AGENDA

NFPA Technical Committee on Initiating Devices for Fire Alarm and Signaling Systems (SIG-IDS)
NFPA 72 First Draft Meeting (A2024)

July 21 – July 22, 2022
8:00 a.m. – 5:00 p.m. (ET)

Indianapolis, Indiana
To join the meeting, please contact JDepew@nfpa.org

1. **Call to order.** Chairman Laurence J. Dallaire.
2. **Introductions.** See committee roster attached.
3. **Chair report.** Laurence J. Dallaire.
4. **Staff liaison report.** Jeff Sargent/Elena Liolin.
5. **Previous meeting minutes.** June 16th, 18th and 23rd, 2020, Virtual. See attached.
6. **NFPA 72 First Draft.**
   a. **Public Inputs.** See attached.
   b. **Task group report(s).**
      i. **TG 1**. Samuel Rokowski.
      ii. **TG 2**. Scott Frazer.
      iii. **TG 3**. James Mottorn.
      iv. **TG 4**. Jason Webb.

Task Group 1	Task Group 2	Task Group 3	Task Group 4
Samuel Rokowski – Chair	Scott Frazer – Chair	James Mottorn – Chair	Jason Webb – Chair
Chuck Berra	Abhay Nadgir	Alhassan Ahmed	Charles Bockett
David Waite	Brian Swanick	Cecil Bilbo	Chris Marrion
Henry Kozlowski	David Mills	David Nelson	Grady Metcalf
Jim Goggin	James Gaut	John Denhardt	John Parssinen
Justin Merrick	Jerry Trotter	Lynn Nielson	Mark Boone
Ken Schneider	John Cholin	Marty Heller	Michael Sides
Mark Hopkins	Larry Mann	Nicole Thomson	Noel Hernberger

Mike Brennan	Mark Swerdin	Robert Kasiski	Ryan Hall
Ovid Morphew	Mohammed Saefan	Robert Mathes	Sam Miller
Scott Bailey	Raja Hussain	Scott Lang	Todd Gustafson
Wayne Aho	Shar Beddow	Tommy Farr	Wilson Cheung

7. **Other Business.**
8. **Future meetings.**
9. **Adjournment.**

Initiating Devices for Fire Alarm and Signaling Systems — SIG-IDS

Signaling Systems for the Protection of Life and Property

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Chair — **SIG-IDS**
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Initiating Devices for Fire Alarm and Signaling Systems

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Initiating Devices for Fire Alarm and Signaling Systems — SIG-IDS

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Initiating Devices for Fire Alarm and Signaling Systems

Signaling Systems for the Protection of Life and Property

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Chad Duffy 9/10/2021

Staff Liaison **SIG-IDS**

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Technical Committee on
Initiating Devices for Fire Alarm and Signaling Systems
NFPA 72 (SIG-IDS) Second Draft Meeting Minutes

June 16th, 18th and 23rd, 2020 Virtual Meetings

- Item 20-6-1 Call to Order

  TC Chair, LJ Dallaire called the meetings to order:
  16 June 2020 (Day 1) 14.00 EST
  18 June 2020 (Day 2) 10.00 EST
  23 June 2020 (Day 3) 14.00 EST

- Item 20-6-2 Roll Call and Introductions

  See attached

- Item 20-6-3 Approval of Meeting Agenda

  Scott Golly motion
  Justin Merrick second
  Motion carries

- Item 20-6-4 Approval of Meeting Minutes

  Jim Goggin motion
  Scott Golly second
  Motion carries

- Item 20-6-5 Staff/Chair Remarks

  Richard Roux, NFPA provides presentation and overview of the process.
  TC Chair, LJ Dallaire thanked everyone for their hard work.

- Item 20-6-6 Task Group Reports

  See Old Task Groups

- Item 20-6-7 Review of Chapter 11 and establish/revise necessary references in Chapter 17/Annex 17 to Chapter 11 as required

  See New Task Groups

- Item 20-6-8 Public Comments and Second Revisions

Four (4) Task Groups were comprised from the Technical Committee and all PCs were assigned to TG1-4. Each TG presented their recommendations and the TC reviewed the Task Group proposals for 25 Public Comments. All PCs were addressed.

- Item 20-6-9 Old/New Task Groups

  Video detector TG - Sam Miller / Scott Golly / Scott Frazer - Did not see anything needing to be changed. Existing language allows products to be used under performance design. Task Group is retired with thanks.

  4" detector spacing TG - Guidance of the annex does not align with the body (fix the 4" detector spacing). Sam Rokowski, Chair. This was addressed during Public Comments. Task Group is retired with thanks.

  Tables in Annex B TG – should they be revised to align with NFPA 92? No reason to make a change because the reference is still valid. Sam Rokowski, Chair. Task Group is retired with thanks.

  Task Group to review symbols comparing NFPA 72 chapter 17 with NFPA 170. Justin Merrick, Mark Swerdin and Marty Heller on Task Group – no changes recommended. Task Group is retired with thanks.

  New Task Group formed to review symbols in NFPA 72 chapter 17 for compliance with NFPA 170. Scott Bailey (Chair), Jim Gaut, Mark Swerdin and Marty Heller

  New Task Group for Manual of Style to review the Word documents and respective annex to see what needs to change, in order to provide PIs for the next cycle. Richard Roux, NFPA to work with this TG over the next year. Sam Rokowski (Chair), Sam Miller, Jason Webb and Noel Hernberger.

  New Task Group for cybersecurity. Justin Merrick (Chair) and Ken Schneider on TG, and Jason Webb offered an outside specialist colleague to support the TG. TG to look through the new Chapter 11 and 17 to see if we need new cybersecurity requirements. Looking for opportunities for where we should be pointing to Chapter 11 when appropriate.

  New Task Group for CO detection. See comments in New Business. Scott Lang (Chair), Jason Webb, Richard Roberts (guest), John Schertel and Chris Marrion.

- Item 20-6-10 Old Business

  No old business

- Item 20-6-11 New Business

Scott Lang asked about having a new Carbon Monoxide Task Group for new requirements. TC Chair agrees that with dissolution of 720 we need more focus on this area. See New Task Groups.

- Item 20-6-12 Review Dates and Times for Future Meetings/Conference Calls

  Richard Roux, NFPA commented that this is our last meeting of this cycle. The next milestone is the Tech Session in Las Vegas, June, 2021.

- Item 20-6-13 Adjournment and Closing Remarks

  TC Chair, LJ Dallaire thanked the committee for their hard work during difficult circumstances. Richard Roux, NFPA echoed comments thanking the committee members, especially for their hard work during the second draft.

  16 June 2020 (Day 1) suspend @ 16.55 EST
  18 June 2020 (Day 2) suspend @ 13.17 EST
  23 June 2020 (Day 3) adjourn @ 17.10 EST

  Motion to adjourn, seconded and carries.

Submitted respectfully,

Justin D. Merrick
23 June 2020

Principal members in attendance:

Dallaire, Laurence (Chair)	Architect of the Capitol
Cholin, John	J. M. Cholin Consultants Inc.
Duplechian, Donald	Wilson Fire Equipment
Frazer, Scott	Performance Design Technologies
Gaut, James	Marriott Vacations Worldwide
Goggin, Jim	Protectowire Company, Inc.
Heller, Marty	National Fire Sprinkler Association
Hernberger, Noel	International Brotherhood f Electrical Workers
Lang, Scott	Honeywell International
Makowka, Norbert	National Association of Fire Equipment Distributors
Marrion, Chris	Marrion Fire & Risk Consulting PE, LLC
Merrick, Justin	S&S Sprinkler Company, LLC
Miller, Samuel	BP
Mottorn, James	Bosch Security Systems
Nadgir, Abhay	Fire Suppression Systems Association
Nielson, Lynn	City of Henderson
Ouimette, Ronald	Siemens Building Technologies, Inc.
Parssinen, John	UL LLC
Rokowski, Samuel	Reedy Creek Improvement District
Schertel, John	National Electrical Manufacturers Association
Schneider, Kenneth	UA- ITF
Sides, Michael	Global Asset Protection Services, LLC
Swerdin, Mark	Zurich Services Corporation
Waite, David	FM Global
Webb, Jason	Potter Electric Signal Company
Golly, Scott (Voting Alt)	JENSEN HUGHES
Gustafson, Todd (Voting Alt)	Automatic Fire Alarm Association, Inc.

Alternates in attendance:

Bailey, Scott	Fire Suppression Systems Association
Henke, Michael	Potter Electric Signal Company
Kasiski, Robert	FM Global
Mills, David	UL LLC
Swanick, Brian	Siemens Industry, Inc.

Guests in attendance:

Bunker, Jr., Merton
Finnegan, Dan (Siemens)
Roberts, Richard (Honeywell)

NFPA Staff in attendance:

Duffy, Chad
Roux, Richard

Public Input No. 538-NFPA 72-2022 [New Section after 3.3.37.2]

Carbon Monoxide Source

Equipment that is commonly used in a building or a permanently installed appliance, fireplace or process that is located inside a building that produces or emits carbon monoxide gas.

Statement of Problem and Substantiation for Public Input

This public input is adding a definition for “carbon monoxide source” and replacing the term “fuel-burning appliance” in several sections. This change is needed to clarify that only permanently installed or commonly used sources in a building such as gas fired heaters or propane powered forklifts that are part of the daily operations of a space are captured.

Submitter Information Verification

Submitter Full Name: Tim Knisely
Organization: Automatic Fire Alarm Association (AFAA)
Affiliation: Automatic Fire Alarm Association (AFAA)
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 31 15:14:31 EDT 2022
Committee: SIG-IDS

Public Input No. 180-NFPA 72-2022 [Section No. 3.3.77 [Excluding any Sub-Sections]]

A device suitable for connection to a circuit that has a sensor that responds to a ~~physical~~ stimulus such as gas, heat, light or smoke. (SIG-IDS)

Statement of Problem and Substantiation for Public Input

Not all detectors require a physical stimulus. An example is video image smoke detectors that sense light reflected from smoke.

Submitter Information Verification

Submitter Full Name: Scott Lang
Organization: Honeywell International
Street Address:
City:
State:
Zip:
Submittal Date: Wed Mar 09 10:45:49 EST 2022
Committee: SIG-IDS

Public Input No. 176-NFPA 72-2022 [Section No. 3.3.77.18]

3.3.77.18 Radiant Energy–Sensing Fire Detector.

A non-imaging device that detects radiant energy, such as ultraviolet, visible, or infrared, that is emitted as a product of combustion reaction and obeys the laws of optics. (SIG-IDS)

Statement of Problem and Substantiation for Public Input

Traditionally, in NFPA 72, radiant energy detectors were spark or flame detectors that did not use a visible or thermal imager. These radiant energy detectors (such as triple-IR), use photonic or thermal sensors such as pyroelectric detectors. This definition is being revised in order to add a new definition for thermal image fire detectors. By revising the definition for radiant energy detectors, it will not be necessary to go back through the whole standard to revise the language to differentiate between non-imaging and imaging detectors.

Submitter Information Verification

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Submittal Date: Wed Mar 09 09:57:34 EST 2022
Committee: SIG-IDS

Public Input No. 177-NFPA 72-2022 [New Section after 3.3.77.23]

3.3.77.24 Thermal image fire detector.

An initiating device that senses overheated combustible material by imaging in the long wave infrared wavelengths (far infrared) using a focal plane array

Statement of Problem and Substantiation for Public Input

Though thermal image fire detectors are technically radiant energy detectors, the current definition for radiant energy detectors was originally written for traditional (non-imaging) flame and spark detectors. New products are being developed with enhanced capabilities to look for overheated areas in a thermal imager field of view. Specific requirements for these detectors need to be added to the standard and they may be different than traditional flame detectors.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 275-NFPA 72-2022 [New Section after 14.4.3.3]	

Submitter Information Verification

Submitter Full Name: Scott Lang
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Zip:
Submittal Date: Wed Mar 09 10:03:37 EST 2022
Committee: SIG-IDS

Public Input No. 199-NFPA 72-2022 [New Section after 3.3.323]

3.3.324 Unconditioned Area

Enclosed areas, rooms, or spaces without continuous climate or HVAC controls.

Statement of Problem and Substantiation for Public Input

This is a new definition to support a new requirement in Chapter 17 for carbon monoxide detectors in unconditioned areas.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 198-NFPA 72-2022 [New Section after 17.12.2]	
Public Input No. 198-NFPA 72-2022 [New Section after 17.12.2]	

Submitter Information Verification

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Submittal Date: Tue Mar 29 10:54:09 EDT 2022
Committee: SIG-IDS

Public Input No. 369-NFPA 72-2022 [New Section after 3.3.331]

Waterflow Alarm-Initiating Device

An attachment to a water-based fire protection system that detects and signals a predetermined volume of water flow.

Statement of Problem and Substantiation for Public Input

This definition is needed since it is a term used throughout the code.

Submitter Information Verification

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Committee: SIG-IDS

Public Input No. 461-NFPA 72-2022 [New Section after 3.3.332]

TITLE OF NEW CONTENT

3.3.332 Waterflow Alarm-Initiating Device.

An attachment to a water-based fire protection system that detects and signals a predetermined volume of water flow.

Additional Proposed Changes

File Name	Description	Approved
NFPA_72_BS_SB_3.3.332_water_flow_comments.docx		

Statement of Problem and Substantiation for Public Input

Add definition of waterflow alarm device since it is used throughout the code.

Submitter Information Verification

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Affiliation: Automatic Fire Alarm Association (AFAA)
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Zip:
Submittal Date: Fri May 27 09:44:03 EDT 2022
Committee: SIG-IDS

Public Input No. 502-NFPA 72-2022 [New Section after 3.3.332]

3.3.332 Waterflow Alarm-Initiating Device

An attachment to a water-based fire protection system that detects and signals a predetermined voume of water flow.

Statement of Problem and Substantiation for Public Input

add definition of waterflow alarm device since it is used throughout the code.

Submitter Information Verification

Submitter Full Name: Megan Hayes
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City:
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Submittal Date: Mon May 30 15:22:03 EDT 2022
Committee: SIG-IDS

Public Input No. 484-NFPA 72-2022 [New Section after 17.4]

17.X Initiating Device Circuits

17.x.1 A hard wired initiating device circuit shall comply with requirements in this Chapter and sections 23.5 or 23.6.

17.x.2 (move current 17.4.6 to here as it pertains to interconnection requirements needed for supervising a initiating device circuit) Duplicate terminals, leads, or connectors that provide for the connection of installation wiring shall be provided on each initiating device for the express purpose of connecting into the fire alarm system to monitor the integrity of the signaling and power wiring unless the initiating devices are connected to a system that provides the required monitoring.

17.x.3 The selection of wire size and material shall meet the requirements of this Code and the applicable sections in NFPA70, article 760.

17.x.4 The interconnection of an initiating device with fire resistant wiring shall be in accordance with the manufacturers installation instructions and comply with NFPA 70, articles 728 and 760.

17.x.5 A low power wireless initiating device shall comply with the performance requirements in section 23.16.

Statement of Problem and Substantiation for Public Input

We have nothing in this chapter that references the interconnection of initiating devices with other chapters and sections in this Code. Chapter 12 describes the circuits and pathway requirements, Section 23.5 references connections to initiating devices, and section 23.16 describes the wireless performance of devices.
This proposal adds a new section 17.X for initiating device circuits that correlates this chapter with the other above chapters and requirements.

