardless of where a sprinkler is located horizontally from the curtain, as long as the curtain is suspended by mesh that meets the requirements of 10.3.6.2.2.1 the sprinkler discharge is not considered to be obstructed.

Statement of Problem and Substantiation for Public Comment

After reviewing the July 26, 2004 NIST report “The Effect of Privacy Curtains on Sprinkler Spray” and the resulting NFPA Report on Proposals A2006 13-235 Log #442 AUT-SSI, it is evident that the original intent was to provide an exception to the section on Suspended or Floor-Mounted Vertical Obstructions. However, the technical committee at that time erroneously qualified item (3). Based on the NIST testing and the original first revision, item (3) should state the mesh must extend 20 inches down from the sprinkler deflector, not 22 inches down from the ceiling.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 151-NFPA 13-2023 [Section No. 10.3.6.2.2.1]	

Related Item

- PI-244

Submitter Information Verification

Submitter Full Name: Terry Victor

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Submittal Date: Fri May 26 15:13:42 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Rejected but see related SR

Action:

Resolution: [SR-1033-NFPA 13-2023](#)

Statement: The required distance to the mesh of privacy curtains has been modified to a distance related to the deflector versus the ceiling to align with the 2004 NIST test, "The Effect of Privacy Curtains on Sprinkler Spray" outcome.



Public Comment No. 144-NFPA 13-2023 [Section No. A.14.2.4]

A.14.2.4 — 8.2.1 —

Storage in single-story or multistory buildings can be permitted, provided the maximum ceiling/roof height as specified in Table 14.2.8.2.1 is satisfied for each storage area.

Statement of Problem and Substantiation for Public Comment

Section 14.2.4 needs to be deleted, so this annex note needs to be moved. This appears to be better situated as an annex note to 14.2.8.2.1.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 86-NFPA 13-2023 [Section No. 14.2.4]	
<u>Related Item</u>	
• FR 1126 • PI 488	

Submitter Information Verification

Submitter Full Name: Kenneth Isman
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Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1200-NFPA 13-2023
Statement: The information was removed as it is redundant to, and conflicts with, section 14.2.10 as modified in the First Draft. Since Section 14.2.4 was deleted, A.14.2.4 was moved to A.14.2.8.2.1.



Public Comment No. 201-NFPA 13-2023 [New Section after A.14.2.11.3.2]

A.14.2.11.3.6.1

The installation of supplemental sprinklers below non-flat or non-solid obstructions using linear spacing that is less than the required minimum spacing indicated for the sprinkler is acceptable for this application. This is due to the lack of heat collection under the obstruction. As a result, the intent of the close spacing of the supplemental sprinklers is to allow the sprinkler closest to the point of fire origin to operate in a timely fashion, similar to an in-rack sprinkler, and provide the amount of sprinkler discharge needed to the fire area below the obstruction in order to obtain either fire control or fire suppression. As a result, sprinkler skipping due to the close spacing of these sprinklers is not a concern.

Statement of Problem and Substantiation for Public Comment

Because the installation of supplemental sprinklers could be installed on spacing that is less than that required for ceiling sprinklers, Annex language is being added to help clarify for an AHJ that having this closer spacing is acceptable as well as explaining the reason why this is the case.

Related Item

- FR-1068

Submitter Information Verification

Submitter Full Name: Weston Baker

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Submittal Date: Wed May 31 07:31:43 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1047-NFPA 13-2023

Statement: The spacing requirements for supplemental sprinklers were provided within Section 9.5.5.3.4.2 at the first draft meeting, which applied to all occupancy hazards. For the second draft, the guidelines that were previously in Section 9.5.5.3.4.2 are being relocated into a new section of Chapter 14 so that the guidelines previously provided in Section 9.5.5.3.4.2 only apply to CMSA and ESFR sprinklers protecting storage occupancies. For CMSA sprinklers chapter 13 points you to these requirements in chapter 14.

This language is being added to help clarify that water shields are not required for the supplemental sprinklers when installed in accordance with Section 14.2.11.3.6.2.

Because the installation of supplemental sprinklers could be installed on spacing that is less than that required for ceiling sprinklers, Annex language is being added to help

clarify for an AHJ that having this closer spacing is acceptable as well as explaining the reason why this is the case.



Public Comment No. 71-NFPA 13-2023 [New Section after A.14.2.11.3.2]

A.14.2.12 Clearance to Storage (Early Suppression Fast-Response Sprinklers)

Where supplemental sprinklers are located under obstructions the clearance between the deflector and the top of storage shall be 36 in. (900mm) or greater. The clearance to storage required for supplemental sprinklers installed under obstructions should include all storage that falls within the protection area of the supplemental sprinkler as well as the protection area of the ceiling level sprinklers that are supplemented due to the obstruction.

