



Public Comment No. 24-NFPA 72-2023 [Global Input]

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Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._3.pdf	NFPA 72 Correlating Note No. 3	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 3 appeared in the First Draft Report on First Revisions No. 5280.

Review the definitions for 'Cybersecurity Software' and 'Cybersecurity-Related Only Software' and resolve the two definitions into one definition. Two competing definitions for software related to cybersecurity created by SIG-TMS and SIG-FUN. The SIG-FUN definition was created as part of the Chapter 11 work. The two committees should work together to create one definition

Related Item

- FR-5280

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 11:55:57 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5094-NFPA 72-2023

Statement: Based on the public comment from the Correlating Committee, the definition has been deleted so that a single definition for cybersecurity-related software is used in the standard. The definition for cybersecurity software should remain under the purview of SIG-FUN.



Public Comment No. 22-NFPA 72-2023 [Section No. 1.4.1]

1.4.1

The provisions of this document shall not be required to be applied to facilities, equipment, structures, or installations that were existing or approved for construction or installation prior to the effective date of the document.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._4.pdf	Correlating Note No. 4	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 4 appeared in the First Draft Report on First Revision No. 5002.

Review the language of 1.4.1. The revision appears to make it unclear as to what standard would be used to test existing fire alarm systems if the adopted edition of NFPA 72 can't be used. If the current revision were to be included, this would override the application of NFPA72's ITM requirements (Chapter 14) for existing buildings.

Related Item

- FR-5002

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Correlating Committee on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 11:34:07 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5068-NFPA 72-2023

Statement: The revision adds clarity to application of the requirement to new and existing buildings.



Public Comment No. 3-NFPA 72-2023 [Section No. 2.2]

2.2 NFPA Publications.

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

NFPA 10, *Standard for Portable Fire Extinguishers*, 2022 [edition](#).

NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2025 [edition](#).

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2023 [edition](#).

NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines*, 2024 [edition](#).

NFPA 70[®], *National Electrical Code*[®], 2023 [edition](#).

NFPA 75, *Standard for the Fire Protection of Information Technology Equipment*, 2024 [edition](#).

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, 2024 [edition](#).

NFPA 101[®], *Life Safety Code*[®], 2024 [edition](#).

NFPA 110, *Standard for Emergency and Standby Power Systems*, 2025 [edition](#).

NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*, 2025 [edition](#).

NFPA 170, *Standard for Fire Safety and Emergency Symbols*, 2024 [edition](#).

NFPA 601, *Standard for Security Services in Fire Loss Prevention*, 2020 [edition](#).

[NFPA 715](#), *Standard for the Installation of Fuel Gases Detection and Warning Equipment*, 2023 [edition](#).

NFPA 855, *Standard for the Installation of Stationary Energy Storage Systems*, 2023 [edition](#).

NFPA 1031, *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*, 2014 [edition](#).

NFPA 1225, *Standard for Emergency Services Communications*, 2022 [edition](#).

NFPA 1600[®], *Standard on Continuity, Emergency, and Crisis Management*, 2019 [edition](#).

NFPA 1620, *Standard for Pre-Incident Planning*, 2020 [edition](#).

Statement of Problem and Substantiation for Public Comment

NFPA 715 is the new standard for fuel gas detection. Several other PCs have been submitted to other sections of NFPA 72 to point to NFPA 715 for fuel gas detection. Therefore, it needs to be added to the referenced publications. If the Committee designates this as new material, please carry over to the next cycle for consideration.

Related Item

- FR 5205

Submitter Information Verification

Submitter Full Name: Stephen Olenick

Organization: Combustion Science & Engineering, Inc.

Street Address:

State:

City:

Zip:

Street Address:
State:
City:
Zip:

Submittal Date: Mon Mar 13 10:38:59 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Accepted

Resolution: [SR-5069-NFPA 72-2023](#)

Statement: NFPA 715 is the new standard for fuel gas detection. Several other PCs have been submitted to other sections of NFPA 72 to point to NFPA 715 for fuel gas detection. Therefore, it needs to be added to the referenced publications.



Public Comment No. 10-NFPA 72-2023 [Section No. 3.3.43.2]

3.3.43.2 Girder.

A support for beams or joists that runs at right angles to the beams or joists. ~~If the top of the girder is within 4 in. (100 mm) of the ceiling, the girder is a factor in determining the number of detectors and is to be considered a beam. If the top of the girder is more than 4 in. (100 mm) from the ceiling, the girder is not a factor in detector location. (SIG-IDS)~~

Statement of Problem and Substantiation for Public Comment

NFPA Manual of Style (MoS) mandates Chapter 3 shall only contain definitions. (Clause 1.6.3.1, Manual of Style for Technical Committee Documents, 2004 edition). The second and third sentences ,(If the top of the girder is within 4 in. (100 mm) of the ceiling, the girder is a factor in determining the number of detectors and is to be considered a beam. If the top of the girder is more than 4 in. (100 mm) from the ceiling, the girder is not a factor in detector location), do not contribute to the definition of a girder but rather outline how to consider a girder in the spacing of detectors. Therefor in order to comply with MoS, this content should be deleted from the definition and added to the appropriate sections in Chapter 17. CN-11 indicated the FR 5297 was possibly in conflict with this definition and suggested a review and correlation making this public comment relative to the initial FR. This proposed revision clarifies how girders are to be applied thereby correlating the definition with the first revision and correcting a manual of style issue.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 11-NFPA 72-2023 [New Section after 17.6.3.3.2]</u>	Destination of relocated content
<u>Public Comment No. 15-NFPA 72-2023 [New Section after 17.7.4.2.4.1]</u>	Destination of relocated content
<u>Public Comment No. 11-NFPA 72-2023 [New Section after 17.6.3.3.2]</u>	
<u>Public Comment No. 15-NFPA 72-2023 [New Section after 17.7.4.2.4.1]</u>	

Related Item

- First Revision No. 5297-NFPA 72-2022 • Correlating Committee Note No. 11-NFPA 72-2023

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: Bp Inc.
Street Address:
City:
State:
Zip:
Submittal Date: Tue Mar 21 08:05:55 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Resolution: Accepted
Action Statement: SR-5029-NFPA 72-2023
 Corrects a Manual of Style issue by deleting requirements from the definition. The requirements were moved into Chapter 17.

Committee:
Resolution:
Action:
Statement:

Accepted
SR-5029-NFPA 72-2023

Corrects a Manual of Style issue by deleting requirements from the definition. The requirements were moved into Chapter 17.



Public Comment No. 201-NFPA 72-2023 [New Section after 3.3.75]

After 3.3.75

Design Review: A review of an installed system by a qualified design professional for compliance to the original or current installation codes or standards.

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Statement of Problem and Substantiation for Public Comment

The term "Observation" was added in the 2022 edition of NFPA 72. The Automatic Fire Alarm Association is in favor of ITM technicians being able to point out possible improvements to the fire alarm or signaling system, even if these items are not impairments or deficiencies. However, we feel additional clarifications are needed in order to reduce the liability of ITM companies who have ITM technicians servicing systems and making good faith observations that the owner may want to consider. It needs to be clear that an observation made about one part of a system, or the protected premise, does not mean that the ITM technician has done a complete review of the entire system and the building and that the observation, or observations cover all possible hazards. ITM technicians are not design professionals or trained fire protection engineers and their opinions on possible improvements to the fire life safety of a premise should not be considered to be a complete or thorough review of all of the hazards or code requirements that may come into play. In my previous public inputs. We refer to this type of system and premise review as a "Design Review" which was proposed to be defined as "A review of an installed system by a qualified design professional for compliance to the original or current installation codes and standards." (Public Input 342)

As the code now is written, ITM companies will discourage ITM technicians from making any observations, as these may be considered to be part of a "Design Review", which could open the ITM company up to litigation. For example, if an ITM technician noticed that a building owner was storing flammable chemicals in a closet that did not have a smoke detector, in good faith, the technician could make the observation to the building owner that they might want to consider adding a smoke detector to that closet. So the owner adds a smoke detector to that closet. But, sometime down the road, there is a fire in a different closet that does not have a smoke detector in it, in a completely different area of the building that also had some chemicals in it, that the ITM technician never entered. It is not hard to imagine a building owner initiating litigation against the ITM company because the technician did not tell them about the other closet and it not having a smoke detector, even though the ITM technician was never in that room. ITM companies will simply tell their ITM technicians to not make any observations.

Mr. Jason Dupuis submitted public inputs 340, 341, and 342 which were intended to help address this concern. PI 340 was identical to this public comment, looking to amend the definition of "Observation". PI 341 looked to add a definition for "Design Review" as mentioned above. PI 342 looked to add section 14.1.6 which would state that "This chapter does not require inspection, test, or maintenance personnel to verify the adequacy of the design of existing previously approved systems." This language was borrowed from NFPA 25 – section 1.1.3.1. We are resubmitting these three Public Inputs as Public Comments and hope that the technical committee will reconsider them.

Mr. Warren Olsen also submitted Public Input 204 which also looked to address this issue. We urge the technical committee to review Mr. Olsen's PI, and presumably his public comments which we believe he is submitting. We urge the committee to reconsider their initial position and add some language that will allow ITM technicians to make good faith life safety observations to building owners that will not at the same time open up the ITM companies to litigation.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 200-NFPA 72-2023 [New Section after 14.1.5]	Group with Public Comments 201, 202
Public Comment No. 202-NFPA 72-2023 [Section No. 3.3.196]	Group with Public Comments 200, 201
Public Comment No. 200-NFPA 72-2023 [New Section after 14.1.5]	

~~after 14.1.5]~~
Public Comment No. 202-NFPA 72-2023 [Section No. 3.3.196]
Public Comment No. 200-NFPA 72-2023 [New Section after 14.1.5]
Public Comment No. 202-NFPA 72-2023 [Section No. 3.3.196]

202
 Group with Public Comments 200,
 201

Related Item

- 340, 341, 342

Submitter Information Verification

Submitter Full Name: Shane Clary
Organization: Bay Alarm Company
Affiliation: Automatic Fire Alarm Association
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 30 23:59:13 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected
Resolution: The new definition of Design Review is unnecessary, a building owner can undertake a design review with a qualified professional at any time.