Submitter Information Verification

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Submittal Date: Fri May 27 13:18:44 EDT 2022
Committee: SIG-IDS

Public Input No. 436-NFPA 72-2022 [Section No. 17.5.3.1.1]

17.5.3.1.1

Where inaccessible areas are constructed of or contain combustible material, unless otherwise specified in 17.5.3.1.2 ~~, they shall be made accessible and shall be~~ and 17.5.3.1.3 , both of the following shall apply:

(1) Be made accessible

(2) Be protected by a detector(s)~~.~~

Statement of Problem and Substantiation for Public Input

Manual of style issue. The previous text had shall apply twice in the section. The section was altered to meet the MOS.

Submitter Information Verification

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Submittal Date: Thu May 26 14:44:51 EDT 2022
Committee: SIG-IDS

Public Input No. 438-NFPA 72-2022 [New Section after 17.5.3.1.2]

17.5.3.1.4
Detectors shall not be required in combustible blind spaces where the concealed space is entirely filled with a noncombustible insulation.

Statement of Problem and Substantiation for Public Input

Manual of Style issue. Creating new section to address the two separate conditions in a single section.

Worked with MOS TG.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 437-NFPA 72-2022 [Section No. 17.5.3.1.2]	

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
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Submittal Date: Thu May 26 14:55:28 EDT 2022
Committee: SIG-IDS

Public Input No. 439-NFPA 72-2022 [New Section after 17.5.3.1.2]

17.5.3.1.4

Where the concealed space is entirely filled with a noncombustible insulation in solid joist construction as described in 17.5.3.1.3, the insulation shall be required to fill only the space from the ceiling to the bottom edge of the joist of the roof or floor deck.

Statement of Problem and Substantiation for Public Input

Manual of style issue. Adding the second section of Public Input 438.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 440-NFPA 72-2022 [Section No. 17.5.3.1.3]	
Public Input No. 441-NFPA 72-2022 [Section No. 17.5.3.1.4]	
Public Input No. 442-NFPA 72-2022 [Section No. 17.5.3.1.5]	

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City:
State:
Zip:
Submittal Date: Thu May 26 14:59:42 EDT 2022
Committee: SIG-IDS

Public Input No. 437-NFPA 72-2022 [Section No. 17.5.3.1.2]

17.5.3.1.2

Detectors shall not be required in combustible blind spaces if any of the following conditions exist:

(1) Where the ceiling is attached directly to the underside of the supporting beams of a combustible roof or floor deck~~.~~

(2) Where ~~the concealed space is entirely filled with a noncombustible insulation. (In solid joist construction, the insulation shall be required to fill only the space from the ceiling to the bottom edge of the joist of the roof or floor deck.)~~

(3) ~~Where~~ there are small concealed spaces over rooms, provided that any space in question does not exceed 50 ft^2 (4.6 m^2) in area.

(4) In spaces formed by sets of facing studs or solid joists in walls, floors, or ceilings, where the distance between the facing studs or solid joists is less than 6 in. (150 mm).

Statement of Problem and Substantiation for Public Input

Manual of style issue. Sub section (2) is being removed and placed into another section. The single sub section had two existing requirements and didn't really fit as a sub section.

Worked with SIG IDS TG.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 438-NFPA 72-2022 [New Section after 17.5.3.1.2]	

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 26 14:50:02 EDT 2022
Committee: SIG-IDS

Public Input No. 440-NFPA 72-2022 [Section No. 17.5.3.1.3]

17.5.3.1.3 ~~–~~ 5

Detectors shall not be required below open grid ceilings if all of the following conditions exist:

(1) Openings of the grid are ¼ in. (6.4 mm) or larger in the least dimension.

(2) Thickness of the material does not exceed the least dimension.

(3) Openings constitute at least 70 percent of the area of the ceiling material.

Statement of Problem and Substantiation for Public Input

Renumbering issue. With Public Inputs 438 & 439, section renumbering will be required.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 439-NFPA 72-2022 [New Section after 17.5.3.1.2]	Renumbering will only be required if accepted

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
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Submittal Date: Thu May 26 15:03:17 EDT 2022
Committee: SIG-IDS

Public Input No. 277-NFPA 72-2022 [Section No. 17.5.3.1.4]

17.5.3.1.4*

Where concealed accessible spaces above suspended ceilings are used as a return air plenum,_ meeting the requirements of NFPA 90A,_ detection shall be provided in one of the following means:

(1) Smoke detection shall be provided in accordance with 17.7.5.2, or

(2) Smoke detection shall be provided at each connection from the return air plenum to the central air-handling system.

Statement of Problem and Substantiation for Public Input

Missing commas in the clause make it hard to read.

Submitter Information Verification

Submitter Full Name: Scott Lang
Organization: Honeywell International
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 12 09:43:22 EDT 2022
Committee: SIG-IDS

Public Input No. 441-NFPA 72-2022 [Section No. 17.5.3.1.4]

17.5.3.1.4 6 *

Where concealed accessible spaces above suspended ceilings are used as a return air plenum meeting the requirements of NFPA 90A detection shall be provided in one of the following means:

(1) Smoke detection shall be provided in accordance with 17.7.5.2, or

(2) Smoke detection shall be provided at each connection from the return air plenum to the central air-handling system.

Statement of Problem and Substantiation for Public Input

Renumbering issue. If attached PI's are accepted the section numbers will need to be revised.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 439-NFPA 72-2022 [New Section after 17.5.3.1.2]	
Public Input No. 443-NFPA 72-2022 [Section No. A.17.5.3.1.4]	

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 26 15:05:38 EDT 2022
Committee: SIG-IDS

Public Input No. 442-NFPA 72-2022 [Section No. 17.5.3.1.5]

17.5.3.1.5 7

Detectors shall not be required underneath open loading docks or platforms and their covers and for accessible underfloor spaces if all of the following conditions exist:

(1) Space is not accessible for storage purposes or entrance of unauthorized persons and is protected against the accumulation of windborne debris.

(2) Space contains no equipment such as steam pipes, electric wiring, shafting, or conveyors.

(3) Floor over the space is tight.

(4) No flammable liquids are processed, handled, or stored on the floor above.

Statement of Problem and Substantiation for Public Input

Renumbering issue. If previous sections are approved the section numbers will need to be renumbered.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 439-NFPA 72-2022 [New Section after 17.5.3.1.2]	

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 26 15:07:35 EDT 2022
Committee: SIG-IDS

Public Input No. 529-NFPA 72-2022 [Section No. 17.6.1.2]

17.6.1.2

Designs not in accordance with 17.6.1.3 shall be deemed prescriptive designs ~~and~~ .

17.6.1.3

Designs not in accordance with 17.6.1.3 shall be designed in accordance with the prescriptive requirements of this chapter.

17.6.1.4*

Performance-based designs shall be executed in accordance with Section 17.3

17.6.1.5

Heat sensing fire detectors shall be listed in accordance with applicable standards such as UL 521, *Heat Detectors for Fire Protective Signaling Systems* .

17.6.1.6

Spot-type heat detectors shall include in their installation instructions, technical data, and listing documentation the operating temperature and response time index (RTI) as determined by the organization listing the device.

Statement of Problem and Substantiation for Public Input

Manual of style issue. Section 17.6.1.2 had shall in the normative texts two times. The TG agreed to break it into two different sections. The remainder of the PI was to renumber the existing sections.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
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Submittal Date: Tue May 31 13:24:43 EDT 2022
Committee: SIG-IDS

Public Input No. 530-NFPA 72-2022 [Section No. 17.6.3.1.1]

17.6.3.1.1 * – ~~Spacing.~~

~~One of the following requirements shall apply:~~

Detector spacing shall comply with 17.6.3.1.1.1 or 17.6.3.1.1.2.

17.6.3.1.1.1

The distance between detectors shall

~~not~~

be both of the following:

(1) Not exceed their listed spacing

~~, and there shall be detectors~~

(2) D etectors located within a distance of one-half the listed spacing, measured at right angles from all walls or partitions extending upward to within the top 15 percent of the ceiling height.

One of the following requirements shall apply:
17.6.3.1.1.2

All points on the ceiling shall have a detector within a distance equal to or less than 0.7 times the listed spacing (0.7 *S*).

Statement of Problem and Substantiation for Public Input

Manual of style issue. The existing text had both shall and shall not in normative text. In addition there was text that needed to be placed in another sub section. MOS TG agreed.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
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Submittal Date: Tue May 31 13:44:02 EDT 2022
Committee: SIG-IDS

Public Input No. 531-NFPA 72-2022 [Section No. 17.6.3.5.2]

17.6.3.5.2

For line-type electrical conductivity detectors *(see 3.3.77.12)* and pneumatic rate-of-rise tubing heat detectors (*see 3.3.77.16)*, which rely on the integration effect, the derating required by Table 17.6.3.5.1 shall not apply~~, and the~~ .

17.6.3.5.3

For heat detectors described in 17.6.3.5.2, the manufacturer's published instructions shall be followed for appropriate alarm point and spacing.

17.6.3.5.4*

The spacing of heat detectors shall not be required to be less than 0.4 times the height of the ceiling.

A.17.6.3.5.4*

The width of uniform temperature of the plume when it impinges on the ceiling is approximately 0.4 times the height above the fire, so reducing spacing below this level will not increase response time. For example, a detector with a listed spacing of 15 ft (4.6 m) or 225 ft^2 (21 m^2) need not be spaced closer than 12 ft (3.7 m) on a 30 ft (9.1 m) ceiling, even though Table 17.6.3.5.1 states that the spacing should be 0.34 × 15 ft (0.34 × 4.6 m), which equals 5.1 ft (1.6 m).

Statement of Problem and Substantiation for Public Input

Manual of style issue. Section 17.6.3.5.2 has both shall and shall not in the normative text in addition to multiple requirements. The MOS TG separated the sections to meet the MOS requirements.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
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Street Address:
City:
State:
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Submittal Date: Tue May 31 13:50:26 EDT 2022
Committee: SIG-IDS

Public Input No. 532-NFPA 72-2022 [Section No. 17.7.1.2]

17.7.1.2*

Designs not in accordance with 17.7.1.3 shall be both of the following:

(1) Be deemed prescriptive designs ~~and shall be~~ .

(2) Be designed in accordance with the prescriptive requirements of this chapter.

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG agreed. Section 17.7.1.2 had two shalls and two separate requirements in a single section. We separated the two requirements.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
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Submittal Date: Tue May 31 14:38:19 EDT 2022
Committee: SIG-IDS

Public Input No. 244-NFPA 72-2022 [Section No. 17.7.2]

17.7.2* Protection During Construction.

17.7.2.1

Where detectors are installed for signal initiation during construction, they shall be cleaned and verified to be operating in accordance with the listed sensitivity, or they shall be replaced prior to the final acceptance test of the system.

17.7.2.2*

Where ~~detectors are installed but not operational during construction, they shall be protected from construction debris, dust, dirt, and damage in accordance with the manufacturer's recommendations and verified to be operating in accordance with the listed sensitivity, or they shall be replaced prior to the final acceptance test of the system.~~

~~17.7.2.3~~ –

~~Where~~ detection is not required during construction, detectors shall not be installed until after all other construction trades have completed cleanup.

Statement of Problem and Substantiation for Public Input

Either smoke detectors are installed for signal initiation during construction per 17.7.2.1 or they're not required during construction and need to be installed after all construction trades have completed cleanup per 17.7.2.3.

Therefore, Section 17.7.2.2 as it currently reads should be removed since detectors that are "installed but not operational during construction" equates to "where detection is not required during construction".

The annex note currently assigned to 17.7.2 would be reassigned to the new section 17.7.2.2 since that note provides the explanation as to why construction trades must complete cleanup before detectors are installed. That annex note relocation is addressed in a related PI.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 245-NFPA 72-2022 [Section No. A.17.7.2]	
Public Input No. 245-NFPA 72-2022 [Section No. A.17.7.2]	

Submitter Information Verification

Submitter Full Name: Joe Scibetta
Organization: BuildingReports
Street Address:
City:
State:
Zip:
Submittal Date: Tue Apr 26 11:00:05 EDT 2022
Committee: SIG-IDS

Public Input No. 534-NFPA 72-2022 [Section No. 17.7.2.1]

17.7.2.1

Where detectors are installed for signal initiation during construction, ~~they~~ the installation shall be one of the following:

(1) Detectors cleaned and verified to be operating in accordance with the listed sensitivity~~, or they shall be~~ .

(2) Detectors replaced prior to the final acceptance test of the system.

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG agreed. 17.7.2.1 had two separate shalls and requirements in a single section. Reworded the section to meet the MOS.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
State:
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Submittal Date: Tue May 31 14:41:49 EDT 2022
Committee: SIG-IDS

Public Input No. 535-NFPA 72-2022 [Section No. 17.7.2.2]

17.7.2.2

Where detectors are installed but not operational during construction, ~~they~~ the installation shall be by one of the following:

(1) Be protected from construction debris, dust, dirt, and damage in accordance with the manufacturer's recommendations and verified to be operating in accordance with the listed sensitivity~~, or they shall be~~ .

(2) Be replaced prior to the final acceptance test of the system.

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG agreed. Section 17.7.2.2 had two shalls and two separate requirements. Reworded the section to comply with the MOS.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
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Submittal Date: Tue May 31 14:45:11 EDT 2022
Committee: SIG-IDS

Public Input No. 186-NFPA 72-2022 [Section No. 17.7.4.2.3.1]

17.7.4.2.3.1*

In the absence of specific performance-based design criteria, on ceilings up to 30 feet in height, one of the following requirements shall apply:

(1) The distance between smoke detectors shall not exceed a nominal spacing of 30 ft (9.1 m) and there shall be detectors within a distance of one-half the nominal spacing, measured at right angles from all walls or partitions extending upward to within the top 15 percent of the ceiling height.

(2)* All points on the ceiling shall have a detector within a distance equal to or less than 0.7 times the nominal 30 ft (9.1 m) spacing (0.7*S*).

Statement of Problem and Substantiation for Public Input

Unlike almost all other fire alarm installation standards worldwide, NFPA 72 does not provide any prescriptive guidance for smoke detector spacing based on ceiling height. NFPA 72 essentially says that there are many factors that should be considered when spacing detectors on high ceilings. One of the questions that we, at Honeywell, get most frequently, is around how to space detectors on high ceilings. Using a height of 30 feet, below which standard spacings apply, is a conservative approach based on what other countries and regions have decided to do. Much of Europe is currently at 12 meters.

It is important to keep in mind that current smoke detector thresholds are based on enabling individuals to escape an occupancy with a 10-foot ceiling prior to the visibility being reduced to less than 0.25 OD/m at the five foot level. Once the ceiling height becomes higher than ten feet, there is even more time to escape based on a standard size fire based on the time it takes for the smoke layer to descend.

The Fire Protection Research Foundation is looking to start a project that would provide more definitive guidance on high ceiling detector spacing. This research should be available after the First Draft meeting for NFPA 72. Data on smoke detector performance on ceilings up to 21 meters is available in research that was conducted by William Kuffner as part of his master's thesis called "Method of Determining Smoke Detector Spacing in High Ceiling Applications."

Submitter Information Verification

Submitter Full Name: Scott Lang
Organization: Honeywell International
Street Address:
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Submittal Date: Mon Mar 21 13:41:43 EDT 2022
Committee: SIG-IDS

Public Input No. 536-NFPA 72-2022 [Section No. 17.7.4.2.3.1]

17.7.4.2.3.1*

In the absence of specific performance-based design criteria,

~~one of the following requirements shall apply:~~
detector spacing shall comply with 17.7.4.2.3.1*(A) and (B) or (C).