Statement of Problem and Substantiation for Public Comment

The current text makes no distinction between ESFR sprinklers at the ceiling and supplemental sprinklers. While the clearance to storage for these heads, and the obstructed heads above is important, the standard lacks any defining guidance as to the extents of this storage height limitation. I believe adding this material to the annex helps to identify the issue of clearance to storage for supplemental sprinklers while also defining criteria to allow normal storage heights in unaffected areas.

Related Item

- 429-NFPA-13-2022

Submitter Information Verification

Submitter Full Name: Mike Morey

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Zip:

Submittal Date: Wed Apr 05 10:16:37 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Action: Rejected

Resolution: This annex would add confusion. Regardless of where a sprinkler is located above storage it must maintain 36 inches of clearance in accordance with 14.2.12. This would apply to Supplemental, ESFR, and CMSA sprinklers, as well.

**Public Comment No. 145-NFPA 13-2023 [Section No. A.16.2.7.7.1]****A.16.2.7.7.1**

The minimum information in the list contained in the spare sprinkler cabinet should be marked with the sprinkler identification described in 7.2.1; a general description of the sprinkler, including upright, pendent, residential, ESFR, and so forth; the quantity of each type of sprinkler installed in the property; the quantity of sprinklers that is to be maintained in the spare sprinkler cabinet; and a sprinkler wrench type.

An example of the list is shown in Figure A.16.2.7.7.1.

Figure A.16.2.7.7.1 Sample List.

Sprinklers Contained in this Cabinet				
Sprinkler Identification, SIN	General Description	Temperature Rating, °F	Sprinkler Quantity Maintained	Sprinkler Wrench Type
TY9128	Extended coverage, K-25, upright	165	6	W-Type 1 sprinkler wrench
VK494	Residential concealed pendent	155	6	Standard sprinkler wrench 21475MB

Statement of Problem and Substantiation for Public Comment

Having the number and type of sprinklers installed in the property will aid when it comes time to test sprinklers as required by NFPA 25, rather than having to perform a survey to determine this information.

Related Public Comments for This Document**Related Comment****Relationship**

[Public Comment No. 143-NFPA 13-2023 \[Section No. 16.2.7.7.1\]](#)

[Public Comment No. 146-NFPA 13-2023 \[Section No. A.16.2.7.7.1\]](#)

Related Item

- FR-1078

Submitter Information Verification

Submitter Full Name: Terry Victor

Organization: Johnson Controls

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Submittal Date: Fri May 26 14:13:52 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Rejected but see related SR

Action:

Resolution: [SR-1049-NFPA 13-2023](#)

Statement: Having the number and type of sprinklers installed in the property will aid when it comes time to test sprinklers as required by NFPA 25, rather than having to perform a survey to determine this information. In addition some editorial corrections were made and the figure in the annex was updated to add a new column.

**Public Comment No. 146-NFPA 13-2023 [Section No. A.16.2.7.7.1]****A.16.2.7.7.1**

The minimum information in the list contained in the spare sprinkler cabinet should be marked with the sprinkler identification described in 7.2.1; a general description of the sprinkler, including upright, pendent, residential, ESFR, and so forth; the quantity of sprinklers that is to be maintained in the spare sprinkler cabinet; and a sprinkler wrench type.

An example of the list is shown in Figure A.16.2.7.7.1.

Figure A.16.2.7.7.1 Sample List. - Modify the Figure by adding a new column that states "Sprinkler Quantity in the Property".

Sprinklers Contained in this Cabinet				
Sprinkler Identification, SIN	General Description	Temperature Rating, °F	Sprinkler Quantity Maintained	Sprinkler Wrench Type
TY9128	Extended coverage, K-25, upright	165	6	W-Type 1 sprinkler wrench
VK494	Residential concealed pendent	155	6	Standard sprinkler wrench 21475MB

Statement of Problem and Substantiation for Public Comment

Having the number and type of sprinklers installed in the property will aid when it comes time to test sprinklers as required by NFPA 25, rather than having to perform a survey to determine this information.

Related Public Comments for This Document**Related Comment****Relationship**

[Public Comment No. 143-NFPA 13-2023 \[Section No. 16.2.7.7.1\]](#)

[Public Comment No. 145-NFPA 13-2023 \[Section No. A.16.2.7.7.1\]](#)

Related Item

- FR-1078

Submitter Information Verification

Submitter Full Name: Terry Victor

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Submittal Date: Fri May 26 14:19:07 EDT 2023

Committee: AUT-SSI

Committee Statement

Committee Rejected but see related SR

Action:

Resolution: [SR-1049-NFPA 13-2023](#)

Statement: Having the number and type of sprinklers installed in the property will aid when it comes time to test sprinklers as required by NFPA 25, rather than having to perform a survey to determine this information. In addition some editorial corrections were made and the figure in the annex was updated to add a new column.