Public Comment No. 39-NFPA 72-2023 [New Section after 3.3.75]

New Definition for "Design Review"

Design Review: A review of an installed system by a qualified design professional for compliance to the original or current installation codes or standards.

Statement of Problem and Substantiation for Public Comment

The term "Observation" was added in the 2022 edition of NFPA 72. I am in favor of ITM technicians being able to point out possible improvements to the fire alarm or signaling system, even if these items are not impairments or deficiencies. However, I feel additional clarifications are needed in order to reduce the liability of ITM companies who have ITM technicians servicing systems and making good faith observations that the owner may want to consider. It needs to be clear that an observation made about one part of a system, or the protected premise, does not mean that the ITM technician has done a complete review of the entire system and the building and that the observation, or observations cover all possible hazards. ITM technicians are not design professionals or trained fire protection engineers and their opinions on possible improvements to the fire life safety of a premise should not be considered to be a complete or thorough review of all of the hazards or code requirements that may come into play. In my previous public inputs, I refer to this type of system and premise review as a "Design Review" which I proposed be defined as "A review of an installed system by a qualified design professional for compliance to the original or current installation codes and standards." (Public Input 342).

As the code now is written, ITM companies will discourage ITM technicians from making any observations, as these may be considered to be part of a "Design Review", which could open the ITM company up to litigation. For example, if an ITM technician noticed that a building owner was storing flammable chemicals in a closet that did not have a smoke detector, in good faith, the technician could make the observation to the building owner that they might want to consider adding a smoke detector to that closet. So the owner adds a smoke detector to that closet. But, sometime down the road, there is a fire in a different closet that does not have a smoke detector in it, in a completely different area of the building that also had some chemicals in it, that the ITM technician never entered. It is not hard to imagine a building owner initiating litigation against the ITM company because the technician did not tell them about the other closet and it not having a smoke detector, even though the ITM technician was never in that room. ITM companies will simply tell their ITM technicians to not make any observations.

I submitted public inputs 340, 341, and 342 which were intended to help address this concern. PI 340 was identical to this public comment, looking to amend the definition of "Observation". PI 341 looked to add a definition for "Design Review" as mentioned above. PI 342 looked to add section 14.1.6 which would state that "This chapter does not require inspection, test, or maintenance personnel to verify the adequacy of the design of existing previously approved systems." This language was borrowed from NFPA 25 - section 1.1.3.1. I am resubmitting these three Public Inputs as Public Comments and hope that the technical committee will reconsider them.

Warren Olsen also submitted Public Input 204 which also looked to address this issue. I urge the technical committee to review Warren's PI, and presumably his public comments which I believe he is submitting. I urge the committee to reconsider their initial position and add some language that will allow ITM technicians to make good faith life safety observations to building owners that will not at the same time open up the ITM companies to litigation.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 40-NFPA 72-2023 [New Section after 14.1.5]</u>	Group with public comments 38, 39, and 40
<u>Public Comment No. 38-NFPA 72-2023 [Section No. 3.3.196]</u>	Group with public comments 38, 39, and 40
<u>Public Comment No. 38-NFPA 72-2023 [Section No. 3.3.196]</u> <u>Public Comment No. 40-NFPA 72-2023 [New Section after 14.1.5]</u>	

Related Item

Public Comment No. 38-NFPA 72-2023 | Section No. 39.1.5
Public Comment No. 40-NFPA 72-2023 | New Section after 14.1.5]

Related Item

- Public Inputs 340, 341, and 342

Submitter Information Verification

Submitter Full Name: Jason Dupuis
Organization: Cintas Fire Protection
Street Address:
City:
State:
Zip:
Submittal Date: Wed Apr 26 17:03:54 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected
Resolution: The new definition of Design Review is unnecessary, a building owner can undertake a design review with a qualified professional at any time.



Public Comment No. 88-NFPA 72-2023 [Section No. 3.3.78.1]

3.3.78.1* Acoustic Leak Detector.

A device which detects the presence of a gas leak through detection of the sound produced by a pressurized gas release- ~~from a choked flow condition~~ . (SIG-IDS)

Statement of Problem and Substantiation for Public Comment

Defining the detection based on choked flow limits technology. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Item

- FR 5347

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: BP America Inc.
Affiliation: SIG-IDS Task group for Acoustic Gas Detection
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 17 07:20:47 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5030-NFPA 72-2023](#)
Statement: Defining the detection method based solely on choked flow limits other technologies. The included annex language further clarifies the different types of acoustic leak detection available.



Public Comment No. 23-NFPA 72-2023 [Section No. 3.3.78.5]

3.3.78.5 Carbon Monoxide Detector.

A device containing electrical components coupled with a carbon monoxide sensing means that has a provision for the connection of electrical power and signaling circuits. (SIG-IDS)

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._19.pdf	NFPA 72 Correlating Note No. 19	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 19 appeared in the First Draft Report on First Revisions No. 5338 (SIG-IDS).

Review the language of 3.3.78.5. During editorial review, the editors recommended changes to this section to make the language easier to understand. Consider revisions such as: "Carbon Monoxide Detector. A device that contains electrical components, a carbon monoxide sensing means, and connections for electrical power and signaling circuits. (SIG-IDS)"

Related Item

- FR-5338

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Correlating Committee on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 11:51:13 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5008-NFPA 72-2023](#)

Statement: This revision simplifies the definition and removes unnecessary language.



Public Comment No. 47-NFPA 72-2023 [Section No. 3.3.82]

3.3.82* Digital Alarm Communicator Transmitter (DACT).

A fire alarm system component at the protected premises to which initiating devices or groups of devices are connected. The DACT seizes the connected telephone line, dials a preselected number to connect to a DACR, and transmits signals a fire alarm control unit or a group of control units are connected and transmits voiced-based signals to the DACR.

A.3.3.81

The DACT uses legacy POTS lines or emulated lines from an MFVN or listed communication equipment, or a combination of them, to connect and transmit signals to a DACR indicating a status change of the

initiating device. (SIG-SSS) fire alarm system.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_2025_PC_DACT_Definition.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 and to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5100

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: SIG-SSS Chapter 26.6 Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Apr 30 15:48:29 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR 5104-NFPA 72-2023
Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising

Resolution: SR 5104-NFPA 72-2023

During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following point is the specific basis for the change.

1. Clarified that DACTs are a legacy transmission means based on loop start technology.



Public Comment No. 169-NFPA 72-2023 [New Section after 3.3.154]

TITLE OF NEW CONTENT

3.3.156* Intermediary Service Provider.

A company that participates in the delivery of signals from an alarm system installed at a protected premises to the responsible supervising station by taking a position in the communications cloud where:

- (1) Signals from a protected premise traverse a path through communications channel(s) to the intermediary service provider’s network servers, which automatically retransmit signals through communications channel(s) to the responsible supervising station.
- (2) The intermediary service provider provides supervision of the connection between itself, the protected property, and the supervising station.
- (3) The receipt of an alarm signal triggers both a) immediate retransmission of the signal to the supervising station and b) delivery of services not required by this code, such as notification to a list of supplemental contacts specified by the fire alarm system owner, predictive maintenance analytics, and the like.

A.3.3.156 – Figure 3.3.156 depicts the location of an intermediary service provider in the communications cloud relative to a protected premises and a supervising station.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Picture1.png	Figure A.3.3.156	

Statement of Problem and Substantiation for Public Comment

The proposed new definition is the work of a Task Group assigned by the Chair of SIG-SSS to address an Intermediary Service Provider.

The term Intermediary Service Provider is new to NFPA 72 and is used in Chapter 26. The term is defined to add clarity to new material proposed in PC No 168 creating new Section 26.2.11.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 168-NFPA 72-2023 [Section No. 26.7]</u>	

Related Item

- FR-5108

Submitter Information Verification

Submitter Full Name: Warren Olsen
Organization: Fire Safety Consultants, Inc.
Affiliation: Illinois Fire Inspectors Association
Street Address:
Zip:

Street Address:

Zip:

Submittal Date: Wed May 24 21:53:47 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5147-NFPA 72-2023](#)

Statement: Currently, intermediary services providers are being used to communicate fire protection signals from the protected premises to the supervising stations. Requirements were needed to ensure that when these signals pass through the intermediary service provider servers they are processed in a reliable and supervised manner, and do not bypass the supervising station.



Public Comment No. 172-NFPA 72-2023 [Section No. 3.3.170]

3.3.170* Managed Facilities-Based Voice Network (MFVN).

A physical facilities-based network capable of transmitting real-time signals with formats unchanged that is managed, operated, and maintained by the ~~service provider to~~ communications carrier to ensure service quality and reliability from the subscriber location to the ~~interconnection point~~ supervising station via the Public-Switched Telephone Network (PSTN) or interconnection points with other MFVN peer networks- ~~or the supervising station~~ . (SIG-SSS)

Statement of Problem and Substantiation for Public Comment

The term "service provider" can be taken to mean alarm service provider, but that is not the intent. Revising the text to include "communications carrier" wording more consistent with text planned for chapter 26. The communications path is between the subscriber location to the supervising station.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge
Organization: Ericsson
Affiliation: ATIS
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 25 16:00:30 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5106-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Providing clarification that the MFVN is a regulated communications service/carrier.
2. The annex language was expanded for clarity of FCC licensed carriers.