(A) The distance between smoke detectors shall not exceed a nominal spacing of 30 ft (9.1 m)

~~and there~~

.

(B) There shall be detectors within a distance of one-half the nominal spacing, measured at right angles from all walls or partitions extending upward to within the top 15 percent of the ceiling height.

(C) * All points on the ceiling shall have a detector within a distance equal to or less than 0.7 times the nominal 30 ft (9.1 m) spacing (0.7 *S*).

A.17.7.4.2.3.1(C)

The 30 ft (9.1 m) spacing is a guide for prescriptive designs. The use of such a spacing is based upon customary practice in the fire alarm community.

Where there are explicit performance objectives for the response of the smoke detection system, the performance-based design methods outlined in Annex B should be used.

For the purposes of this section, “nominal 30 ft (9.1 m)” should be determined to be 30 ft (9.1 m) ±5 percent [±18 in. (460 mm)].

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG agreed. The existing section had multiple shalls and requirements in the section. In the first subsection there were multiple requirements in the section.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
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Submittal Date: Tue May 31 14:52:37 EDT 2022
Committee: SIG-IDS

Public Input No. 279-NFPA 72-2022 [Section No. 17.7.4.2.4.2]

17.7.4.2.4.2

For level ceilings, the following shall apply:

(1) For ceilings with beam depths of less than 10 percent of the ceiling height (0.1 *H*), the following shall apply:

(a) Smooth ceiling spacing shall be permitted.

(b) Spot-type smoke detectors shall be permitted to be located on ceilings or on the bottom of beams.

(2) For ceilings with beam depths equal to or greater than 10 percent of the ceiling height (0.1 *H*), the following shall apply:

(3) Where beam spacing is equal to or greater than 40 percent of the ceiling height (0.4 *H*), spot-type detectors shall be located on the ceiling in each beam pocket.

(4) Where beam spacing is less than 40 percent of the ceiling height (0.4 *H*), the following shall be permitted for spot detectors:

(5) Smooth ceiling spacing in the direction parallel to the beams and at one-half smooth ceiling spacing in the direction perpendicular to the beams

(6) Location of detectors either on the ceiling or on the bottom of the beams

(7)* For beam pockets formed by intersecting beams, including waffle or pan-type ceilings, the following shall apply:

(8) For beam depths less than 10 percent of the ceiling height (0.1 *H*), spacing shall be in accordance with 17.7.4.2.4.2 (1).

(9) For beam depths greater than or equal to 10 percent of the ceiling height (0.1 *H*), spacing shall be in accordance with 17.7.4.2.4.2 (2).

(10)* For corridors 15 ft (4.6 m) in width or less having ceiling beams or solid joists perpendicular to the corridor length, the following shall apply:

(11) Smooth ceiling spacing shall be permitted.

(12) Location of spot-type smoke detectors shall be permitted on ceilings, sidewalls, or the bottom of beams or solid joists.

(13) For rooms of 900 ft^2 (84 m^2) or less, the following shall apply:

(14) Use of smooth ceiling spacing shall be permitted.

(15) Location of spot-type smoke detectors shall be permitted on ceilings or on the bottom of beams.

(16) For ceilings with beams, where there is a gap greater than the beam depth above the beam, smooth ceiling spacing shall be permitted.

Statement of Problem and Substantiation for Public Input

The standard does not address the case where there is a gap above a beam traversing a ceiling. How big does that gap need to be before smooth ceiling spacing can be used? This happens when the beam is attached to a corrugated roof material.

This PI would only add item (6) despite all of the underlining added by Terra.

(6) For ceilings with beams, where there is a gap greater than the beam depth above the beam, smooth ceiling spacing shall be permitted.

Submitter Information Verification

Submitter Full Name: Scott Lang
Organization: Honeywell International
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 12 11:35:22 EDT 2022
Committee: SIG-IDS

Public Input No. 539-NFPA 72-2022 [Section No. 17.7.4.6.2.2]

17.7.4.6.2.2

Sampling pipe networks shall be designed on the basis of, ~~and shall be supported~~ and supported by, computer-based fluid dynamics design calculations to ensure required performance.

Statement of Problem and Substantiation for Public Input

Manual of style issues. MOS TG. Removed the redundant shall. The extra shall was not needed.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 31 15:16:14 EDT 2022
Committee: SIG-IDS

Public Input No. 470-NFPA 72-2022 [Section No. 17.7.4.6.4.1]

17.7.4.6.4.1 Air ~~Duct Applications.~~ duct applications shall comply with 17.7.4.6.4.1(A) through (D).

(A)

The air sampling system shall be listed for air duct applications~~ and~~ .

(B)

The air sampling systems shall be installed in accordance with the manufacturer's published instructions.

(~~B~~ C) –

The inlet and exhaust sections of pipe that are installed inside the air duct shall be air-tight.

(D)

The inlet and exhaust sections of pipe that are installed inside the air duct shall exhaust the sampled air in accordance with the manufacturer's published instructions.

Statement of Problem and Substantiation for Public Input

Manual of style issues. MOS TG. In both sections (A) and (B), there were separate requirements in each. The main section was reworded to be easier read and understood.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 27 11:20:21 EDT 2022
Committee: SIG-IDS

Public Input No. 449-NFPA 72-2022 [Section No. 17.7.6.5.4]

17.7.6.5.4 ~~–~~ Detector Installation.

17.7.6.5.4.1 Detectors shall be mounted in accordance with the manufacturer's published instructions ~~and~~ .

17.7.6.5.4.2 Detectors shall be accessible for cleaning by providing access doors or panels in accordance with NFPA 90A.

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG. The existing section had two shalls and two conditions in one section. Reworded and formatted the section to comply.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 26 15:43:51 EDT 2022
Committee: SIG-IDS

Public Input No. 448-NFPA 72-2022 [Section No. 17.7.6.6.4.2]

17.7.6.6.4.2

If door release is intended to prevent smoke transmission from one space to another in one direction only, detectors located in the space to which smoke is to be confined, regardless of the depth of wall section above the door, ~~shall be~~ one of the following shall apply:

(1) Be in accordance with 17.7.6.6.5. ~~Alternatively,~~

(2) Install a smoke detector conforming with 17.7.6.6.4.1(D) ~~shall be permitted to be used.~~

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG. The existing section had two shalls in the normative text and two separate conditions. Reworded the section to address the issues.

Submitter Information Verification

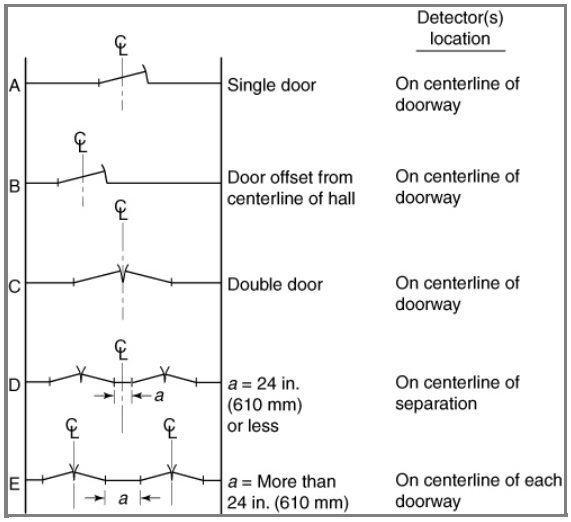
Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
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City:
State:
Zip:
Submittal Date: Thu May 26 15:38:51 EDT 2022
Committee: SIG-IDS

Public Input No. 248-NFPA 72-2022 [Section No. 17.7.6.6.4.3(A)]

(A)

If the separation between doorways exceeds 24 in. (610 mm), each doorway shall be treated separately. Figure 17.7.6.6.4.3(A), part E, shall apply.

Figure 17.7.6.6.4.3(A) Detector Location Requirements for Single and Double Doors.



Additional Proposed Changes

File Name	Description	Approved
NFPA_72_-_Cross_Corridor.jpg	Proposed update to door centerline placement to include cross-corridor doors	

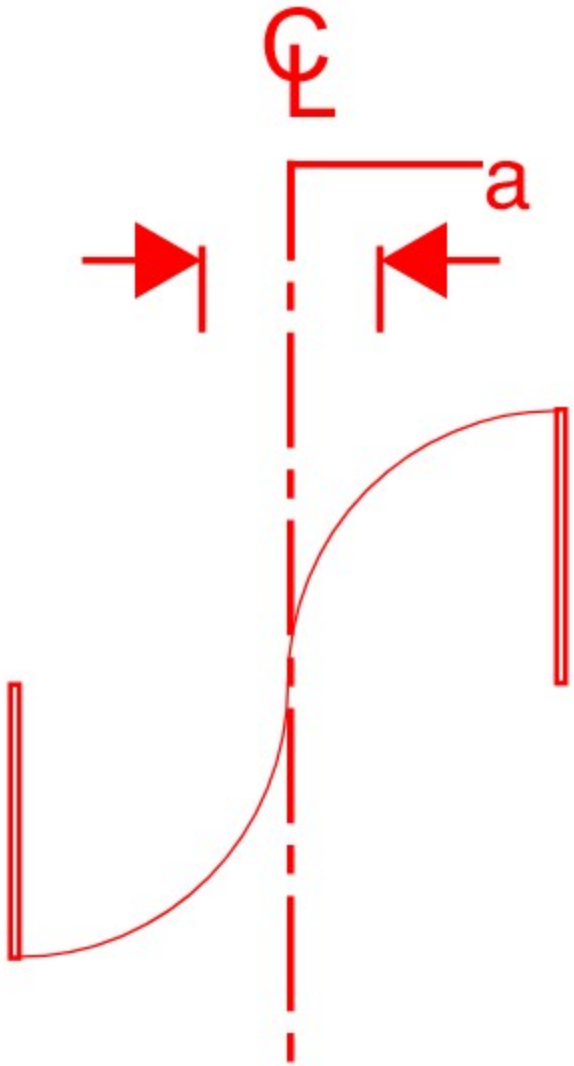
Statement of Problem and Substantiation for Public Input

Propose adding cross-corridor doors to Figure 17.7.6.6.4.3(A), this has been a heavily criticized area by state and local AHJ's. Allowing the smoke detector to be offset will provide much need flexibility in ceiling layout or other trades including lighting, HVAC and fire protection where the grid is centered on 96" wide corridors within healthcare occupancies. The 24" maximum offset is not anticipated to hinder the detectors ability to sense smoke and activate the doors in a timely fashion.

Submitter Information Verification

Submitter Full Name: Nick Gates
Organization: Eppstein Uhen Architects
Street Address:
City:
State:
Zip:
Submittal Date: Tue Apr 26 11:51:58 EDT 2022
Committee: SIG-IDS

Detector(s) location



a = 24 in. or less

On centerline of doorway

Public Input No. 172-NFPA 72-2022 [Section No. 17.7.6.6.5.1]

17.7.6.6.5.1

If ceiling-mounted smoke detectors are to be installed on a smooth ceiling for a single or double doorway, they shall be located as follows *[Figure 17.7.6.6.4.3(A) shall apply]*:

(1) ~~On~~ Within 1 ft (0.3 m) of either side of the centerline of the doorway

(2) No more than 5 ft (1.5 m), measured along the ceiling and perpendicular to the doorway *[Figure 17.7.6.6.4.1(A) shall apply.]*

(3) No closer than shown in Figure 17.7.6.6.4.1(A), parts B, D, and F

Statement of Problem and Substantiation for Public Input

The requirement "on the centerline" is unenforceable since there is no stated tolerance. If it is truly important to be on the centerline, then a tolerance should be added and annex material created to explain why. If it is not critical to be on the centerline in all cases, the requirement should be deleted. In anticipation of keeping the requirement, I have added a plus or minus one foot tolerance.

Submitter Information Verification

Submitter Full Name: Scott Lang
Organization: Honeywell International
Street Address:
City:
State:
Zip:
Submittal Date: Mon Mar 07 10:01:17 EST 2022
Committee: SIG-IDS

Public Input No. 447-NFPA 72-2022 [Section No. 17.7.7.1.2]

17.7.7.1.2*

Holes in the back of a detector shall be covered by a gasket, sealant, or equivalent means~~, and the~~ .

17.7.7.1.3

The detector shall be mounted so that airflow from inside or around the housing does not prevent the entry of smoke during a fire or test condition.

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG. The existing section addressed two separate requirements and needed to be separated by sub sections.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
Organization: Maddox Electric Co Inc
Street Address:
City:
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Zip:
Submittal Date: Thu May 26 15:33:42 EDT 2022
Committee: SIG-IDS

Public Input No. 106-NFPA 72-2022 [Section No. 17.7.7.3.3.2]

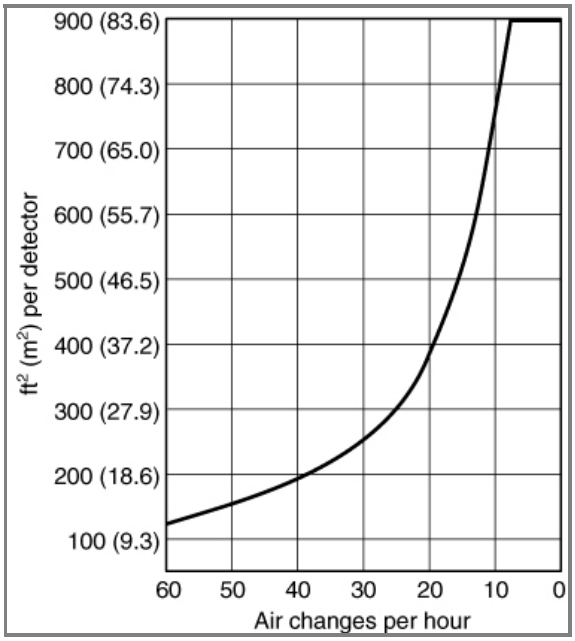
17.7.7.3.3.2

Where spacing must be adjusted for airflow, spot-type smoke detector spacing shall be adjusted in accordance with Table 17.7.7.3.3.2 or Figure 17.7.7.3.3.2 before making any other spacing adjustments required by this Code.

Table 17.7.7.3.3.2 ~~Smoke~~ 2 Spot-type Smoke Detector Spacing Based on Air Movement (Not to Be Used for Under-Floor or Above-Ceiling Spaces)

Minutes per Air Change	Air Changes per Hour	Spacing per Detector	
		ft^2	m^2
1	60	125	12
2	30	250	23
3	20	375	35
4	15	500	46
5	12	625	58
6	10	750	70
7	8.6	875	81
8	7.5	900	84
9	6.7	900	84
10	6	900	84

Figure 17.7.7.3.3.2 High Air Movement Areas (Not to Be Used for Under-Floor or Above-Ceiling Spaces).



Statement of Problem and Substantiation for Public Input

Proposed change would make it clearer to users of the standard that the spacing reductions are only

for spot-type detectors, not aspirating.

Submitter Information Verification

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Submittal Date: Fri Jan 21 13:40:39 EST 2022
Committee: SIG-IDS

Public Input No. 446-NFPA 72-2022 [Section No. 17.8.3.2.3]

17.8.3.2.3*

In applications where the fire to be detected could occur in an area not on the optical axis of the detector, the ~~distance shall be reduced or detectors shall be added~~ application shall comply with either of the following:

(1) The distance reduced

(2) Detectors added to compensate for the angular displacement of the fire in accordance with the manufacturer's published instructions.