Public Comment No. 48-NFPA 72-2023 [Section No. 3.3.170]

3.3.170* Managed Facilities-Based Voice Network (MFVN).

A physical facilities-based network capable of transmitting real - time signals with formats unchanged that is managed, operated, and maintained by the service provider to ensure service quality and reliability from the subscriber location to the interconnection point with public-switched telephone network (PSTN) interconnection points or other MFVN peer networks or the networks the supervising station. - (SIG-SSS)

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_2025_PC_MFVN_Definition.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5100

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: SIG-SSS Chapter 26.6 Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Apr 30 16:01:14 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5106-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Providing clarification that the MFVN is a regulated communications service/carrier.

transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Providing clarification that the MFVN is a regulated communications service/carrier.
2. The annex language was expanded for clarity of FCC licensed carriers.



Public Comment No. 107-NFPA 72-2023 [Section No. 3.3.188]

3.3.188* Network Connectable Equipment.

System components that connect to the internet or external systems through wired or wireless pathways using various protocols.

A.3.3.188

Examples of external systems include, but are not limited to building controls or elevator controls and do not include input output devices, strobes, horns or other devices that are directly connected to fire alarm system.

Statement of Problem and Substantiation for Public Comment

This comment is to provide clarification to the definition for network connectable equipment. Annex material was added for additional clarity.

Related Item

- FR 5199

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 11:19:37 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5070-NFPA 72-2023](#)

Statement: The new annex material provides an example of external systems described by the definition.



Public Comment No. 202-NFPA 72-2023 [Section No. 3.3.196]

3.3.196 * – Observation.

A suggested correction, improvement, or enhancement, which is not considered to be part of a design review, to the fire alarm or signaling system that is not considered to be an impairment or deficiency. (SIG-TMS)

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Statement of Problem and Substantiation for Public Comment

The term "Observation" was added in the 2022 edition of NFPA 72. The Automatic Fire Alarm Association is in favor of ITM technicians being able to point out possible improvements to the fire alarm or signaling system, even if these items are not impairments or deficiencies. However, we feel additional clarifications are needed in order to reduce the liability of ITM companies who have ITM technicians servicing systems and making good faith observations that the owner may want to consider. It needs to be clear that an observation made about one part of a system, or the protected premise, does not mean that the ITM technician has done a complete review of the entire system and the building and that the observation, or observations cover all possible hazards. ITM technicians are not design professionals or trained fire protection engineers and their opinions on possible improvements to the fire life safety of a premise should not be considered to be a complete or thorough review of all of the hazards or code requirements that may come into play. In my previous public inputs. We refer to this type of system and premise review as a "Design Review" which was proposed to be defined as "A review of an installed system by a qualified design professional for compliance to the original or current installation codes and standards." (Public Input 342)

As the code now is written, ITM companies will discourage ITM technicians from making any observations, as these may be considered to be part of a "Design Review", which could open the ITM company up to litigation. For example, if an ITM technician noticed that a building owner was storing flammable chemicals in a closet that did not have a smoke detector, in good faith, the technician could make the observation to the building owner that they might want to consider adding a smoke detector to that closet. So the owner adds a smoke detector to that closet. But, sometime down the road, there is a fire in a different closet that does not have a smoke detector in it, in a completely different area of the building that also had some chemicals in it, that the ITM technician never entered. It is not hard to imagine a building owner initiating litigation against the ITM company because the technician did not tell them about the other closet and it not having a smoke detector, even though the ITM technician was never in that room. ITM companies will simply tell their ITM technicians to not make any observations.

Mr. Jason Dupuis submitted public inputs 340, 341, and 342 which were intended to help address this concern. PI 340 was identical to this public comment, looking to amend the definition of "Observation". PI 341 looked to add a definition for "Design Review" as mentioned above. PI 342 looked to add section 14.1.6 which would state that "This chapter does not require inspection, test, or maintenance personnel to verify the adequacy of the design of existing previously approved systems." This language was borrowed from NFPA 25 – section 1.1.3.1. We are resubmitting these three Public Inputs as Public Comments and hope that the technical committee will reconsider them.

Mr. Warren Olsen also submitted Public Input 204 which also looked to address this issue. We urge the technical committee to review Mr. Olsen's PI, and presumably his public comments which we believe he is submitting. We urge the committee to reconsider their initial position and add some language that will allow ITM technicians to make good faith life safety observations to building owners that will not at the same time open up the ITM companies to litigation.

Related Comment

Relationship

Related Public Comments for This Document

[Public Comment No. 200-NFPA 72-2023 \[New Section after 14.1.5\]](#)

Group with Public Comment s 201, 202

Related Public Comments for This Document

Related Comment
[Public Comment No. 200-NFPA 72-2023 \[New Section after 14.1.5\]](#)
[Public Comment No. 201-NFPA 72-2023 \[New Section after 3.3.75\]](#)
[Public Comment No. 200-NFPA 72-2023 \[New Section after 14.1.5\]](#)
[Public Comment No. 201-NFPA 72-2023 \[New Section after 3.3.75\]](#)

Relationship
 Group with Public Comment s 201, 202
 Group with Public Comment s 200, 202

Related Item

- 340, 341, 342

Submitter Information Verification

Submitter Full Name: Shane Clary
Organization: Bay Alarm Company
Affiliation: Automatic Fire Alarm Association
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 00:08:03 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected
Resolution: The existing definition language is clear as to the intent and does not require any modification. The ITM Tables in Chapter 14 do require items of the design to be verified. Additional annex language from Chapter 10 on Inspection and Testing Personnel clarify the responsibility of the ITM personnel.



Public Comment No. 38-NFPA 72-2023 [Section No. 3.3.196]

3.3.196* Observation.

A suggested correction, improvement, or enhancement, which is not considered to be part of a design review, to the fire alarm or signaling system that is not considered to be an impairment or deficiency. (SIG-TMS)

Statement of Problem and Substantiation for Public Comment

The term "Observation" was added in the 2022 edition of NFPA 72. I am in favor of ITM technicians being able to point out possible improvements to the fire alarm or signaling system, even if these items are not impairments or deficiencies. However, I feel additional clarifications are needed in order to reduce the liability of ITM companies who have ITM technicians servicing systems and making good faith observations that the owner may want to consider. It needs to be clear that an observation made about one part of a system, or the protected premise, does not mean that the ITM technician has done a complete review of the entire system and the building and that the observation, or observations cover all possible hazards. ITM technicians are not design professionals or trained fire protection engineers and their opinions on possible improvements to the fire life safety of a premise should not be considered to be a complete or thorough review of all of the hazards or code requirements that may come into play. In my previous public inputs, I refer to this type of system and premise review as a "Design Review" which I proposed be defined as "A review of an installed system by a qualified design professional for compliance to the original or current installation codes and standards." (Public Input 342).

As the code now is written, ITM companies will discourage ITM technicians from making any observations, as these may be considered to be part of a "Design Review", which could open the ITM company up to litigation. For example, if an ITM technician noticed that a building owner was storing flammable chemicals in a closet that did not have a smoke detector, in good faith, the technician could make the observation to the building owner that they might want to consider adding a smoke detector to that closet. So the owner adds a smoke detector to that closet. But, sometime down the road, there is a fire in a different closet, that also did not have a smoke detector, in a completely different area of the building that also had some chemicals in it, that the ITM technician never entered. It is not hard to imagine a building owner initiating litigation against the ITM company because the technician did not tell them about the other closet and it not having a smoke detector, even though the ITM technician was never in that room. ITM companies will simply tell their ITM technicians to not make any observations.

I submitted public inputs 340, 341, and 342 which were intended to help address this concern. PI 340 was identical to this public comment, looking to amend the definition of "Observation". PI 341 looked to add a definition for "Design Review" as mentioned above. PI 342 looked to add section 14.1.6 which would state that "This chapter does not require inspection, test, or maintenance personnel to verify the adequacy of the design of existing previously approved systems." This language was borrowed from NFPA 25 - section 1.1.3.1. I am resubmitting these three Public Inputs as Public Comments and hope that the technical committee will reconsider them.

Warren Olsen also submitted Public Input 204 which also looked to address this issue. I urge the technical committee to review Warren's PI, and presumably his public comments which I believe he is submitting. I urge the committee to reconsider their initial position and add some language that will allow ITM technicians to make good faith life safety observations to building owners that will not at the same time open up the ITM companies to litigation.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 39-NFPA 72-2023 [New Section after 3.3.75]	Group with public comments 38, 39, and 40
Public Comment No. 40-NFPA 72-2023 [New Section after 3.3.75]	Group with public comments 38, 39, and 40
Public Comment No. 39-NFPA 72-2023 [New Section after 3.3.75]	
Public Comment No. 40-NFPA 72-2023 [New Section after 3.3.75]	

~~Public Comment No. 40-NFPA 72-2023 [New Section after 3.3.7.5]~~
~~Public Comment No. 39-NFPA 72-2023 [New Section after 3.3.7.5]~~

Group with public comments 38, 39, and 40

Public Comment No. 40-NFPA 72-2023 [New Section after 14.1.5]

Related Item

- Public Inputs 340, 341, and 342

Submitter Information Verification

Submitter Full Name: Jason Dupuis

Organization: Cintas Fire Protection

Street Address:

City:

State:

Zip:

Submittal Date: Wed Apr 26 16:15:56 EDT 2023

Committee: SIG-TMS

Committee Statement

Committee Action: Rejected

Resolution: The existing definition language is clear as to the intent and does not require any modification. The ITM Tables in Chapter 14 do require items of the design to be verified. Additional annex language from Chapter 10 on Inspection and Testing Personnel clarify the responsibility of the ITM personnel.