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG. The existing section had two shalls in normative text. Added conditions and removed unnecessary verbiage.

Submitter Information Verification

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Submittal Date: Thu May 26 15:30:05 EDT 2022
Committee: SIG-IDS

Public Input No. 445-NFPA 72-2022 [Section No. 17.8.3.3.5]

17.8.3.3.5*

In applications where the sparks to be detected could occur in an area not on the optical axis of the detector, the ~~distance shall be reduced or detectors shall be~~ application shall comply with either of the following:

(1) The distance reduced

(2) Detectors added to compensate for the angular displacement of the fire in accordance with the ~~manufacturer's~~ manufacturer's published instructions~~.~~

Statement of Problem and Substantiation for Public Input

Manual of style issue. MOS TG. The existing section had (2) shalls, and two solutions. Reworded the section to address the MOS issue and make it easier to understand.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
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Submittal Date: Thu May 26 15:21:15 EDT 2022
Committee: SIG-IDS

Public Input No. 183-NFPA 72-2022 [New Section after 17.8.5.5]

17.8.5.6*

The location and spacing of detectors shall be the result of an engineering evaluation that includes the following:

(1) Size of the fire that is to be detected

(2) Fuel involved

(3) Sensitivity of the detector

(4) Field of view of the detector

(5) Distance between the fire and the detector

(6) Presence of extraneous sources of light

(7) Purpose of the detection system

(8) Response time required

17.8.5.7

The system design shall specify the size of the flaming fire of given fuel that is to be detected.

17.8.5.8

In applications in which the fire to be detected is of a fuel that differs from the test fuel used in the process of listing or approval, the distance between the detector and the fire shall be adjusted consistent with the fuel specificity of the detector as established by the manufacturer.

17.8.5.9

Because video image flame detectors are line-of-sight devices, their ability to respond to the required area of fire in the zone that is to be protected shall not be compromised by the presence of intervening structural members or other opaque objects or materials.

17.8.5.10

Provisions shall be made to sustain detector window clarity in applications where airborne particulates and aerosols coat the detector window between maintenance intervals and affect sensitivity.

Statement of Problem and Substantiation for Public Input

Public input provides additional information to aid the user in the use of video image flame detectors. These requirements are very similar to those of radiant energy (non-imaging) flame detectors.

Submitter Information Verification

Submitter Full Name: Scott Lang
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Submittal Date:	Wed Mar 09 10:57:17 EST 2022
Committee:	SIG-IDS

Public Input No. 178-NFPA 72-2022 [New Section after 17.10.2.4]

17.x Thermal Image Fire Detection.

17.x.1 Thermal image fire detection systems and all the components thereof, including hardware and software, shall be listed for the purpose of fire detection.

17.x.2 Thermal image fire detection systems shall comply with all the applicable requirements of Chapters 1, 10, 11, 14, 17, and 23 of this Code.

17.x.2.1 Systems shall be designed in accordance with the performance-based design requirements of Section 17.3.

17.x.2.2 The location and spacing of thermal image fire detectors shall comply with the requirements of 17.11.5.

17.x.2.3 The thermal image fire detector must have clear line of site to the hazard it is protecting.

17.x.2.4 Thermal image fire detectors shall not be used with a pan-tilt mount unless specifically listed for moveable operation.

17.x.3 S ignals generated by thermal imagers that are components of thermal image fire detection systems shall be permitted to be transmitted to other systems for other uses only through output connections provided specifically for that purpose by the system manufacturer.

17.x.4 All component controls and software shall be protected from unauthorized changes.

17.x.5 All changes to the software or component settings shall be tested in accordance with Chapter 14.

17.x.6 The thermal image fire detector shall produce a supervisory signal if the lens is blocked or dirty enough to impede proper operation.

17.x.7 The thermal image fire detector shall be capable of producing an alarm due to a temperature rate of rise within its field of view.

Statement of Problem and Substantiation for Public Input

This new section for thermal image fire detectors is needed to address the unique characteristics of imaging fire detectors which are different from either video image detectors or traditional (non-imaging) radiant energy detectors. This technology is new to fire detection and these requirements represent minimum requirements for their use.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 275-NFPA 72-2022 [New Section after 14.4.3.3]	

Submitter Information Verification

Submitter Full Name: Scott Lang
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Submittal Date:	Wed Mar 09 10:09:23 EST 2022
Committee:	SIG-IDS

Public Input No. 397-NFPA 72-2022 [Section No. 17.12.1]

17.12.1*

Where carbon monoxide protection of a building is required by laws , codes, or standards, carbon monoxide detectors shall be ~~installed~~ sited in accordance with all of the following, unless a performance-based design in accordance with Section 17.3 is used:

(1) * On the ceiling ~~in the~~ or on the wall with the top of the detector within 12 inches of the ceiling, where installed in the same room as permanently installed fuel-burning appliances

(2) * Centrally located ~~on every habitable level and in every HVAC zone of the building~~ the HVAC zones of the areas required by laws, codes, or standards

(3) * Outside of each separate ~~dwelling unit~~ sleeping area , guest room, and guest suite ~~sleeping area~~ within 21 ft (6.4 m) of any door to a sleeping room, with the distance measured along a path of travel

(4) **In each area separated by normally closed doors.**

(5) * Other locations where required by applicable laws, codes, or standards

(6) In accordance with manufacturer's published instructions.

Statement of Problem and Substantiation for Public Input

This Public Input seeks to remove conflicts between the various ICC and NFPA model codes (fire and building) and NFPA 72. As written in the 2022 edition of NFPA 72, section 17.12.1 requires CO detection in certain rooms or areas. However, the Fire Code takes precedence with respect to when and in what type of occupancy carbon monoxide detection is required. We have rewritten this section to focus on how and physically where to install detection when it is required in an area by the building code or laws. The rewritten requirements focus on the specific conclusions of the 2007 Fire Protection Research Foundation report entitled, “Development of a Technical Basis for Carbon Monoxide Detector Siting.”

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 399-NFPA 72-2022 [Section No. A.17.12.1(3)]	

Submitter Information Verification

Submitter Full Name: Chris Heaton
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Submittal Date: Wed May 25 18:15:58 EDT 2022
Committee: SIG-IDS

Public Input No. 517-NFPA 72-2022 [Section No. 17.12.1]

17.12.1*

Where carbon monoxide protection of a building is required by laws , codes, or standards, carbon monoxide detectors shall be ~~installed in~~ sited in accordance with all of the following, unless a performance-based design in accordance with Section 17.3 is used:

(1) * On the ceiling in the same room as permanently installed fuel-burning appliances

(2) * Centrally located on every habitable level and in every HVAC zone of the building

(3) * Outside of each separate dwelling unit, guest room, and guest suite sleeping area within 21 ft (6.4 m) of any door to a sleeping room, with the distance measured along a path of travel

(4) * Other locations where required by applicable laws, codes, or standards

Statement of Problem and Substantiation for Public Input

This Public Input seeks to remove conflicts between the various ICC and NFPA model codes (fire and building) and NFPA 72. As written in the 2022 edition of NFPA 72, section 17.12.1 requires CO detection in certain rooms or areas. However, the Fire Code takes precedence with respect to when and in what type of occupancy carbon monoxide detection is required. We have rewritten this section to focus on how and physically where to install detection when it is required in an area by the building code or laws. The rewritten requirements focus on the specific conclusions of the 2007 Fire Protection Research Foundation report entitled, “Development of a Technical Basis for Carbon Monoxide Detector Siting.”

Submitter Information Verification

Submitter Full Name: Megan Hayes
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Submittal Date: Tue May 31 09:57:46 EDT 2022
Committee: SIG-IDS

Public Input No. 541-NFPA 72-2022 [Section No. 17.12.1]

17.12.1*

~~Where carbon~~

~~Carbon~~ ~~monoxide protection of a building is required, carbon monoxide detectors shall be installed in accordance with all of the following, unless a performance-based design in accordance with Section~~ ~~17.3~~

~~is~~

~~is~~ ~~used:~~

Where required by other governing laws, codes, or standards for a specific type of occupancy, listed carbon monoxide alarms or detectors shall be installed as follows:

(1) * On the ceiling in the same room as permanently installed ~~fuel-burning appliances~~ carbon monoxide source

(2) * Centrally located on every habitable level and in every HVAC zone of the building

(3) * Outside of each separate dwelling unit, guest room, and guest suite sleeping area within 21 ft (6.4 m) of any door to a sleeping room, with the distance measured along a path of travel

(4) * Other locations where required by applicable laws, codes, or standards

Additional Proposed Changes

File Name	Description	Approved
NFPA_72_NEW_CO_Definition_v3.docx	Doc has text of three proposed changes	

Statement of Problem and Substantiation for Public Input

This public input is adding a definition for “carbon monoxide source” and replacing the term “fuel-burning appliance” in several sections. This change is needed to clarify that only permanently installed or commonly used sources in a building such as gas fired heaters or propane powered forklifts that are part of the daily operations of a space are captured.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 538-NFPA 72-2022 [New Section after 3.3.37.2]	

Submitter Information Verification

Submitter Full Name: Tim Knisely
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Submittal Date:	Tue May 31 15:20:16 EDT 2022
Committee:	SIG-IDS

Proposed Change for the 2025 Edition of NFPA 72

Chapter 3

Carbon Monoxide Source. Equipment that is commonly used in a building or a permanently installed appliance, fireplace or process that produces or emits carbon monoxide gas that is installed inside a building.

17.12.1* Where required by other governing laws, codes, or standards, carbon monoxide detectors shall be installed in accordance with the following:

~~Carbon monoxide protection of a building is required, carbon monoxide detectors shall be installed in accordance with all of the following, unless a performance-based design in accordance with Section 17.3 is used:~~

1) On the ceiling in the same room as permanently installed ~~fuel-burning appliances~~ carbon monoxide source, an

29.7.1.1* Where required by other governing laws, codes, or standards for a specific type of occupancy, listed carbon monoxide alarms or detectors shall be installed as follows:

2) Outside of each separate dwelling unit sleeping area, within 21 ft (6.4 m) of any door to a sleeping room, with the distance measured along a path of travel
3) On every occupiable level of a dwelling unit, including basements, excluding attics and crawl spaces
4) In all sleeping rooms and guest rooms containing installed ~~fuel-burning appliances~~ carbon monoxide source
5) Other locations where required by applicable laws, codes, or standards

A.17.12.1(1) Carbon monoxide detectors are located on the ceiling above permanently installed ~~fuel-burning appliances~~ carbon monoxide source because of the buoyancy of the heated combustion gases as compared to normal ambient temperatures. Detectors should be located as close as practical to the permanently installed fuel-burning appliance consistent with considerations of detector accessibility, sources of detector contamination, and nuisance sources. Siting considerations can include transient back drafting spillage of flue gases during startup and ventilation supply or exhaust vents.

Reason Statement: This public input is adding a definition for “carbon monoxide source” and replacing the term “fuel-burning appliance” in several sections. This change is needed to clarify that only permanently installed or commonly used sources in a building such as gas fired heaters or propane powered forklifts that are part of the daily operations of a space are captured.

CARBON MONOXIDE SOURCE. A piece of commonly used equipment or permanently installed appliance, fireplace or process that produces or emits carbon monoxide gas.

Commenter's Reason: This is the second of 3 related proposals. This proposal simply adds a definition for Carbon Monoxide Source. This will clarify that only permanently installed or used sources in a building such as gas fired heaters or propane powered forklifts that are part of the daily operations of a space are included, and that things like candles and floor polishers are not intended to be captured. Additionally, this shortens the code language so that not every iteration of something that produces CO is written in several places in the code.

This Public Comment is submitted by the ICC Fire Code Action Committee (FCAC). The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes.

Public Input No. 198-NFPA 72-2022 [New Section after 17.12.2]

17.12.2.1

Carbon monoxide detectors installed in unconditioned areas shall be listed for the environment.

Statement of Problem and Substantiation for Public Input

It is not uncommon to install carbon monoxide detectors in areas that may not be climatically controlled. This new clause makes it clear that detectors need to be certified for use in unconditioned areas if that is where they are installed.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 199-NFPA 72-2022 [New Section after 3.3.323]	
Public Input No. 199-NFPA 72-2022 [New Section after 3.3.323]	

Submitter Information Verification

Submitter Full Name: Scott Lang
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Submittal Date: Tue Mar 29 10:49:49 EDT 2022
Committee: SIG-IDS

Public Input No. 525-NFPA 72-2022 [New Section after 17.15.9.1]

TITLE OF NEW CONTENT

Manual Station Used for Releasing Service.

Manual stations used for activation of releasing systems shall be clearly identified.

Statement of Problem and Substantiation for Public Input

Some manual stations in the past have been identified as being connected to a releasing system. Newer stations have not been identified as initiating a releasing system or sequence. Yes the system they are attached to is a fire alarm system but since these stations are for releasing they, in some circumstances, not activate a general alarm for the building fire alarm system. Also many systems have been inadvertently activated by personnel testing the systems. They may be testing the building system but in many cases they may not have the requisite training on special hazard systems and these stations should be clearly identified to reduce the possibility of inadvertent release.

Submitter Information Verification

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Submittal Date: Tue May 31 11:06:41 EDT 2022
Committee: SIG-IDS

Public Input No. 246-NFPA 72-2022 [Section No. 17.15.9.2]

17.15.9.2

Manual fire alarm boxes shall be installed so that they are conspicuous, unobstructed, and readily accessible.

Statement of Problem and Substantiation for Public Input

NFPA 72 makes an important distinction between "accessible" and "readily accessible" in Chapter 3. As such, manually actuated alarm initiating devices (pull stations) should be readily accessible in keeping with their purpose as part of a fire alarm/signaling system.

Submitter Information Verification

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Submittal Date: Tue Apr 26 11:13:46 EDT 2022
Committee: SIG-IDS

Public Input No. 444-NFPA 72-2022 [Section No. 17.17.4.2]

17.17.4.2

Two signals shall be provided for a temperature supervisory device in accordance with 17.17.4.2.1 and 17.17.4.2.2

17.17.4.2.1

One signal shall indicate a decrease in water temperature to ~~40°F~~ 40F (4.4~~°C), and the other~~ 4C)

17.17.4.2.2

The second signal shall indicate its restoration to above ~~40°F~~ 40 F (4.4~~°C~~ 4 C).~~.~~

Statement of Problem and Substantiation for Public Input

Manual of style issue. The existing section has (2) shalls and addresses two separate signals. The TG proposed two additional sub sections to comply with MOS.

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
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Submittal Date: Thu May 26 15:14:09 EDT 2022
Committee: SIG-IDS

Public Input No. 443-NFPA 72-2022 [Section No. A.17.5.3.1.4]

A.17.5.3.1.4 — 6 __

Total coverage requires that a fire above the suspended ceiling be detected. Detector spacing and location for above ceiling spaces are addressed in 17.7.4.5.4. If that above-ceiling space is used as an air return plenum, this detection can be provided either by smoke detectors placed in accordance with 17.7.5.2 or where the air leaves the smoke compartment in accordance with 17.7.6.4.2.2.

Statement of Problem and Substantiation for Public Input

Renumbering issue if other PI's are accepted.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 441-NFPA 72-2022 [Section No. 17.5.3.1.4]	

Submitter Information Verification

Submitter Full Name: Samuel Rokowski
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Submittal Date: Thu May 26 15:11:06 EDT 2022
Committee: SIG-IDS

Public Input No. 249-NFPA 72-2022 [Section No. A.17.6.3.1.1]

A.17.6.3.1.1

Maximum linear spacings on smooth ceilings for spot-type heat detectors are determined by full-scale fire tests. *[See Figure A.17.6.3.1.1(c).]* These tests assume that the detectors are to be installed in a pattern of one or more squares, each side of which equals the maximum spacing as determined in the test, as illustrated in Figure A.17.6.3.1.1(a). The detector to be tested is placed at a corner of the square so that it is positioned at the farthest possible distance from the fire while remaining within the square. Thus, the distance from the detector to the fire is always the test spacing multiplied by 0.7 and can be calculated as shown in Table A.17.6.3.1.1. Figure A.17.6.3.1.1(b) illustrates the smooth ceiling spacing layout for line-type heat detectors.

Table A.17.6.3.1.1 Test Spacing for Spot-Type Heat Detectors

Test Spacing		Maximum Test Distance from Fire to Detector (0.7*D*)	
ft	m	ft	m
50 × 50	15.2 × 15.2	35.0	10.7
40 × 40	12.2 × 12.2	28.0	8.5
30 × 30	9.1 × 9.1	21.0	6.4
25 × 25	7.6 × 7.6	17.5	5.3
20 × 20	6.1 × 6.1	14.0	4.3
15 × 15	4.6 × 4.6	10.5	3.2

Once the correct maximum test distance has been determined, it is valid to interchange the positions of the fire and the detector. The detector is now in the middle of the square, and the listing specifies that the detector is adequate to detect a fire that occurs anywhere within that square — even out to the farthest corner.

In laying out detector installations, designers work in terms of rectangles, as building areas are generally rectangular in shape. The pattern of heat spread from a fire source, however, is not rectangular in shape. On a smooth ceiling, heat spreads out in all directions in an ever-expanding circle. Thus, the coverage of a detector is not, in fact, a square, but rather a circle whose radius is the linear spacing multiplied by 0.7.

This is graphically illustrated in Figure A.17.6.3.1.1(d). With the detector at the center, by rotating the square, an infinite number of squares can be laid out, the corners of which create the plot of a circle whose radius is 0.7 times the listed spacing. The detector will cover any of these squares and, consequently, any point within the confines of the circle.

So far, this explanation has considered squares and circles. In practical applications, very few areas turn out to be exactly square, and circular areas are extremely rare. Designers deal generally with rectangles of odd dimensions and corners of rooms or areas formed by wall intercepts, where spacing to one wall is less than one-half the listed spacing. To simplify the rest of this explanation, the use of a detector with a listed spacing of 30 ft × 30 ft (9.1 m × 9.1 m) should be considered. The principles derived are equally applicable to other types.

Figure A.17.6.3.1.1(g) illustrates the derivation of this concept. In Figure A.17.6.3.1.1(g), a detector is placed in the center of a circle with a radius of 21 ft (0.7 × 30 ft) [6.4 m (0.7 × 9.1 m)]. A series of rectangles with one dimension less than the permitted maximum of 30 ft (9.1 m) is constructed within the circle. The following conclusions can be drawn:

(1) As the smaller dimension decreases, the longer dimension can be increased beyond the linear maximum spacing of the detector with no loss in detection efficiency.

(2) A single detector covers any area that fits within the circle. For a rectangle, a single, properly located detector should be permitted, provided the diagonal of the rectangle does not exceed the diameter of the circle.

(3) Relative detector efficiency actually is increased, because the area coverage in square meters is always less than the 900 ft^2 (84 m^2) permitted if the full 30 ft × 30 ft (9.1 m × 9.1 m) square were to be utilized. The principle illustrated here allows equal linear spacing between the detector and the fire, with no recognition for the effect of reflection from walls or partitions, which in narrow rooms or corridors is of additional benefit. For detectors that

are not centered, the longer dimension should always be used in laying out the radius of coverage.

Areas so large that they exceed the rectangular dimensions given in Figure A.17.6.3.1.1(g) require additional detectors. Often, proper placement of detectors can be facilitated by breaking down the area into multiple rectangles of the dimensions that fit most appropriately *[see Figure A.17.6.3.1.1(e) and Figure A.17.6.3.1.1(f)]*. For example, refer to Figure A.17.6.3.1.1(h). A corridor 10 ft (3.0 m) wide and up to 82 ft (25.0 m) long can be covered with two 30 ft (9.1 m) spot-type detectors. An area 40 ft (12.2 m) wide and up to 74 ft (22.6 m) long can be covered with four spot-type detectors. Irregular areas need more careful planning to make certain that no spot on the ceiling is more than 21 ft (6.4 m) away from a detector. These points can be determined by striking arcs from the remote corner. Where any part of the area lies beyond the circle with a radius of 0.7 times the listed spacings, additional detectors are required.

Figure A.17.6.3.1.1(h) illustrates smoke or heat detector spacing layouts in irregular areas.

Figure A.17.6.3.1.1(a) Spot-Type Heat Detectors.

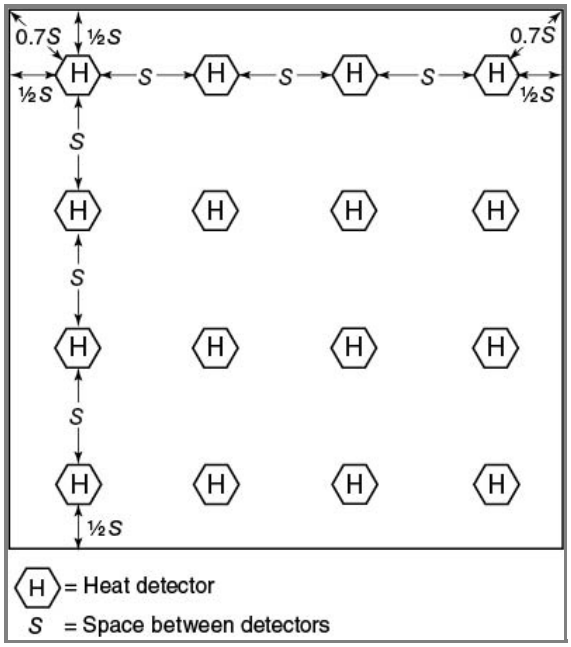


Figure A.17.6.3.1.1(b) Line-Type Detectors — Spacing Layouts, Smooth Ceiling.

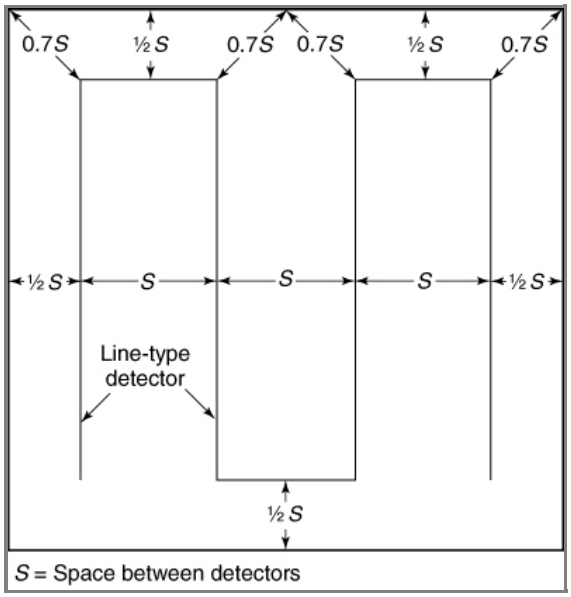


Figure A.17.6.3.1.1(c) Fire Test Layout.

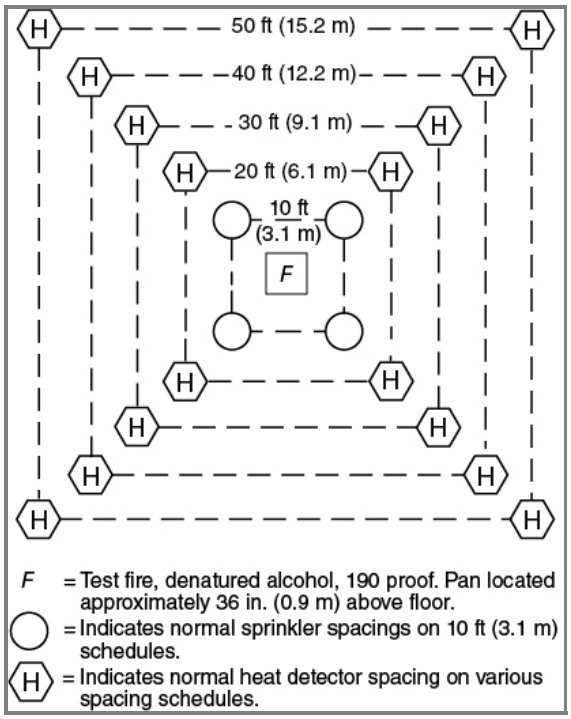


Figure A.17.6.3.1.1(d) Detector Covering any Square Laid Out in Confines of Circle in Which Radius Is 0.7 Times Listed Spacing.

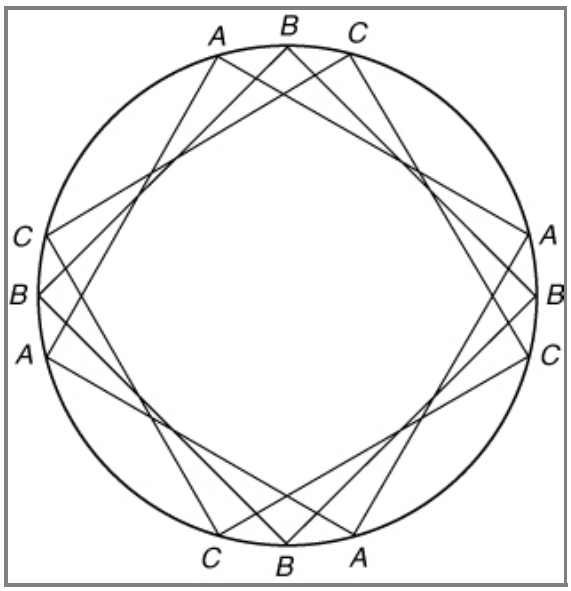


Figure A.17.6.3.1.1(e) Typical Rectangles for Detector Curves of 15 ft to 50 ft.

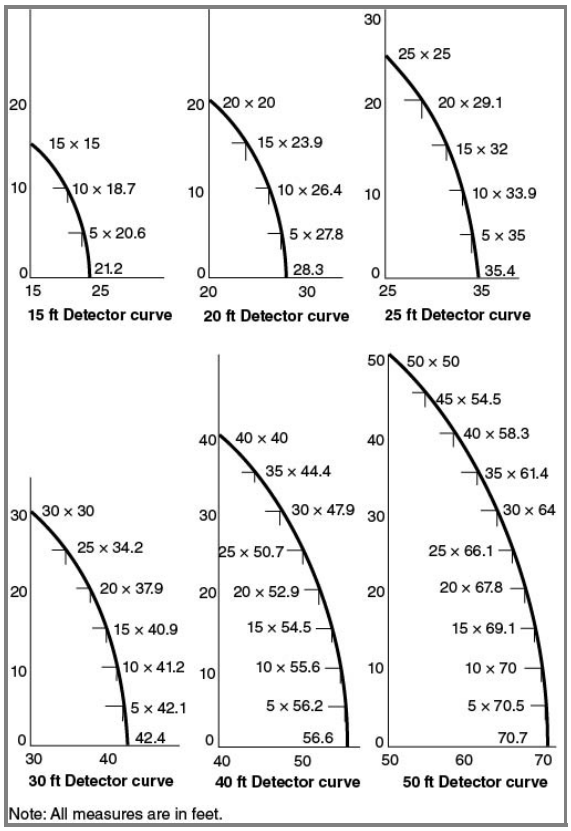


Figure A.17.6.3.1.1(f) Typical Rectangles for Detector Curves of 4.6 m to 15.2 m.

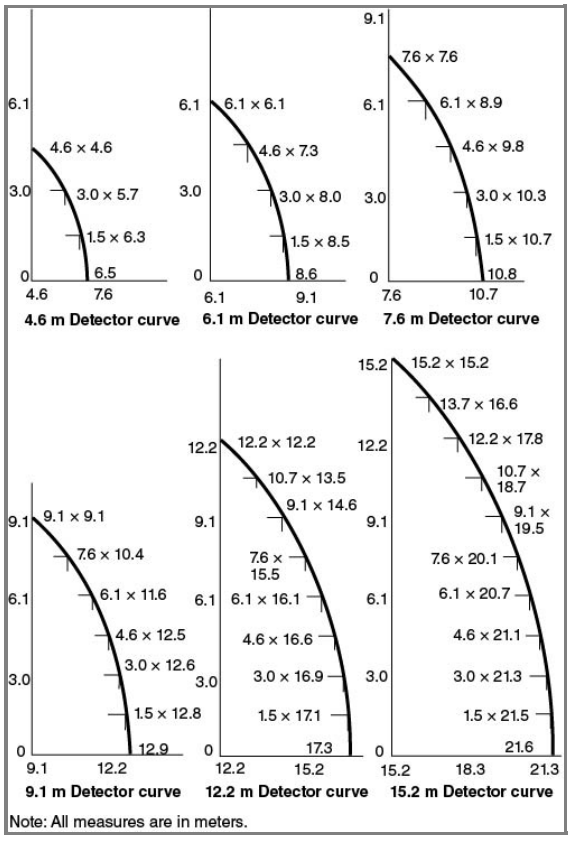


Figure A.17.6.3.1.1(g) Detector Spacing, Rectangular Areas.

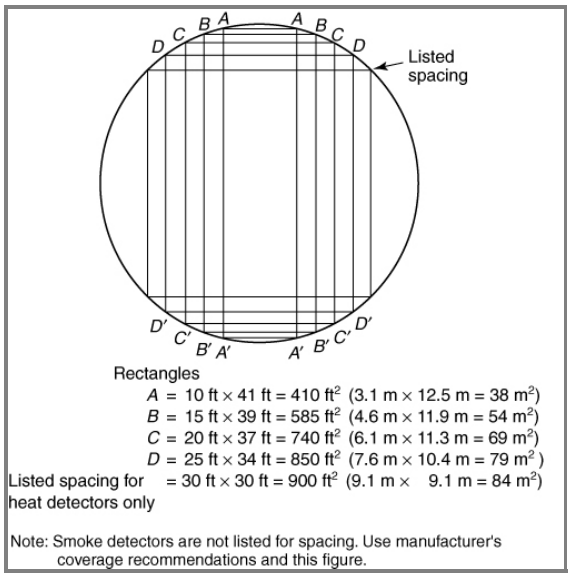
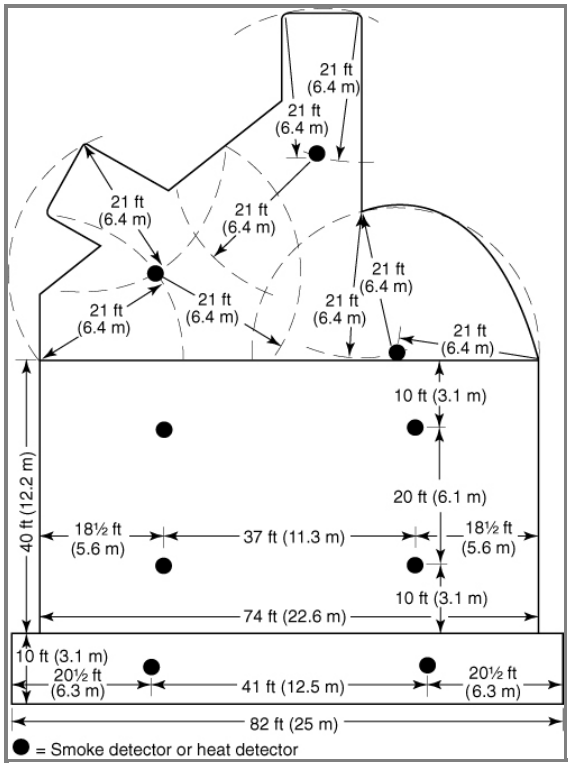


Figure A.17.6.3.1.1(h) Smoke or Heat Detector Spacing Layout in Irregular Areas.