Public Comment No. 79-NFPA 72-2023 [Section No. 3.3.267]

3.3.267 Risk Analysis.

A process to characterize the likelihood, vulnerability, and magnitude of incidents associated with natural, technological, and manmade ~~disasters and~~ hazards and other emergencies that address scenarios of concern, their probability, and their potential consequences. (SIG-ECS)

Statement of Problem and Substantiation for Public Comment

This change is being made in conjunction with PC No. 78 which removes the term “natural disasters” from the body of NFPA 72.

The term “natural...disasters” is inappropriate, as a disaster can really only be determined after the fact. Rather, this term should be replaced with ‘hazards’ as this more closely relates what should be identified during a Risk Analysis. Hazard events that do not rise to the significance of a “disaster” still need to be addressed in a Risk Analysis. This new language more closely aligns with the Risk Analysis Checklist provided in A.7.3.6.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 78-NFPA 72-2023 [Section No. 24.2.3]</u>	Dependent

Related Item

- FR-5294 • Corelating Committee Note No. 34

Submitter Information Verification

Submitter Full Name: Larry Rietz

Organization: Jensen Hughes

Street Address:

City:

State:

Zip:

Submittal Date: Mon May 15 18:21:29 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Accepted

Resolution: SR-5067-NFPA 72-2023

Statement: The term “natural...disasters” is inappropriate, as a disaster can really only be determined after the fact. Rather, this term should be replaced with ‘hazards’ as this more closely relates what should be identified during a Risk Analysis. Hazard events that do not rise to the significance of a “disaster” still need to be addressed in a Risk Analysis. This new language more closely aligns with the Risk Analysis Checklist provided in A.7.3.6.



Public Comment No. 193-NFPA 72-2023 [Section No. 3.3.337]

3.3.337– * Sprinkler Waterflow Alarm -Initiating Device.

An attachment to the sprinkler system that detects a predetermined water flow and is connected to a fire alarm system to initiate an alarm condition or is used to mechanically or electrically initiate a fire pump or local audible or visual alarm. See 17.13 [13, 2025] (SIG-IDS)

Add Annex

A.3.3.337: A Sprinkler Waterflow Alarm-Initiating Device is considered as a Fire Alarm Initiating Device per Section 17.13 and is also known as "waterflow alarm" (See 10.14.4), "waterflow device" (See 14.3.1), "waterflow switch" (See 14.4.3.2, 21.3.3.2, 21.4.3, 21.8), "waterflow detection device" (See Section 23.8.5.1.2), "waterflow alarm-initiating device" (See 23.8.5.5, 29.10.7.8.4), "waterflow from automatic sprinkler system" (See 26.2.1.1), "watrfow" (See 26.6.5.1.5.2 and Table 26.6.5.2.6.2(A)).

Statement of Problem and Substantiation for Public Comment

The intent of this proposal is to be consistent with the Code language indicating the term: "Sprinkler Waterflow Alarm-Initiating Devices." in Section 17.13. Also, this will clarify the intent of NFPA 72 that this device is considered as a Fire Alarm Initiating Device (since it is included in Chapter 17) ...

Some people think that since this device is an attachment to the sprinkler system and it is not a part of the Fire Alarm system - it is not considered as a "Fire Alarm Initiating Device" - However, since it is included in Chapter 17 (17.13) this proposal will prevent this confusion.

Also, a new annex is proposed to this definition which specifies all the other known terms for this SAME device throughout the code.

Related Item

- FR-5628 • PI 461

Submitter Information Verification

Submitter Full Name: Sagiv Weiss-Ishai

Organization: San Francisco Fire Department

Affiliation: SFFD

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 30 12:55:06 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected

Resolution: The proposed revision alters the definition extracted from NFPA 13. Aligning the definitions throughout the NFPA standards is important for clarity. With the proposed revision being rejected, the Annex material was not needed.



Public Comment No. 250-NFPA 72-2023 [New Section after 7.3.4.6]

7.3.4.7

Design documentation for Restricted Audible Mode Operation (RAMO) notification, including the definition of the protected space, sound pressure levels, and staff requirements, in accordance with 18.4.1.8.

7.3.4.8

Design documentation for Maximum Public Mode Audible Levels, including the definition of the protected space and design sound pressure levels, in accordance with 18.4.1.9.

Statement of Problem and Substantiation for Public Comment

FR-5352 added two new sections to Chapter 18 (18.4.1.8 and 18.4.1.9) which requires significant design documentation. If these new sections remain, design documentation must be added in Chapter 7 to document these alternate notification design strategies for approval by the AHJ. Any changes during Second Draft to the Chapter 18 language should be coordinated with SIG-NAS and these Chapter 7 requirements.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 247-NFPA 72-2023 [New Section after 14.4.12.3]	Reference
<u>Related Item</u>	
• FR-5352	

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 19:33:23 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Accepted
Resolution: SR-5072-NFPA 72-2023
Statement: Section 18.4.1.8 on restricted audible mode operation (RAMO) notification was added to the standard at the first draft stage and these new requirements in Chapter 7 provide clarity for application by the user.



Public Comment No. 25-NFPA 72-2023 [Section No. 7.4.3]

7.4.3

Shop drawings for fire alarm or emergency communications systems shall provide ~~both of the following:~~

- Basic information

~~The basic information and the basis for the record (as-built) drawings required in accordance with 7.5.5 .~~

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._1.pdf	NFPA 72 Correlating Note No. 1	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 1 appeared in the First Draft Report on First Revision No. 5007.

Review the language of 7.4.3. During editorial review, the editors recommended changes to this section to make the language easier to understand by keeping the language as a single section if revised such as: "7.4.3 Shop drawings for fire alarm or emergency communications systems shall provide basic information and the basis for the record (as-built) drawings required in accordance with 7.5.5."

Related Item

- FR-5007

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 12:02:33 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected

Resolution: The proposed revision does not add clarity to the requirement.



Public Comment No. 26-NFPA 72-2023 [Section No. 7.7.2.3]

7.7.2.3*

All record documentation shall comply with the following:

- (1) Stored in the documentation cabinet
- (2) Not stored in the control unit

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._2.pdf	NFPA 72 Correlating Note No. 2	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 2 appeared in the First Draft Report on First Revisions No. 5035.

Review the language of 7.7.2.3. Consider breaking 7.7.2.3(2) into a separate section.

Related Item

- FR-5035

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 12:10:54 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5074-NFPA 72-2023](#)

Statement: The requirements have been written in two separate statements that comply with the Manual of Style and provide additional clarity on record storage.



Public Comment No. 194-NFPA 72-2023 [Section No. 10.4.4]

10.4.4*

Unless otherwise permitted by the authority having jurisdiction, control unit displays, visible indicators, or controls shall be mounted to comply with both of the following:

- (1) The distance to the highest switch, lamp, or the centerline of the textual display does not exceed 6 ft (1.8 m) above the finished floor.
- (2) The distance to the lowest switch, lamp, or the centerline of the textual display is not within 15 in. (375 mm) of the finished floor.

Statement of Problem and Substantiation for Public Comment

The term "centerline" is used in the Code in other sections such as 17.7.6.6.5.1 (centerline of doorway) and 21.3.5.1 (centerline of elevator door). Since control units can have very large displays such as LCD or LED displays or computer screens, etc. there can be a significant difference to where the measurement is taken on that display AFF. Therefore, adding the term "centerline of the textual display" will resolve this potential issue.

Related Item

- FR 5051 • PI 283
- PI 98

Submitter Information Verification

Submitter Full Name: Sagiv Weiss-Ishai
Organization: San Francisco Fire Department
Affiliation: SFFD
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 30 17:37:07 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5098-NFPA 72-2023](#)
Statement: The revision clarifies that the lowest line of text in not to be less than 15 inches from the floor and not higher than 6 feet above the floor. The term centerline can result in different heights depending on the size of the display.



Public Comment No. 77-NFPA 72-2023 [Section No. 10.21.1]

10.21.1

The system owner or the owner's designated representative shall be notified via verbal notice and in writing within 8 hours when a system or part thereof is impaired.

Statement of Problem and Substantiation for Public Comment

An "out-of-service event" is included as an "impairment" per 10.21.2 and an out of service must be reported to the AHJ if that lasts for more than 8 hours per 10.21.5. So, why is it not a requirement to report impairments to the system owner within a similar time period? It is important to add this additional text to clarify the importance of reporting system Impairments, and as indicated in the TC's PI 572 comment, "in some cases, a conversation will be more efficient". Deficiencies must be reported to the Owner within 24 hours and in writing, but Impairments are required to be reported to the Owner but no requirement exists for the notification to be in writing or within a certain amount of time. This new language would better match the requirements of section 14.2.2.2 and 14.2.2.3.2. The TC's committee statement for PI 572 stated that adopted model codes include requirements for impairment notification, but a fire alarm inspection or service technician is not going to reference the model building code during a periodic inspection or service call when looking for requirements to notify an owner.

Related Item

- PI 572

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 15 17:56:36 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5078-NFPA 72-2023](#)
Statement: It is necessary to specify the amount of time in which the notification of the owner must occur.