Additional Proposed Changes

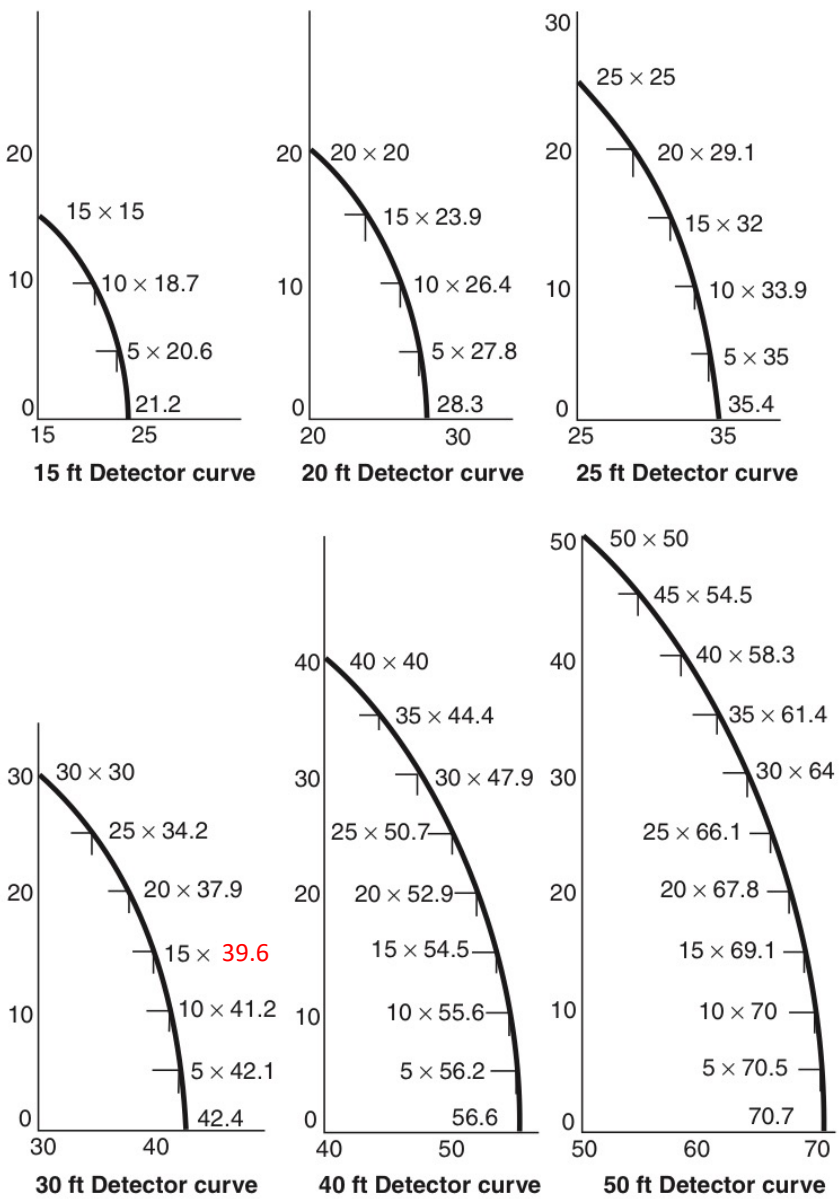
File Name	Description	Approved
A.17.6.3.1.1_e_.pdf	30 ft Detector curve with updated spacing for 15 ft dimension matching Figure A.17.6.3.1.1(g) letter B Rectangle and following the "0.7 times" rule	

Statement of Problem and Substantiation for Public Input

30 ft Detector curve with updated spacing for 15 ft dimension matching Figure A.17.6.3.1.1(g) letter B Rectangle and following the "0.7 times" rule

Submitter Information Verification

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Submittal Date: Wed Apr 27 12:58:33 EDT 2022
Committee: SIG-IDS



Note: All measures are in feet.

FIGURE A.17.6.3.1.1(e) Typical Rectangles for Detector Curves of 15 ft to 50 ft.

Public Input No. 184-NFPA 72-2022 [Section No. A.17.7.1.11]

A.17.7.1.11

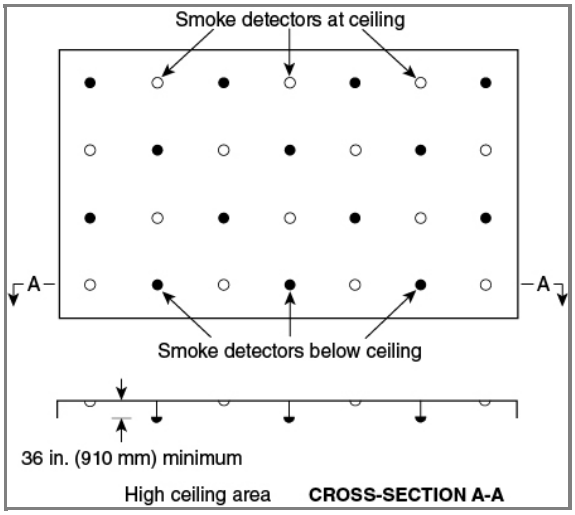
Stratification of air in a room can hinder air containing smoke particles or gaseous combustion products from reaching ceiling-mounted smoke detectors or fire–gas detectors.

Stratification occurs when air containing smoke particles or gaseous combustion products is heated by smoldering or burning material and, becoming less dense than the surrounding cooler air, rises until it reaches a level at which there is no longer a difference in temperature between it and the surrounding air.

Stratification also can occur when evaporative coolers are used, because moisture introduced by these devices can condense on smoke, causing it to fall toward the floor. Therefore, to ensure rapid response, it might be necessary to install smoke detectors on sidewalls or at locations below the ceiling.

In installations where detection of smoldering or small fires is desired and where the possibility of stratification exists, consideration should be given to mounting a portion of the detectors below the ceiling. In high-ceiling areas, projected beam–type or air sampling–type detectors at different levels also should be considered. *(See Figure A.17.7.1.11.)* Video image smoke detectors can overcome the effects of stratification because they will potentially detect any smoke that is within its field of view. That is, the smoke does not need to rise to the level of the detector for effective sensing.

Figure A.17.7.1.11 Smoke Detector Layout Accounting for Stratification.



Statement of Problem and Substantiation for Public Input

Video image smoke detectors are uniquely able to detect smoke plumes where stratification may be an issue because the smoke need not rise to the level of the detector for sensing. It is only required that the smoke be able to be imaged and appear in the field of view of the camera.

Submitter Information Verification

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Submittal Date:	Wed Mar 09 11:00:06 EST 2022
Committee:	SIG-IDS

Public Input No. 245-NFPA 72-2022 [Section No. A.17.7.2]

A.17.7.2.2

Construction debris, dust (especially gypsum dust and the fines resulting from the sanding of drywall joint compounds), and aerosols can affect the sensitivity of smoke detectors and, in some instances, cause deleterious effects to the detector, thereby significantly reducing the expected life of the detector.

Statement of Problem and Substantiation for Public Input

See PI-244 for substantiation

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 244-NFPA 72-2022 [Section No. 17.7.2]	
Public Input No. 244-NFPA 72-2022 [Section No. 17.7.2]	

Submitter Information Verification

Submitter Full Name: Joe Scibetta
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Submittal Date: Tue Apr 26 11:09:24 EDT 2022
Committee: SIG-IDS

Public Input No. 181-NFPA 72-2022 [Section No. A.17.7.7.2]

A.17.7.7.2

For the most effective detection of fire in high-rack storage areas, detectors should be located on the ceiling above each aisle and at intermediate levels in the racks. This is necessary to detect smoke that is trapped in the racks at an early stage of fire development when insufficient thermal energy is released to carry the smoke to the ceiling. Earliest detection of smoke is achieved by locating the intermediate level detectors adjacent to alternate pallet sections as shown in Figure A.17.7.7.2(a) and Figure A.17.7.7.2(b). The detector manufacturer's published instructions and engineering judgment should be followed for specific installations.

A projected beam–type detector can be permitted to be used in lieu of a single row of individual spot-type smoke detectors.

Sampling ports of an air sampling–type detector can be permitted to be located above each aisle to provide coverage that is equivalent to the location of spot-type detectors. The manufacturer's published instructions and engineering judgment should be followed for the specific installation.

Video smoke detectors can be a suitable option in rack storage provided the manufacturer's recommendations for ambient lighting and other guidelines can be met. Smoke need not rise to the level of the detector to be sensed.

Figure A.17.7.7.2(a) Detector Location for Solid Storage (Closed Rack) in Which Transverse and Longitudinal Flue Spaces Are Irregular or Nonexistent, as for Slatted or Solid Shelved Storage.

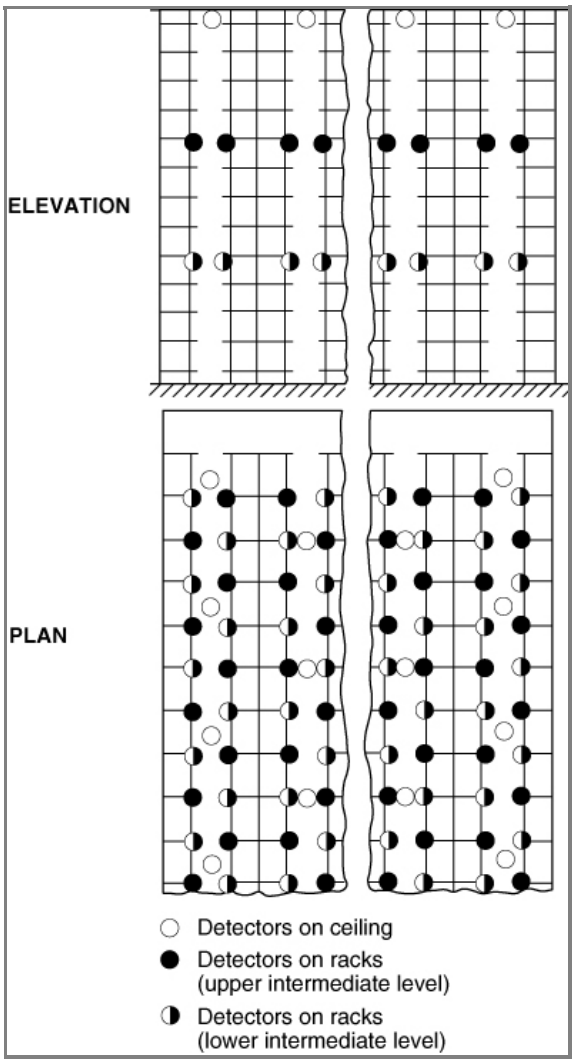
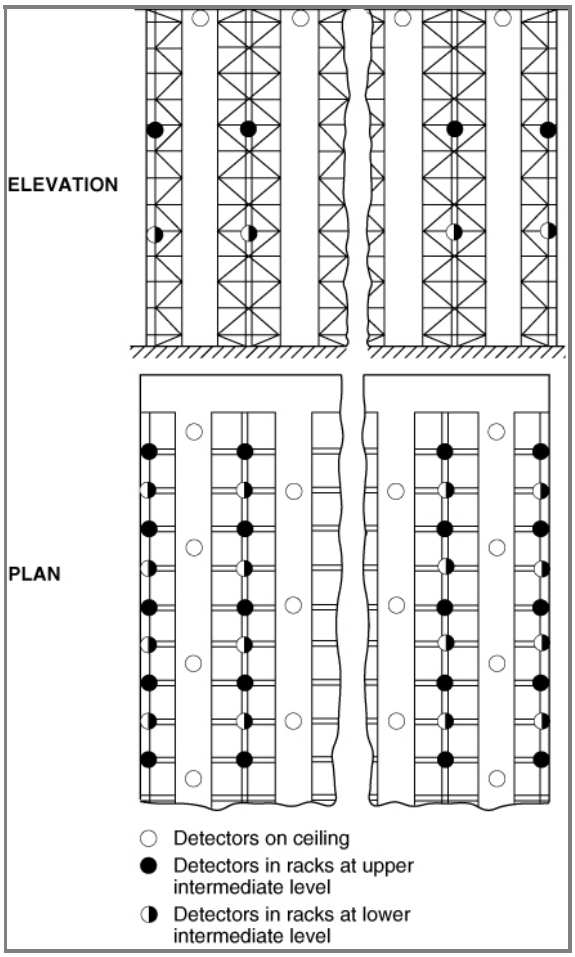


Figure A.17.7.7.2(b) Detector Location for Palletized Storage (Open Rack) or No Shelved Storage in Which Regular Transverse and Longitudinal Flue Spaces Are Maintained.



Statement of Problem and Substantiation for Public Input

The existing annex material specifically mentions beam and air sampling-type detectors. Video smoke detection is also a viable technology as long as manufacturer's published instructions are followed.

Submitter Information Verification

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Submittal Date: Wed Mar 09 10:51:44 EST 2022
Committee: SIG-IDS

Public Input No. 107-NFPA 72-2022 [New Section after A.17.7.7.3.3]

A.17.7.7.3.3.3

Projected beam smoke detectors integrate smoke density across the protected space and may not require spacing reduction in high airflows. Similarly, air sampling smoke detectors may benefit from aspiration or accumulative sensing wherein smoke is drawn into more than one sampling port. Manufacturer's published instructions should be followed.

Statement of Problem and Substantiation for Public Input

Added Annex material provides additional explanation as to why the spot-type detector spacing reduction table should not be used for aspirated or beam-type smoke detectors.

Submitter Information Verification

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Submittal Date: Fri Jan 21 13:44:25 EST 2022
Committee: SIG-IDS

Public Input No. 182-NFPA 72-2022 [New Section after A.17.8.5.4]

A.17.8.5.6

The following are types of applications for which video image flame detectors are suitable:

(1) High-ceiling, open-spaced buildings such as warehouses and aircraft hangars

(2) Areas where rapidly developing flaming fires can occur, such as aircraft hangars, petrochemical production areas, storage and transfer areas, natural gas installations, paint shops, or solvent areas

(3) Areas needing high fire risk machinery or installations

(4) Environments that are unsuitable for other types of detectors

Statement of Problem and Substantiation for Public Input

This new annex material describes some applications that VIFD are suitable. The applications are similar, but not identical to radiant energy flame detectors.

Submitter Information Verification

Submitter Full Name: Scott Lang
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Zip:
Submittal Date: Wed Mar 09 10:55:06 EST 2022
Committee: SIG-IDS

Public Input No. 516-NFPA 72-2022 [Sections A.17.12.1, A.17.12.1(1), A.17.12.1(2), A.17.12.1(3...]

Sections A.17.12.1, A.17.12.1(1), A.17.12.1(2), A.17.12.1(3), A.17.12.1(4)

A.17.12.1

Additional documents such as NEMA SB-7, *Applications Guide for Carbon Monoxide Alarms and Detectors*, and the NFPA Fire Protection Research Foundation (FPRF) technical report, *Development of a Technical Basis for Carbon Monoxide Detector Siting*, can also be used as supplemental resources to help with risk assessment, siting, and application considerations.

(1)* On the ceiling or on the wall with the top of the detector within 12 inches of the ceiling, where installed in the same room as permanently installed fuel-buring appliances;

A.17.12.1(1)

~~Both permanent and temporary carbon-monoxide-producing devices need to be considered when locating carbon monoxide detectors. This includes accounting for all carbon-monoxide-producing appliances and equipment and temporary/mobile equipment, including vehicles, generators, machinery, engines, internal combustion engines, propane equipment, space heaters, engine-driven tools, grills, fire pits, systems used to generate hydrogen, fuel-burning equipment, and any other permanent and/or transient-type equipment and appliances that can be sources of carbon monoxide.~~

By placing carbon monoxide detectors close to all permanent as well as all temporary carbon-monoxide-producing sources, early detection of carbon monoxide is more likely to occur. Detectors should therefore be located as close as practicable to the carbon-monoxide-producing source, taking into account such factors as detector accessibility for inspection, testing, and maintenance; potential sources of detector damage or contamination; potential nuisance alarm sources; transient backdrafting spillage of flue gases during startup and operation; and ventilation supply and exhaust vents. For early detection, carbon monoxide detectors should be located on the ceiling over carbon-monoxide-producing sources. There is often some buoyancy of the heated combustion gases that can help carry the carbon monoxide to the detector.

Carbon monoxide detectors should also be considered throughout the room/space that contains the carbon-monoxide-producing source to help address either limited or no buoyancy of the carbon monoxide, adverse impacts by HVAC systems, as well as ambient airflows in the space that can carry carbon monoxide away from the source rather than up to the ceiling directly over the source.

(2)* Centrally located in the HVAC zones of the areas required by laws, codes or standards;

A.17.12.1(2)

~~Carbon monoxide can follow flow paths from its original source to adjacent areas in the building, including moving horizontally and vertically throughout the space, building, and structure, and where carbon monoxide detectors should be located in these adjacent areas needs to be considered. Detector location and spacing should be based on an engineering evaluation that considers potential sources and migration of carbon monoxide, including through exhaust ductwork, HVAC equipment, openings in walls and floors, unprotected penetrations, and elevator shafts.~~

~~As some of the higher carbon monoxide concentrations are often at the source and within the exhaust ductwork and venting equipment, carbon monoxide detectors should be located along the exhaust path of any carbon-monoxide-producing equipment, appliances, and so forth, extending from the source of the carbon monoxide through the building to the termination of the exhaust at an exterior wall or roof. This should include detectors along any duct branch lines and interconnections to any ductwork and piping used in the exhaust system so carbon monoxide that might exist outside the exhaust path (due to leaks, damage, obstructions, rust, corrosion, etc.) can be detected.~~

The impact of HVAC systems should be taken into account when locating carbon monoxide detectors. HVAC systems can transport as well as mix and dilute carbon monoxide. Consideration should be given to the layout and operation of the HVAC system and whether the HVAC is constantly running or only runs for a portion of the time and, therefore, is not constantly distributing or mixing air in the building. ~~When~~ An HVAC zone is an area that is independently climatically controlled from other areas. Centrally located is defined as the geometric center of a physical area, i.e. the centroid.

A.17.12.1(3)

Outside of each separate sleeping area, guest room, and guest suite within 21 ft (6.4m) of any door to a sleeping room, with the distance measured along a path of travel.

(4) In each area separated by normally closed doors.

A.17.12.1(4)

When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls.

~~These~~

These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and

~~not~~

allow it to spread and dilute the concentration.

~~Carbon monoxide can potentially enter the building from an exterior source, such as through make-up air systems. Some of the external sources that should be considered when locating carbon monoxide detectors include adjacent structures, exterior systems, equipment such as vehicles and generators, and interconnections to underground spaces or parking garages.~~

~~**A.17.12.1(3)**~~

~~Carbon monoxide detectors should be considered within each bedroom, dwelling unit, guest room, guest suite, and sleeping area, as well as the potential for multiple detectors in multiroom suites. Additional detectors in these spaces can provide more appropriate protection for people while awake or asleep.~~

(5)* Other locations where required by applicable laws, codes or standards.

(6) in accordance with manufacturer's published instructions.

A.17.12.1(

4

6)

–

-

~~Carbon~~

~~monoxide~~

~~Monoxide~~ ~~detectors should~~

~~also~~

~~be located and installed as recommended by the~~

~~manufacturer's~~

~~manufacturer's~~ ~~published instructions, including those specific requirements for the spacing between detectors, minimum/maximum~~

~~spacings to walls and obstructions, minimum/maximum height of a detector in a space, minimum/maximum~~

~~distances to HVAC vents, reductions in spacing required for~~

~~high ceilings~~

~~high ceilings~~ ~~, and other pertinent information required to help properly design, assess, and install detectors to achieve their intent of detecting carbon monoxide early on to warn occupants of a hazard.~~

Additional Proposed Changes

File Name	Description	Approved
NFPA_72_BS_SB_17-12-1_comments.docx	clarity of A17.12.1 revisions	

Statement of Problem and Substantiation for Public Input

This Public Input seeks to remove conflicts between the various ICC and NFPA model codes (fire and building) and NFPA 72. As written in the 2022 edition of NFPA 72, section 17.12.1 requires CO detection in certain rooms or areas. However, the Fire Code takes precedence with respect to when and in what type of occupancy carbon monoxide detection is required. We have rewritten this section to focus on how and physically where to install detection when it is required in an area by the building code or laws. The rewritten requirements focus on the specific conclusions of the 2007 Fire Protection Research Foundation report entitled, “Development of a Technical Basis for Carbon Monoxide Detector Siting.”

Submitter Information Verification

Submitter Full Name: Megan Hayes
Organization: Nema
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Zip:
Submittal Date: Tue May 31 09:18:54 EDT 2022

Committee: SIG-IDS

NFPA Public Input Form

NOTE: All Public Input must be received by 5:00 pm EST/EDST on the published Public Input Closing Date.

For further information on the standards-making process, please contact the Codes and Standards Administration at 617-984-7249 or visit www.nfpa.org/codes.

For technical assistance, please call NFPA at 1-800-344-3555

FOR OFFICE USE ONLY

Log #:

Date Rec'd:

Date 3/18/22 **Name** Megan Hayes **Tel. No.** 703-841-3236

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Street Address 1300 North 17th Street, Suite 900 **City** Rosslyn **State** VA **Zip** 22209

Please indicate organization represented (if any) NEMA

1. (a) Title of NFPA Standard NFPA 72 National Fire Alarm Code **NFPA No. & Year** 72 / 2022

(b) Section/Paragraph 17.12.1

2. Public Input Recommends (check one): ☐ new text ☒ revised text ☐ deleted text

3. Proposed Text of Public Input (include proposed new or revised wording, or identification of wording to be deleted):
[Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

17.12.1 * Where carbon monoxide protection of a building is required by laws, codes, or standards, carbon monoxide detectors shall be ~~installed~~ sited in accordance with all of the following, unless a performance-based design in accordance with Section 17.3 is used:

A.17.12.1 Additional documents such as NEMA SB-7, Applications Guide for Carbon Monoxide Alarms and Detectors, and the NFPA Fire Protection Research Foundation (FPRF) technical report, Development of a Technical Basis for Carbon Monoxide Detector Siting, can also be used as supplemental resources to help with risk assessment, siting, and application considerations.

(1)*On the ceiling or on the wall with the top of the detector within 12 inches of the ceiling, where installed in the same room as permanently installed fuel-burning appliances;

~~Both permanent and temporary carbon-monoxide-producing devices need to be considered when locating carbon monoxide detectors. This includes accounting for all carbon-monoxide-producing appliances and equipment and temporary/mobile equipment, including vehicles, generators, machinery, engines, internal combustion engines, propane equipment, space heaters, engine-driven tools, grills, fire pits, systems used to generate hydrogen, fuel-burning equipment, and any other permanent and/or transient-type equipment and appliances that can be sources of carbon monoxide.~~

A.17.12.1 (1) By placing carbon monoxide detectors close to all permanent as well as all temporary carbon-monoxide-producing sources, early detection of carbon monoxide is more likely to occur. Detectors should therefore be located as close as practicable to the carbon-monoxide-producing source, taking into account such factors as detector accessibility for inspection, testing, and maintenance; potential sources of detector damage or contamination; potential nuisance alarm sources; transient backdrafting spillage of flue gases during startup and operation; and ventilation supply and exhaust vents. For early detection, carbon monoxide detectors should be located on the ceiling over carbon-monoxide-producing sources. There is often some buoyancy of the heated combustion gases that can help carry the carbon monoxide to the detector.

Carbon monoxide detectors should also be considered throughout the room/space that contains the carbon-monoxide-producing source to help address either limited or no buoyancy of the carbon monoxide, adverse impacts by HVAC systems, as well as ambient airflows in the space that can carry carbon monoxide away from the source rather than up to the ceiling directly over the source.

(2)*Centrally located ~~on every habitable level and~~ in ~~every~~ the HVAC zones ~~of the building~~ of the areas required by laws, codes, or standards;

~~Carbon monoxide can follow flow paths from its original source to adjacent areas in the building, including moving horizontally and vertically throughout the space, building, and structure, and where carbon monoxide detectors should be located in these adjacent areas needs to be considered. Detector location and spacing should be based on an engineering evaluation that considers potential sources and migration of carbon monoxide, including through exhaust ductwork, HVAC equipment, openings in walls and floors, unprotected penetrations, and elevator shafts.~~

~~As some of the higher carbon monoxide concentrations are often at the source and within the exhaust ductwork and venting equipment, carbon monoxide detectors should be located along the exhaust path of any carbon-monoxide-producing equipment, appliances, and so forth, extending from the source of the carbon monoxide through the building to the termination of the exhaust at an exterior wall or roof. This should include detectors along any duct branch lines and interconnections to any ductwork and piping used in the exhaust system so carbon monoxide that might exist outside the exhaust path (due to leaks, damage, obstructions, rust, corrosion, etc.) can be detected.~~

A.17.12.1 (2) The impact of HVAC systems should be taken into account when locating carbon monoxide detectors. HVAC systems can transport as well as mix and dilute carbon monoxide. Consideration should be given to the layout and operation of the HVAC system and whether the HVAC is constantly running or only runs for a portion of the time and, therefore, is not constantly distributing or mixing air in the building. An HVAC zone is an area that is independently climatically controlled from other areas. Centrally located is defined as the geometric center of a physical area, i.e., the centroid. ~~When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls. These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.~~

~~Carbon monoxide can potentially enter the building from an exterior source, such as through make-up air systems. Some of the external sources that should be considered when locating carbon monoxide detectors include adjacent structures, exterior systems, equipment such as vehicles and generators, and interconnections to underground spaces or parking garages.~~

(3)

*Outside of each separate ~~dwelling unit, guest room, and guest suite~~ sleeping area, guest room, and guest suite within 21 ft (6.4 m) of any door to a sleeping room, with the distance measured along a path of travel

~~Carbon monoxide detectors should be considered within each bedroom, dwelling unit, guest room, guest suite, and sleeping area, as well as the potential for multiple detectors in multiroom suites. Additional detectors in these spaces can provide more appropriate protection for people while awake or asleep.~~

(4) In each ~~required~~ area ~~of a floor defined~~ separated by normally closed doors.

A.17.12.1 (4) When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls. These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.

(5) *Other locations where required by applicable laws, codes, or standards

(6) In accordance with manufacturer's published instructions.

A.17.12.1 (6) Carbon monoxide detectors should also be located and installed as recommended by the manufacturer's published instructions, including those specific requirements for the spacing between detectors, minimum/maximum spacings to walls and obstructions, minimum/maximum height of a detector in a space, minimum/maximum distances to HVAC vents, reductions in spacing required for high ceilings, and other pertinent information required to help properly design, assess, and install detectors to achieve their intent of detecting carbon monoxide early on to warn occupants of a hazard.

4. Statement of Problem and Substantiation for Public Input: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Public Input, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

This Public Input seeks to remove conflicts between the various ICC and NFPA model codes (fire and building) and NFPA 72. As written in the 2022 edition of NFPA 72, section 17.12.1 requires CO detection in certain rooms or areas. However, the Fire Code takes precedence with respect to when and in what type of occupancy carbon monoxide detection is required. We have rewritten this section to focus on how and physically where to install detection when it is required in an area by the building code or laws. The rewritten requirements focus on the specific conclusions of the 2007 Fire Protection Research Foundation report entitled, “Development of a Technical Basis for Carbon Monoxide Detector Siting.”

5. Copyright Assignment

(a) ☒ I am the author of the text or other material (such as illustrations, graphs) proposed in the Public Input.

(b) ☐ Some or all of the text or other material proposed in this Public Input was not authored by me. Its source is as follows: (please identify which material and provide complete information on its source)

I hereby grant and assign to the NFPA all and full rights in copyright in this Public Input (including both the Proposed Text and the Statement of Problem and Substantiation). I understand that I acquire no rights in any publication of NFPA in which this Public Input in this or another similar or analogous form is used. Except to the extent that I do not have authority to make an assignment in materials that I have identified in (b) above, I hereby warrant that I am the author of this Public Input and that I have full power and authority to enter into this assignment.

Signature (Required)

PLEASE USE SEPARATE FORM FOR EACH PUBLIC INPUT

To: Secretary, Standards Council National Fire Protection Association
1 Batterymarch Park · Quincy, MA 02169-7471 OR
Fax to: (617) 770-3500 OR Email to: proposals_comments@nfpa.org

6/7/2022

Public Input No. 398-NFPA 72-2022 [Section No. A.17.12.1(2)]

A.17.12.1(2)

~~Carbon monoxide can follow flow paths from its original source to adjacent areas in the building, including moving horizontally and vertically throughout the space, building, and structure, and where carbon monoxide detectors should be located in these adjacent areas needs to be considered. Detector location and spacing should be based on an engineering evaluation that considers potential sources and migration of carbon monoxide, including through exhaust ductwork, HVAC equipment, openings in walls and floors, unprotected penetrations, and elevator shafts.~~

~~As some of the higher carbon monoxide concentrations are often at the source and within the exhaust ductwork and venting equipment, carbon monoxide detectors should be located along the exhaust path of any carbon-monoxide-producing equipment, appliances, and so forth, extending from the source of the carbon monoxide through the building to the termination of the exhaust at an exterior wall or roof. This should include detectors along any duct branch lines and interconnections to any ductwork and piping used in the exhaust system so carbon monoxide that might exist outside the exhaust path (due to leaks, damage, obstructions, rust, corrosion, etc.) can be detected.~~

The impact of HVAC systems should be taken into account when locating carbon monoxide detectors. HVAC systems can transport as well as mix and dilute carbon monoxide. Consideration should be given to the layout and operation of the HVAC system and whether the HVAC is constantly running or only runs for a portion of the time and, therefore, is not constantly distributing or mixing air in the building. ~~When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls. These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.Carbon monoxide can potentially enter the building from an exterior source, such as through make-up air systems. Some of the external sources that should be considered when locating carbon monoxide detectors include adjacent structures, exterior systems, equipment such as vehicles and generators, and interconnections to underground spaces or parking garages~~ An HVAC zone is an area that is independently climatically controlled from other areas. Centrally located defined as the geometric center of a physical area, i.e., the centroid .