Public Comment No. 242-NFPA 72-2023 [Section No. 11.2]

11.2 Network Connectable Equipment Software Development and Production Environments.

Development and production environments used to develop and manufacture network connectable equipment shall employ cybersecurity safeguards that are consistent with one or more of the following standards:

- (1) NIST Cybersecurity Framework
- (2) ISO/IEC 27001 Information Security Management
- (3) IASME Consortium Cyber Essentials
- (4) Other equivalent standards acceptable to a Nationally Recognized Testing Laboratory.
- (5) * Applicable federal laws and regulations

*A.11.2(5) Federal agencies using this Code may be required to meet specific federal laws and regulations pertaining to cybersecurity when installing any fire alarm and/or signaling system in Federally owned space. Therefore, system designers and installers should be aware of any possible additional requirements needed to meet the specific federal laws and regulations.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Change1-DFrable.docx	Add new (5) with Annex material	

Statement of Problem and Substantiation for Public Comment

Current section does not address federal laws and regulations. The intent of this comment is to recognize that any fire alarm and/or signaling system installed in Federally owned space may also need to meet specific federal laws and regulations pertaining to cybersecurity.

Related Item

- FR 5188

Submitter Information Verification

Submitter Full Name: David Frable
Organization: US General Services Administration
Affiliation: US General Services Administration
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 16:57:45 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Reason: SR 5079-NFPA 72-2023
 The current section does not address federal laws and regulations. The technical committee revised the requirement to recognize all other applicable laws and standards pertaining to cybersecurity

Statement: The current section does not address federal laws and regulations. The technical committee revised the requirement to recognize all other applicable laws and standards pertaining to cybersecurity.

All the requirements of Chapter 11 currently apply to the systems themselves, except 11.2 which applies to the manufactures. The new annex material provides context as to why the connection between securing the manufactures operations is important to securing the systems themselves.



Public Comment No. 110-NFPA 72-2023 [Section No. 11.3]

11.3* Security Levels for Network Connectable Equipment.

All interfaces used to communicate with network connectable equipment shall be protected using the following minimum security levels:

- (1) For non-internet-facing wired interfaces that do not employ internet protocol, ANSI/ISA/IEC 62443-4-2/3-3 Security Level 1 or UL 2900 Security Level 1 or ~~the equivalent level~~ a comparable level associated with 11.2(4)
- (2) For all cellular, Bluetooth, wireless interfaces, and other accessible interfaces that do not employ internet protocol, IEC 62443-4-2/3-3 Security Level 2 or UL 2900 Security Level 2 or ~~the equivalent~~ a comparable level associated with 11.2(4)
- (3) For all non-internet-facing wired interfaces and those non-internet-facing wireless interfaces that employ internet protocol, ANSI/ISA/IEC 62443-4-2/3-3 Security Level 2 or UL 2900 Security Level 2 or ~~the equivalent level~~ a comparable level associated with 11.2(4)
- (4) For all wired or wireless internet facing interfaces or publicly accessible networks, ANSI/ISA/IEC 62443-4-2/2-3 Security Level 3 or UL 2900 Security Level 3 or ~~the equivalent level~~ a comparable level associated with 11.2(4)

Statement of Problem and Substantiation for Public Comment

Security Level 's from 62443-4-3 and 62443-3-3 are not equivalent to security levels in UL 2900. So, it would be impractical to consider another standard, only if its security levels were equivalent to these two examples. This change is intended to modify an unattainable requirement to become a practical requirement.

Related Item

- FR-5188

Submitter Information Verification

Submitter Full Name: Michael Pallett

Organization: Pallett Corner Consulting

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 18 11:39:35 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5081-NFPA 72-2023](#)

Statement: Security Levels from 62443-4-3 and 62443-3-3 are not equivalent to security levels in UL 2900. So, it would be impractical to consider another standard, only if its security levels were equivalent to these two examples. This change is intended to modify an unattainable requirement to become a practical requirement. A typographical error in list item #4 has been corrected.

Item #4 has been corrected.



Public Comment No. 111-NFPA 72-2023 [New Section after 11.4]

11.4* Network Connectable Equipment Utilizing Shared Pathways.

11.4.1 Network connectable equipment utilizing security levels as required by 11.3 (2) through (4) shall comply with 23.6.3.3 through 23.6.3.5, and 11.4.3.

11.4.2 Network connectable equipment utilizing Shared Pathway Level 0, 1, or 2 shall comply with 23.6.3.3 through 23.6.3.5 and 11.4.3.

11.4.3* Network Connectable Equipment Maintenance Plan

11.4.3.1* Maintenance plans for network connectable equipment shall identify all accounts, personnel, and organizations that have electronic access credentials that could be utilized by a cybersecurity threat actor.

11.4.3.1.1 Personnel or organizations that maintain electronic access credentials shall be reviewed annually to maintain least privilege access or to eliminate access where access is no longer required.

11.4.3.2* Access Logs shall be maintained for networkable equipment that supports remote access.

11.4.3.2.1 Access logs shall be reviewed at least annually and compared to the access credentials used and the maintenance records, to ensure previous access has been approved.

Statement of Problem and Substantiation for Public Comment

There is a relationship between cellular, Bluetooth, wireless and wired interfaces and shared pathways. If they are internet facing, then they are automatically shared pathways. If they are not internet facing, they still might be shared pathways, or could become shared intentionally or inadvertently in the future. Pathways that are shared pathways are subject to the requirements of chapter 23. There is a danger that in the context of cybersecurity, this relationship between shared pathway requirements and cybersecurity requirements may not be apparent. The requirements of 23.6.3 apply to Class N pathways, which may or may not apply to the network connectable equipment referenced in Chapter 11. But some of these requirements are relevant to the scope of cybersecurity from the perspective of the installation and maintenance. The majority of cybersecurity incidents occur by attacking credentials or infrastructure. These vulnerabilities are not addressed by this chapter 11 draft. This section identifies this relationship through requirements and strengthens controls for common attack vectors.

11.3 (2)-(4) represent applications for which cybersecurity concerns are elevated, and are likely to be shared pathway level 0, 1, or 2. In this case, the chapter 23 requirements for Deployment Plans, Change Control Plans, and identification of the Management Organization are wholly appropriate and necessary to support cybersecurity.

11.3 (1), Security Level 1 applications do not necessarily represent a shared pathway and so are excluded from the requirements of 11.4. However, if a Security Level 1 application does use shared pathways (level 0, 1, 2), then because of 11.4.2, the requirement will apply.

Level 3 shared pathways are not captured by this requirement, because as a closed system that utilizes dedicated equipment, the cybersecurity threat is reduced. However, even with dedicated equipment, the risk is not zero, and a level 3 deployment utilizing Internet Protocol would still be captured by these requirements.

The maintenance requirements of 23.6.3.7 are overly broad from the perspective of cybersecurity and are excluded from 11.4. However, the maintenance of access credentials and the ability to log system access is fundamental and should be covered in cybersecurity requirements.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 117-NEPA 72-2023 [New Section after A.11.3]</u>	
<u>Public Comment No. 119-NFPA 72-2023 [New Section after A.11.3]</u>	
<u>Public Comment No. 118-NEPA 72-2023 [New Section after A.11.3]</u>	
<u>Public Comment No. 120-NFPA 72-2023 [New Section after A.11.3]</u>	

[Public Comment No. 116-NFPA 72-2023 | New Section after A.11.3](#)
[Public Comment No. 119-NFPA 72-2023 | New Section after A.11.3](#)
[Public Comment No. 118-NFPA 72-2023 | New Section after A.11.3](#)
[Public Comment No. 120-NFPA 72-2023 | New Section after A.11.3](#)

Related Item

- FR-5188

Submitter Information Verification

Submitter Full Name: Michael Pallett
Organization: Pallett Corner Consulting
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 18 11:45:58 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5082-NFPA 72-2023](#)
Statement: Pathways that are shared pathways are subject to the requirements of Chapter 23. There is a danger that in the context of cybersecurity, this relationship between shared pathway requirements and cybersecurity requirements may not be apparent. The proposed requirements for documentation are more appropriately located in Chapter 7.



Public Comment No. 112-NFPA 72-2023 [Section No. 11.5]

11.5* Unused Physical Data Ports.

All unused physical data ports of network connectable equipment shall be protected by at least one of the following:

- (1) Physically protected from unauthorized access
- (2) Administratively disabled
- (3) Configured to require a token-based authentication, certificate-based authentication, password, or other method that is consistent with the security requirements of the system

Statement of Problem and Substantiation for Public Comment

This additional context improves the clarity: it is the physical ports of the connectable equipment, rather than all physical ports in the network itself, that are being referenced here.

Related Item

- FR-5188

Submitter Information Verification

Submitter Full Name: Michael Pallett

Organization: Pallett Corner Consulting

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 18 11:49:00 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected

Resolution: Unused data ports on any system equipment provides a cybersecurity attack vector.



Public Comment No. 113-NFPA 72-2023 [Section No. 11.7.6]

11.7.6

Cybersecurity-related only software updates applied to ~~barrier~~ gateways or firewalls that do not affect the system site-specific or system executive software shall not be required to comply with 14.4.2.

Statement of Problem and Substantiation for Public Comment

The term “barrier gateway” as used previously in NFPA 72, includes the notion of one-way communication to protect life safety equipment from interference by other connected equipment. The following, enhanced content from NFPA 72, 2022, illustrates the point:

“On the fire alarm side of the gateway, the information passed is one way; this information is supplemental annunciation only. It does not permit control of the fire alarm system with regard to the acknowledging of alarm signals, silencing of notification appliances, or, for example, the resetting of the control unit from a building automation workstation — nor does it permit programming changes from that same workstation.”

This is not consistent with 23.8.2.11 Remote Access, which permits many of these activities under certain circumstances, but isn’t consistent with the one-way nature of a barrier gateway.

From the perspective of networking, a gateway is a two-way communication device that uses other methods to protect devices behind the gateway from interference. This change seeks to generalize the use of the term in the context of cybersecurity and be consistent with the 11.6 use of the term “gateway”.