Statement of Problem and Substantiation for Public Input

The proposed text changes here comport with revised text proposed for chapter 17.

Submitter Information Verification

Submitter Full Name: Chris Heaton
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Submittal Date: Wed May 25 18:33:00 EDT 2022
Committee: SIG-IDS

Public Input No. 485-NFPA 72-2022 [Section No. A.17.12.1(2)]

A.17.12.1(2)

~~Carbon monoxide can follow flow paths from its original source to adjacent areas in the building, including moving horizontally and vertically throughout the space, building, and structure, and where carbon monoxide detectors should be located in these adjacent areas needs to be considered. Detector location and spacing should be based on an engineering evaluation that considers potential sources and migration of carbon monoxide, including through exhaust ductwork, HVAC equipment, openings in walls and floors, unprotected penetrations, and elevator shafts.~~

~~As some of the higher carbon monoxide concentrations are often at the source and within the exhaust ductwork and venting equipment, carbon monoxide detectors should be located along the exhaust path of any carbon-monoxide-producing equipment, appliances, and so forth, extending from the source of the carbon monoxide through the building to the termination of the exhaust at an exterior wall or roof. This should include detectors along any duct branch lines and interconnections to any ductwork and piping used in the exhaust system so carbon monoxide that might exist outside the exhaust path (due to leaks, damage, obstructions, rust, corrosion, etc.) can be detected.~~

A.17.12.1 (2) The impact of HVAC systems should be taken into account when locating carbon monoxide detectors.

~~HVAC~~

HVAC systems can transport as well as mix and dilute carbon monoxide. Consideration should be given to the layout and operation of the HVAC system and whether the HVAC is constantly running or only runs for a portion of the time and, therefore, is not constantly distributing or mixing air in the building .

~~When~~

An HVAC zone is an area that is independently climatically controlled from other areas. Centrally located is defined as the geometric center of a physical area, i.e., the centroid. ~~When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls.~~

~~These~~

~~These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.~~

~~Carbon monoxide can potentially enter the building from an exterior source, such as through make-up air systems. Some of the external sources that should be considered when locating carbon monoxide detectors include adjacent structures, exterior systems, equipment such as vehicles and generators, and interconnections to underground spaces or parking garages.~~

Additional Proposed Changes

File Name	Description	Approved
NFPA_72_BS_SB_17-12-1_comments.docx		

Statement of Problem and Substantiation for Public Input

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Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 482-NFPA 72-2022 [Section No. 17.12.1]	

Submitter Information Verification

Submitter Full Name: Tim Knisely
Organization: Automatic Fire Alarm Association (AFAA)
Affiliation: Automatic Fire Alarm Association (AFAA)
Street Address:
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Submittal Date: Fri May 27 13:39:46 EDT 2022
Committee: SIG-IDS

NFPA Public Input Form

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For technical assistance, please call NFPA at 1-800-344-3555

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Log #:

Date Rec'd:

Date 5/25/22 **Name** Tim Knisely **Tel. No.** 814-933-8552

Company Automatic Fire Alarm Association (AFAA) **Email** tim@afaa.org

Street Address 3246 Noe-Bixby Road **City** Columbus **State** OH **Zip** 43232

Please indicate organization represented (if any) AFAA

1. (a) Title of NFPA Standard NFPA 72 National Fire Alarm Code **NFPA No. & Year** 72 / 2022

(b) Section/Paragraph 17.12.1

2. Public Input Recommends (check one): ☐ new text ☒ revised text ☐ deleted text

3. Proposed Text of Public Input (include proposed new or revised wording, or identification of wording to be deleted):
[Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

17.12.1 * Where carbon monoxide protection of a building is required by laws, codes, or standards, carbon monoxide detectors shall be ~~installed~~ sited in accordance with all of the following, unless a performance-based design in accordance with Section 17.3 is used:

A.17.12.1 Additional documents such as NEMA SB-7, Applications Guide for Carbon Monoxide Alarms and Detectors, and the NFPA Fire Protection Research Foundation (FPRF) technical report, Development of a Technical Basis for Carbon Monoxide Detector Siting, can also be used as supplemental resources to help with risk assessment, siting, and application considerations.

(1)*On the ceiling or on the wall with the top of the detector within 12 inches of the ceiling, where installed in the same room as permanently installed fuel-burning appliances;

~~Both permanent and temporary carbon-monoxide-producing devices need to be considered when locating carbon monoxide detectors. This includes accounting for all carbon-monoxide-producing appliances and equipment and temporary/mobile equipment, including vehicles, generators, machinery, engines, internal combustion engines, propane equipment, space heaters, engine-driven tools, grills, fire pits, systems used to generate hydrogen, fuel-burning equipment, and any other permanent and/or transient-type equipment and appliances that can be sources of carbon monoxide.~~

A.17.12.1 (1) By placing carbon monoxide detectors close to all permanent as well as all temporary carbon-monoxide-producing sources, early detection of carbon monoxide is more likely to occur. Detectors should therefore be located as close as practicable to the carbon-monoxide-producing source, taking into account such factors as detector accessibility for inspection, testing, and maintenance; potential sources of detector damage or contamination; potential nuisance alarm sources; transient backdrafting spillage of flue gases during startup and operation; and ventilation supply and exhaust vents. For early detection, carbon monoxide detectors should be located on the ceiling over carbon-monoxide-producing sources. There is often some buoyancy of the heated combustion gases that can help carry the carbon monoxide to the detector.

Carbon monoxide detectors should also be considered throughout the room/space that contains the carbon-monoxide-producing source to help address either limited or no buoyancy of the carbon monoxide, adverse impacts by HVAC systems, as well as ambient airflows in the space that can carry carbon monoxide away from the source rather than up to the ceiling directly over the source.

(2)*Centrally located ~~on every habitable level and~~ in ~~every~~ the HVAC zones ~~of the building~~ of the areas required by laws, codes, or standards;

~~Carbon monoxide can follow flow paths from its original source to adjacent areas in the building, including moving horizontally and vertically throughout the space, building, and structure, and where carbon monoxide detectors should be located in these adjacent areas needs to be considered. Detector location and spacing should be based on an engineering evaluation that considers potential sources and migration of carbon monoxide, including through exhaust ductwork, HVAC equipment, openings in walls and floors, unprotected penetrations, and elevator shafts.~~

~~As some of the higher carbon monoxide concentrations are often at the source and within the exhaust ductwork and venting equipment, carbon monoxide detectors should be located along the exhaust path of any carbon-monoxide-producing equipment, appliances, and so forth, extending from the source of the carbon monoxide through the building to the termination of the exhaust at an exterior wall or roof. This should include detectors along any duct branch lines and interconnections to any ductwork and piping used in the exhaust system so carbon monoxide that might exist outside the exhaust path (due to leaks, damage, obstructions, rust, corrosion, etc.) can be detected.~~

A.17.12.1 (2) The impact of HVAC systems should be taken into account when locating carbon monoxide detectors. HVAC systems can transport as well as mix and dilute carbon monoxide. Consideration should be given to the layout and operation of the HVAC system and whether the HVAC is constantly running or only runs for a portion of the time and, therefore, is not constantly distributing or mixing air in the building. An HVAC zone is an area that is independently climatically controlled from other areas. Centrally located is defined as the geometric center of a physical area, i.e., the centroid. ~~When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls. These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.~~

~~Carbon monoxide can potentially enter the building from an exterior source, such as through make-up air systems. Some of the external sources that should be considered when locating carbon monoxide detectors include adjacent structures, exterior systems, equipment such as vehicles and generators, and interconnections to underground spaces or parking garages.~~

(3)

*Outside of each separate ~~dwelling unit, guest room, and guest suite~~ sleeping area, guest room, and guest suite within 21 ft (6.4 m) of any door to a sleeping room, with the distance measured along a path of travel

~~Carbon monoxide detectors should be considered within each bedroom, dwelling unit, guest room, guest suite, and sleeping area, as well as the potential for multiple detectors in multiroom suites. Additional detectors in these spaces can provide more appropriate protection for people while awake or asleep.~~

(4) In each ~~required~~ area ~~of a floor defined~~ separated by normally closed doors.

A.17.12.1 (4) When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls. These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.

(5) *Other locations where required by applicable laws, codes, or standards

(6) In accordance with manufacturer's published instructions.

A.17.12.1 (6) Carbon monoxide detectors should also be located and installed as recommended by the manufacturer's published instructions, including those specific requirements for the spacing between detectors, minimum/maximum spacings to walls and obstructions, minimum/maximum height of a detector in a space, minimum/maximum distances to HVAC vents, reductions in spacing required for high ceilings, and other pertinent information required to help properly design, assess, and install detectors to achieve their intent of detecting carbon monoxide early on to warn occupants of a hazard.

4. Statement of Problem and Substantiation for Public Input: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Public Input, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

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(b) ☒ **Some or all of the text or other material proposed in this Public Input was not authored by me. Its source is as follows:** (please identify which material and provide complete information on its source)

AFAA Codes and Standards Committee

I hereby grant and assign to the NFPA all and full rights in copyright in this Public Input (including both the Proposed Text and the Statement of Problem and Substantiation). I understand that I acquire no rights in any publication of NFPA in which this Public Input in this or another similar or analogous form is used. Except to the extent that I do not have authority to make an assignment in materials that I have identified in (b) above, I hereby warrant that I am the author of this Public Input and that I have full power and authority to enter into this assignment.

Signature (Required)

PLEASE USE SEPARATE FORM FOR EACH PUBLIC INPUT

To: Secretary, Standards Council National Fire Protection Association
1 Batterymarch Park · Quincy, MA 02169-7471 OR
Fax to: (617) 770-3500 OR Email to: proposals_comments@nfpa.org

6/7/2022

Public Input No. 400-NFPA 72-2022 [New Section after A.17.12.1(3)]

A.17.12.1 (4)

When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls. These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.

Statement of Problem and Substantiation for Public Input

Annex material for added section with chapter 17.12.1 (4)

Submitter Information Verification

Submitter Full Name: Chris Heaton
Organization: Electronic Security Association
Affiliation: Electronic Security Association
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 18:43:43 EDT 2022
Committee: SIG-IDS

Public Input No. 399-NFPA 72-2022 [Section No. A.17.12.1(3)]

A.17.12.1(3)

~~Carbon monoxide detectors should be considered within each bedroom, dwelling unit, guest room, guest suite, and sleeping area, as well as the potential for multiple detectors in multiroom suites. Additional detectors in these spaces can provide more appropriate protection for people while awake or asleep.~~

Statement of Problem and Substantiation for Public Input

Incorporated into proposed revision to Chapter 17.12.1

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 397-NFPA 72-2022 [Section No. 17.12.1]	related chapter to this revision in annex

Submitter Information Verification

Submitter Full Name: Chris Heaton
Organization: Electronic Security Association
Affiliation: Electronic Security Association
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 25 18:40:01 EDT 2022
Committee: SIG-IDS

Public Input No. 486-NFPA 72-2022 [Section No. A.17.12.1(3)]

A.17.12.1(3)

~~**Carbon monoxide detectors should be considered within each bedroom, dwelling unit, guest room, guest suite, and sleeping area, as well as the potential for multiple detectors in multiroom suites. Additional detectors in these spaces can provide more appropriate protection for people while awake or asleep.**~~

Additional Proposed Changes

File Name	Description	Approved
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Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 482-NFPA 72-2022 [Section No. 17.12.1]	

Submitter Information Verification

Submitter Full Name: Tim Knisely
Organization: Automatic Fire Alarm Association (AFAA)
Affiliation: Automatic Fire Alarm Association (AFAA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 27 13:42:26 EDT 2022
Committee: SIG-IDS

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Log #:

Date Rec'd:

Date 5/25/22 **Name** Tim Knisely **Tel. No.** 814-933-8552

Company Automatic Fire Alarm Association (AFAA) **Email** tim@afaa.org

Street Address 3246 Noe-Bixby Road **City** Columbus **State** OH **Zip** 43232

Please indicate organization represented (if any) AFAA

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(b) Section/Paragraph 17.12.1

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A.17.12.1 (4) When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls. These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.

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A.17.12.1 (6) Carbon monoxide detectors should also be located and installed as recommended by the manufacturer's published instructions, including those specific requirements for the spacing between detectors, minimum/maximum spacings to walls and obstructions, minimum/maximum height of a detector in a space, minimum/maximum distances to HVAC vents, reductions in spacing required for high ceilings, and other pertinent information required to help properly design, assess, and install detectors to achieve their intent of detecting carbon monoxide early on to warn occupants of a hazard.

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To: Secretary, Standards Council National Fire Protection Association
1 Batterymarch Park · Quincy, MA 02169-7471 OR
Fax to: (617) 770-3500 OR Email to: proposals_comments@nfpa.org

6/7/2022

Public Input No. 487-NFPA 72-2022 [Section No. A.17.12.1(4)]

A.17.12.1(4)

A.17.12.1 (4) When locating carbon monoxide detectors, other considerations include the presence and impact of closed doors and walls. These can compartmentalize areas within an individual HVAC zone or floor and prevent spread. Their presence can also allow carbon monoxide to accumulate more rapidly in given areas if doors are closed to contain it and not allow it to spread and dilute the concentration.

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Additional Proposed Changes

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Related Input	Relationship
Public Input No. 482-NFPA 72-2022 [Section No. 17.12.1]	

Submitter Information Verification

Submitter Full Name: Tim Knisely
Organization: Automatic Fire Alarm Association (AFAA)
Affiliation: Automatic Fire Alarm Association (AFAA)
Street Address:
City:
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Zip:
Submittal Date: Fri May 27 13:45:03 EDT 2022

Committee: SIG-IDS

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(5) *Other locations where required by applicable laws, codes, or standards

(6) In accordance with manufacturer's published instructions.

A.17.12.1 (6) Carbon monoxide detectors should also be located and installed as recommended by the manufacturer's published instructions, including those specific requirements for the spacing between detectors, minimum/maximum spacings to walls and obstructions, minimum/maximum height of a detector in a space, minimum/maximum distances to HVAC vents, reductions in spacing required for high ceilings, and other pertinent information required to help properly design, assess, and install detectors to achieve their intent of detecting carbon monoxide early on to warn occupants of a hazard.

4. Statement of Problem and Substantiation for Public Input: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Public Input, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

This Public Input seeks to remove conflicts between the various ICC and NFPA model codes (fire and building) and NFPA 72. As written in the 2022 edition of NFPA 72, section 17.12.1 requires CO detection in certain rooms or areas. However, the Fire Code takes precedence with respect to when and in what type of occupancy carbon monoxide detection is required. We have rewritten this section to focus on how and physically where to install detection when it is required in an area by the building code or laws. The rewritten requirements focus on the specific conclusions of the 2007 Fire Protection Research Foundation report entitled, “Development of a Technical Basis for Carbon Monoxide Detector Siting.”

5. Copyright Assignment

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(b) ☒ **Some or all of the text or other material proposed in this Public Input was not authored by me. Its source is as follows:** (please identify which material and provide complete information on its source)

AFAA Codes and Standards Committee

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Signature (Required)

PLEASE USE SEPARATE FORM FOR EACH PUBLIC INPUT

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Fax to: (617) 770-3500 OR Email to: proposals_comments@nfpa.org

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