Related Item

- FR-5188

Submitter Information Verification

Submitter Full Name: Michael Pallett

Organization: Pallett Corner Consulting

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 18 11:50:38 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Accepted

Resolution: [SR-5086-NFPA 72-2023](#)

Statement: The term “barrier gateway” as used previously in NFPA 72, includes the notion of one-way communication to protect life safety equipment from interference by other connected equipment. The following, enhanced content from NFPA 72, 2022, illustrates the point:

“On the fire alarm side of the gateway, the information passed is one way; this information is supplemental annunciation only. It does not permit control of the fire alarm system with regard to the acknowledging of alarm signals, silencing of notification appliances, or, for example, the resetting of the control unit from a building automation workstation — nor does it permit programming changes from that same workstation.” activities under certain circumstances, but isn’t consistent with the one-way nature of a barrier gateway.
 This is not consistent with 23.8.2.11 Remote Access, which permits many of these

...activities under certain circumstances, but isn't consistent with the one-way nature of a barrier gateway. This is not consistent with 23.8.2.11 Remote Access, which permits many of these

From the perspective of networking, a gateway is a two-way communication device that uses other methods to protect devices behind the gateway from interference. This change seeks to generalize the use of the term in the context of cybersecurity and be consistent with the 11.6 use of the term "gateway". This revision also aligns with the action taken to delete the definition 3.3.291.4 Cybersecurity Related Only Software.



Public Comment No. 114-NFPA 72-2023 [Section No. 11.7.7]

11.7.7

Cybersecurity-related only software changes to systems or system components shall be permitted to be made by remote access in accordance with ~~Chapter~~ 23.8.2.11.3.

Statement of Problem and Substantiation for Public Comment

Chapter 23 has different requirements for different type of remote access. Providing a specific reference provides clarity to the reader.

Related Item

- FR-5188

Submitter Information Verification

Submitter Full Name: Michael Pallett
Organization: Pallett Corner Consulting
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 18 11:52:00 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Accepted
Resolution: SR-5087-NFPA 72-2023
Statement: Chapter 23 has different requirements for different type of remote access. Providing a specific reference provides clarity to the reader. This revision also aligns with the action taken to delete the definition 3.3.291.4 Cybersecurity Related Only Software.



Public Comment No. 115-NFPA 72-2023 [New Section after 11.11]

11.10.3

The validity of the equipment manufactures contact information for the system owner shall be verified annually by the person testing the system.

Statement of Problem and Substantiation for Public Comment

In the current chapter 11 draft, manufactures are required to reach out to system owners to notify of security updates. That contact information is required to be established by the installer, at the time of acceptance testing, but there is no mechanism to ensure that the contact information remains up-to-date. This requirement corrects that, annually, at the same time as the validity of cybersecurity certification is checked.

Related Item

- FR-5188

Submitter Information Verification

Submitter Full Name: Michael Pallett
Organization: Pallett Corner Consulting
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 18 11:53:33 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5089-NFPA 72-2023](#)

Statement: In the First Draft Report of Chapter 11, manufacturers are required to reach out to system owners to notify of security updates. That contact information is required to be established by the installer, at the time of acceptance testing, but there is no mechanism to ensure that the contact information remains up-to-date. This requirement corrects that, annually, at the same time as the validity of cybersecurity certification is checked. SIG-FUN asks the Correlating Committee to review 11.10 for the purposes of proper placement in the document. This requirement may be more appropriately located in Chapter 14.



Public Comment No. 106-NFPA 72-2023 [Section No. 12.1]

12.1 Application.

12.1.1

Pathways shall be designated based on the performance characteristics defined in this chapter.

12.1.2

The requirements of Chapter 11 shall apply.

Statement of Problem and Substantiation for Public Comment

Section 1.3.5 does not include chapter 11, but it does include Chapter 14.

Related Item

- FR 5093

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 11:14:53 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Rejected

Resolution: The purpose of Chapter 12 is to provide pathway definitions, like Class A, B and etc. as well as pathway survivability definitions like Levels 1, 2 and etc. It does not have specific requirements for all systems and their components. The Chapters reference the definitions in this chapter to create requirements not the other way.



Public Comment No. 27-NFPA 72-2023 [Section No. 12.6.9]

12.6.9

Monitoring for integrity shall not be required for the interconnecting wiring of a stationary computer and the computer's keyboard, video monitor, mouse-type device, or touch screen, provided the interconnecting wiring meets all of the following:

- (1) Does not exceed 8 ft (2.4 m) in length
- (2) Is a listed computer/data processing cable as permitted by *NFPA 70*
- (3) Failure of cable does not cause the failure of the required system functions not initiated from the keyboard, mouse, or touch screen.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._25.pdf	NFPA 72 Correlating Note No. 25	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 25 appeared in the First Draft Report on First Revisions No. 5212.

Review the language of 12.6.9(3) which is a sentence and is not parallel to list items(1) and (2), which are phrases. NFPA Manual of Style requires consistency in list items: all phrases, all sentences, all shall statements, etc.

Related Item

- FR-5212

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 12:17:14 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5007-NFPA 72-2023](#)

Statement: This revision corrects the language to meet the manual of style requirement to eliminate phrases and use complete sentences. The language in the charging statement is revised to be consistent in reference to wiring and cabling.



Public Comment No. 170-NFPA 72-2023 [Chapter 14]

Chapter 14 Inspection, Testing, and Maintenance

14.1 Application.

I am sending this requesting that Fire Systems such as the Simplex 4100 series not be required for annual testing. Exceptons to this would be if the system is not monitored. I currently have three of the Simplex 4100's in different buildings which I pay to be monitored 24 hours a day 365 days a year. These systems are constantly self testing all components along with the system hardware and provide troubles to alert my staff if there are any shortcomings. The systems do not self test the main system back up batteries as well as the NAC batteries. The system will provide a trouble if the outputs of these batteries aren't sufficient, but not if their capacity decreases. I have replacement of all batteries set up on a three year schedule. I currently am spending over \$12,000 annually for systems inspections. The only issues that we have found over the years are some strobe-horns that were installed during a project would not function and needed to be replaced with appraite devices. I follow all required regulations in regards to the buildings aned equipment on Campus. It is my opinion that the Inspection, Testing and Maintenance chapter should be revised to reflect current technology. Thanks for considering.

14.1.1

The inspection, testing, and maintenance of systems, their initiating devices, and notification appliances shall comply with the requirements of this chapter.

14.1.2

The inspection, testing, and maintenance of single- and multiple-station alarms and household alarm systems shall comply with 14.4.5 and 14.4.6. (SIG-HOU)

14.1.3

Procedures that are required by other parties and that exceed the requirements of this chapter shall be permitted.

14.1.4

The requirements of this chapter shall apply to both new and existing systems.

14.1.5

The requirements of Chapter 7 shall apply where referenced in Chapter 14.

14.2 General.

14.2.1 Purpose.

14.2.1.1*

The purpose for initial and reacceptance inspections shall be to ensure compliance with approved design documents and to ensure installation in accordance with this Code and other required installation standards.

14.2.1.2*

The purpose for initial and reacceptance tests of fire alarm and signaling systems shall be to ensure system operation in accordance with the design documents.

14.2.1.3*

The purpose for periodic inspections shall be to assure that obvious damages or changes that might affect the system operability are visually identified.

14.2.1.4*

The purpose for periodic testing shall be to statistically assure operational reliability.

To ensure operational integrity, the system shall have an inspection, testing, and maintenance program.

14.2.2 Performance.

14.2.2.1 Performance Verification.

To ensure operational integrity, the system shall have an inspection, testing, and maintenance program.

14.2.2.1 Performance Verification.

Inspection, testing, and maintenance programs shall satisfy the requirements of this Code and conform to the equipment manufacturer's published instructions.

14.2.2.1.2*

Inspection, testing, and maintenance programs shall verify correct operation of the system.

14.2.2.2 Impairments.

Where an automatic function of a fire alarm or signaling system is taken out of service for testing and a manual means or other compensatory measures are unavailable, the system or portion thereof is impaired and shall comply with the requirements of Section 10.21 until the automatic function is restored.

14.2.2.3 Deficiencies.

14.2.2.3.1

System deficiencies shall be corrected.

14.2.2.3.2

If a deficiency is not corrected at the conclusion of system inspection, testing, or maintenance, the system owner or the owner's designated representative shall be informed of the deficiency in writing within 24 hours.

14.2.2.3.3

In the event that any equipment is observed to be part of a recall program, the system owner or the system owner's designated representative shall be notified in writing.

14.2.2.4 Observations.

14.2.2.4.1

If observations are noted, they shall be permitted to be communicated to the system owner.

14.2.2.4.2

The system owner shall not be required to address such observations unless the observations become an impairment or deficiency.

14.2.3 Responsibilities.

14.2.3.1*

The property or building or system owner or the owner's designated representative shall be responsible for inspection, testing, and maintenance of the system and for alterations or additions to this system.

14.2.3.2

Where the property owner is not the occupant, the property owner shall be permitted to delegate the authority and responsibility for inspecting, testing, and maintaining the fire protection systems to the occupant, management firm, or managing individual through specific provisions in the lease, written use agreement, or management contract.

14.2.3.3

Inspection, testing, or maintenance shall be permitted to be done by the building or system owner or a person or organization other than the building or system owner if conducted under a written contract.

14.2.3.4

Where the building or system owner has delegated any responsibilities for inspection, testing, or maintenance, a copy of the written delegation required by 14.2.3.3 shall be provided to the authority having jurisdiction upon request.

14.2.3.5

Testing and maintenance of central station service systems shall be performed under the contractual arrangements specified in 20.3.

14.2.3.6* Service Personnel Qualifications and Experience.

Service personnel shall be qualified and experienced in accordance with the requirements of

14.2.3.6* Service Personnel Qualifications and Experience.

Service personnel shall be qualified and experienced in accordance with the requirements of 10.5.3.

14.2.4* Notification.

14.2.4.1

Before proceeding with any testing, all persons and facilities receiving alarm, supervisory, or trouble signals and all building occupants shall be notified of the testing to prevent unnecessary response.

14.2.4.2

At the conclusion of testing, those previously notified (and others, as necessary) shall be notified that testing has been concluded.

14.2.4.3

The owner or the owner's designated representative and service personnel shall coordinate system testing to prevent interruption of critical building systems or equipment.

14.2.5 System Documentation.

Prior to system maintenance or testing, the record of completion and any information required by Chapter 7 regarding the system and system alterations, including specifications, wiring diagrams, and floor plans, shall be provided by the owner or a designated representative to the service personnel upon request.

14.2.5.1

The provided documentation shall include the current revisions of all fire alarm software and the revisions of software of any systems with which the fire alarm software interfaces.

14.2.5.2

The revisions of fire alarm software, and the revisions of the software in the systems with which the fire alarm software interfaces, shall be verified for compatibility in accordance with the requirements of 23.2.2.1.1.

14.2.6 Releasing Systems.

Requirements pertinent to testing the fire alarm systems initiating fire suppression system releasing functions shall be covered by 14.2.6.1 through 14.2.6.6.

14.2.6.1

Testing personnel shall be qualified and experienced in the specific arrangement and operation of a suppression system and related releasing functions and cognizant of the hazards associated with inadvertent system discharge.

14.2.6.2

Occupant notification shall be required whenever a fire alarm system configured for releasing service is being serviced or tested.

14.2.6.3

Discharge testing of suppression systems shall not be required by this Code.

14.2.6.4

Suppression systems shall be secured from inadvertent actuation, including disconnection of releasing solenoids or electric actuators, closing of valves, other actions, or combinations thereof, for the specific system, for the duration of the fire alarm system testing.

14.2.6.5

Testing shall include verification that the releasing circuits and components energized or actuated by the fire alarm system are electrically monitored for integrity and operate as intended on alarm.

14.2.6.6

Suppression systems and releasing components shall be returned to their functional operating condition upon completion of system testing.

14.2.7.1* Interface Equipment and Emergency Control Functions.

Testing personnel shall be qualified and experienced in the arrangement and operation of

14.2.7.1* Interface Equipment and Emergency Control Functions.

Testing personnel shall be qualified and experienced in the arrangement and operation of interface equipment and emergency control functions.

14.2.7.2

Testing shall be accomplished in accordance with Table 14.4.3.2.

14.2.8 Automated Testing.**14.2.8.1**

Automated testing arrangements that provide equivalent means of testing devices to those specified in Table 14.4.3.2 at a frequency at least equivalent to those specified in Table 14.4.3.2 shall be permitted to be used to comply with the requirements of this chapter.

14.2.8.2

Failure of a device on an automated test shall result in an audible and visual trouble signal.

14.2.9* Performance-Based Inspection and Testing.

As an alternate means of compliance, subject to the authority having jurisdiction, components and systems shall be permitted to be inspected and tested under a performance-based program.

14.2.10* Test Plan.**14.2.10.1**

A test plan shall be developed to clearly establish the scope of the testing for the fire alarm or signaling system.

14.2.10.2

The test plan and results shall be documented with the testing records.

14.3 Inspection.**14.3.1***

14.3.1*

Unless otherwise permitted by 14.3.2, visual inspections shall be performed in accordance with the authority having jurisdiction or with the schedules provided in Table 14.3.1, whichever is more frequent.

Unless otherwise permitted by 14.3.2, visual inspections shall be performed in accordance with the authority having jurisdiction or with the schedules provided in Table 14.3.1, whichever is more frequent.

Table 14.3.1 Visual Inspection

<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>	
1. All equipment	X	Annual	Ensure there are no changes that affect equipment performance. Inspect for building modifications, occupancy changes, changes in environmental conditions, device location, physical obstructions, device orientation, physical damage, and degree of cleanliness.	14.3.4; 14.3.5	
2. Control equipment:	-	-	-	-	
-	(1) Fire alarm systems monitored for alarm, supervisory, and trouble signals	-	-	-	Ver sys nor cor
-	(a) Fuses	X	Annual	-	-
(b) Interfaced equipment	X	Annual	-	-	-
-	(c) Lamps and LEDs	X	Annual	-	-
-	(d) Primary (main) power supply	X	Annual	-	-
-	(e) Trouble signals	X	Semiannual	-	-
-	(2) Fire alarm systems unmonitored for alarm, supervisory, and trouble signals	-	-	-	Ver sys nor cor
-	(a) Fuses	X	Weekly	-	-
(b) Interfaced equipment	X	Weekly	-	-	-
<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>	

<u>equipment Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>
-	(c) Lamps and LEDs	X	Weekly	-
-	(d) Primary (main) power supply	X	Weekly	-
-	(e) Trouble signals	X	Weekly	-
3. Reserved	-	-	-	-
4. Supervising station alarm systems — transmitters	-	-	-	Verify location, physical condition, and a system normal condition.
-	(1) Digital alarm communicator transmitter (DACT)	X	Annual	-
(2) Digital alarm radio transmitter (DART)	X	Annual	-	-
-	(3) McCulloh transmitter	X	Annual	-
-	(4) Radio alarm transmitter (RAT)	X	Annual	-
-	(5) All other types of communicators	X	Annual	-
5. In-building fire emergency voice/alarm communications equipment	X	Semiannual	Verify location and condition.	-
6. Reserved	-	-	-	-
7. Reserved	-	-	-	-
8. Reserved	-	-	-	-
9.* Batteries	-	-	-	-
-	(1) Valve-regulated lead-acid (VRLA) batteries	-	-	-
-	(a) General	X	N/A	Ensure month and year of manufacture is marked in the month/year format on each battery cell/unit. Verify tightness of battery connections. Inspect terminals for corrosion excessive
<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>

<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>
-	(b) Marking	N/A	Semiannual	<p>Inspect terminals for corrosion excessive container/cover distortion, cracks in cell/unit, or leakage of electrolyte. Replace any battery cell/unit if corrosion, distortion, or leakage is observed.</p> <p>Verify marking of the month/year of manufacture on each battery cell/unit. Replace any cell/unit if alarm equipment manufacturer's replacement date has been exceeded.</p> <p>Ensure a minimum of 60 percent shelf life is remaining based on the use-by date printed on the battery. Record the installed date on the battery. Replace if alarm equipment/battery manufacturer's replacement date has been exceeded. Replacement date not to exceed 12 months from the installed date. Verify tightness of connections. Inspect for corrosion or leakage. Replace any battery cell/unit if corrosion or leakage is observed.</p>
-	(2) Primary (dry cell) batteries other than those used in low-power radio (wireless) systems in accordance with Chapter 23	X	Semiannual	-
-		-	-	-
10. Reserved	-	-	-	-
11. Remote annunciators	X	Semiannual	Verify location and condition.	-
12. Notification appliance circuit (NAC) power extenders	X	Annual	Verify proper fuse ratings, if any. Verify that lamps and LEDs	10.6
<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>

<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>
			any. verify that lamps and LEDs indicate normal operating status of the equipment.	
13. Remote power supplies	X	Annual	Verify proper fuse ratings, if any. Verify that lamps and LEDs indicate normal operating status of the equipment.	10.6
14. Surge protective devices	X	Semiannual	Verify location and condition.	-
15. Reserved	-	-	-	-
16. Optical fiber cable connections	X	Annual	Verify location and condition.	-
17. Initiating devices	-	-	-	Verify location and condition (all devices).
-	(1) Air sampling	-	-	-
-	(a) General	X	Semiannual	Verify that in-line filters, if any, are clean.
-	(b) Sampling system piping and sampling ports	X	N/A	Verify that sampling system piping and fittings are installed properly, appear airtight, and are permanently fixed. Confirm that sampling pipe is conspicuously identified. Verify that sample ports or points are not obstructed.
-	(2) Duct detectors	-	-	-
-	(a) General	X	Semiannual	Verify that detector is rigidly mounted. Confirm that no penetrations in a return air duct exist in the vicinity of the detector. Confirm the detector is installed to
<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>

<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>	
-	(b) Sampling tube	X	Annual	sample the airstream at the proper location in the duct. Verify proper orientation. Confirm the sampling tube protrudes into the duct in accordance with system design.	17.7.6.5
-	(3) Electromechanical releasing devices	X	Semiannual	-	-
-	(4) Fire extinguishing system(s) or suppression system(s) switches	X	Semiannual	-	-
-	(5) Manual fire alarm boxes	X	Semiannual	-	-
-	(6) Heat detectors	X	Semiannual	-	-
-	(7) Radiant energy fire detectors	X	Quarterly	Verify no point requiring detection is obstructed or outside the detector's field of view.	17.8
-	(8) Video image smoke and fire detectors	X	Quarterly	Verify no point requiring detection is obstructed or outside the detector's field of view.	17.7.8; 17.8.5
-	(9) Smoke detectors (excluding one- and two-family dwellings)	X	Semiannual	-	-
-	(10) Projected beam smoke detectors	X	Semiannual	Verify beam path is unobstructed.	-
-	(11) Supervisory signal devices	X	Semiannual	-	-
(12)	Waterflow devices	X	Semiannual	-	-
18.	Reserved	-	-	-	-
19.	<u>Combination systems Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>
					Verify location and condition (all types).

19.	systems <u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>	condition (all types).
-	(1) Fire extinguisher electronic monitoring devices/systems		X	Semiannual	-	-
-	(2) Carbon monoxide detectors/systems		X	Semiannual	-	-
20.	Alarm control interfaces and emergency control function interfaces	X	Semiannual	Verify location and condition.	-	
21.	Guard's tour equipment	X	Semiannual	Verify location and condition.	-	
22.	Notification appliances	-	-			Verify location and condition (all appliances).
-	(1) Audible appliances		X	Semiannual	-	-
-	(2) Loudspeakers	X	Semiannual	-	-	-
-	(3) Visual appliances		-	-	-	-
-	(a) General		X	Semiannual	-	18
-	(b) Candela rating		X	N/A	Verify the appliance candela rating marking or the fire alarm control unit-controlled (FACU-controlled) candela rating agrees with the approved drawings.	18.5.5
23.	Exit marking audible notification appliances	X	Semiannual	Verify location and condition.	-	
24.	Reserved	-	-	-	-	
25.	Two-way emergency communications systems	X	Annual	Verify location and condition.	-	
26.	Reserved	-	-	-	-	
27.	Supervising station alarm systems — receivers	-	-	-	-	
-	(1) Signal receipt		X	Daily	Verify receipt of signal.	-
-	(2) Receivers		X	Annual	Verify location and	-
	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>	

<u>Component</u>	<u>(2) Receivers Initial Acceptance</u>	<u>X Periodic Frequency</u>	<u>Annual Method</u>	<u>Verify location and Reference</u>	
					condition.
28. Public emergency alarm reporting system transmission equipment	-	-			Verify location and condition.
- (1) Publicly accessible alarm box		X	Semiannual	-	-
- (2) Auxiliary box		X	Annual	-	-
(3) Master box	-	-	-	-	
- (a) Manual operation		X	Semiannual	-	-
(b) Auxiliary operation	X	Annual	-	-	
29. Reserved	-	-	-	-	
30. Mass notification system (MNS)	-	-	-	-	
- (1) Monitored for integrity		-	-		Ver sys nor cor
- (a) Control equipment		-	-	-	-
- (i) Fuses		X	Annual	-	-
(ii) Interfaces	X	Annual	-	-	
- (iii) Lamps and LEDs		X	Annual	-	-
- (iv) Primary (main) power supply		X	Annual	-	-
- (b) Secondary power batteries		X	Annual	-	-
- (c) Initiating devices		X	Annual	-	-
(d) Notification appliances	X	Annual	-	-	
- (2) Not monitored for integrity; installed prior to adoption of the 2010 edition		-	-		Ver sys nor cor
- (a) Control equipment		-	-	-	-
- (i) Fuses		X	Semiannual	-	-
(ii) Interfaces	X	Semiannual	-	-	
<u>Component</u>	<u>X Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>	

<u>Interfaces Component</u>	<u>X Initial Acceptance</u>	<u>Semiannual Periodic Frequency</u>	<u>Method</u>	<u>Reference</u>
-	(iii) Lamps and LEDs	X	Semiannual	-
-	(iv) Primary (main) power supply	X	Semiannual	-
-	(b) Secondary power batteries	X	Semiannual	-
-	(c) Initiating devices	X	Semiannual	-
(d) Notification appliances	X	Semiannual	-	-
-	(3) Antenna	X	Annual	Verify location and condition.
(4) Transceivers	X	Annual	Verify location and condition.	-

N/A: Not applicable, no minimum requirement established.

* For other than VRLA or primary (dry) cell batteries, refer to the battery manufacturer’s published instructions or IEEE 450, *Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications*, for vented lead-acid batteries, and IEEE 1106, *Recommended Practice for Installation, Maintenance, Testing, and Replacement of Vented Nickel-Cadmium Batteries for Stationary Applications*, for nickel-cadmium batteries.

14.3.2*

Devices or equipment that is inaccessible for safety considerations (e.g., continuous process operations, energized electrical equipment, radiation, and excessive height) shall be permitted to be inspected during scheduled shutdowns if approved by the authority having jurisdiction.

14.3.3

Extended intervals shall not exceed 18 months.

14.3.4

Initial and reacceptance inspections shall be made to ensure compliance with approved design documents and to ensure installation in accordance with this Code and other required installation standards.

14.3.5

Periodic visual inspections in accordance with Table 14.3.1 shall be made to assure that there are no changes that affect equipment performance.

14.4 Testing.

14.4.1 Initial Acceptance Testing.

14.4.1.1

All new systems shall be inspected and tested in accordance with the requirements of Chapter 14.

14.4.1.2

The authority having jurisdiction shall be notified prior to the initial acceptance test.

14.4.2* Reacceptance Testing.

14.4.2.1

When an initiating device, notification appliance, or control relay is added, it shall be functionally tested.

14.4.2.2

When an initiating device, notification appliance, or control relay is deleted, another device,

14.4.2.2

When an initiating device, notification appliance, or control relay is deleted, another device, appliance, or control relay on the circuit shall be functionally tested.

14.4.2.3*

When control unit hardware is modified or repaired, the control unit shall be tested in accordance with items 2(1) and 2(4) of Table 14.4.3.2.

14.4.2.4

When site-specific software is changed, the following shall apply:

- (1) All functions known to be affected by the change, or identified by a means that indicates changes, shall be 100 percent tested.
- (2) Ten percent of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, shall be tested to verify correct system operation.
- (3) A revised record of completion in accordance with 7.5.6 shall be prepared to reflect the change.

14.4.2.5

Changes to the system executive software shall require a 10 percent functional test of the system, including a test of at least one device on each input and output circuit to verify critical system functions such as notification appliances, control functions, and off-premises reporting.

14.4.2.6

Where changes are made to system executive software or site-specific software for control equipment or transmitting equipment from a remote location not on the protected premises, such changes shall not be made without an individual, meeting the qualifications of 10.5.3.2, 10.5.3.3, or 10.5.3.5, being at the protected premises to verify that testing is accomplished in accordance with 14.4.2.

14.4.3* Test Methods.**14.4.3.1***

At the request of the authority having jurisdiction, the central station facility installation shall be inspected for complete information regarding the central station system, including specifications, wiring diagrams, and floor plans that have been submitted for approval prior to installation of equipment and wiring.

14.4.3.2*

14.4.3.2*

Systems and associated equipment shall be tested according to Table 14.4.3.2.

Table 14.4.3.2 Testing

Systems and associated equipment shall be tested according to Table 14.4.3.2.

Table 14.4.3.2 Testing

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
1. All equipment	X	-	-	See Table 14.3.1.
2. Control unit	-	-	-	Verify correct receipt of alarm, supervisory, and trouble signals (inputs); operation of evacuation signals and auxiliary functions (outputs); circuit supervision, including detection of open circuits and ground faults; and power supply supervision for detection of loss of ac power and disconnection of secondary batteries.
-	(1) Functions	X	Annually	Verify rating and supervision.
-	(2) Fuses	X	Annually	Verify integrity of single or multiple circuits providing interface between two or more control units. Test interfaced equipment connections by operating or simulating operation of the equipment being supervised. Verify signals required to be transmitted at the control unit.
-	(3) Interfaced equipment	X	Annually	Illuminate lamps and LEDs.
-	(4) Lamps and LEDs	X	Annually	Disconnect all secondary (standby) power and test under maximum load, including all alarm appliances requiring simultaneous operation. Reconnect all secondary
-	(5) Primary (main) power supply	X	Annually	secondary (standby) power at end of test. Test
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	secondary (standby) power at end of test. Test Method redundant power supplies separately.
3.	Alarm control unit trouble signals	-	-	<p>Verify operation of control unit trouble signals. Verify ring-back feature for systems using a trouble-silencing switch that requires resetting.</p> <p>If control unit has disconnect or isolating switches, verify performance of intended function of each switch. Verify receipt of trouble signal when a supervised function is disconnected.</p> <p>If the system has a ground detection feature, verify the occurrence of ground-fault indication whenever any installation conductor is grounded.</p> <p>Actuate an initiating device and verify receipt of alarm signal at the off-premises location.</p>
-	(1) Audible and visual	X	Annually	
-	(2) Disconnect switches	X	Annually	
-	(3) Ground-fault monitoring circuit	X	Annually	
-	(4) Transmission of signals to off-premises location	X	Annually	
		-	-	-
		-	-	-
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
4.	Supervising station alarm systems — transmission equipment	-	-	Test all system functions and features in accordance with the equipment manufacturer's published instructions for correct operation in conformance with the applicable sections of Chapter 26. ^a
-	(1) All equipment	X	Annually	
			-	-
			-	-
-	(2) Digital alarm communicator	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	Except for DACTs installed prior to

-	=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		(2) Digital alarm communicator transmitter (DACT)			Except for DACTs installed prior to adoption of the 2013 edition of <i>NFPA 72</i> that are connected to a telephone line (number) that is also supervised for adverse conditions by a derived local channel, ensure connection of the DACT to two separate means of transmission.
	=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-
-	(3) Digital alarm radio transmitter (DART)	X	Annually	Disconnect the primary telephone line. Verify transmission of a trouble signal to the supervising station by the DART occurs within 4 minutes.	-
-	(4) McCulloh transmitter	X	Annually	Actuate initiating device. Verify production of not less than three complete rounds of not less than three signal impulses each by the McCulloh transmitter.	-
-	(2) Ground	-	-	-	-
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-		-	-	-
-		-	-	-
-		-	(2) Ground	-
-	(5) Radio alarm transmitter (RAT)	X	Annually	Cause a fault between elements of the transmitting equipment. Verify indication of the fault at the protected premises, or transmission of trouble signal to the supervising station.
-	(6) Performance-based technologies	X	Annually	Perform tests to ensure the monitoring of integrity of the transmission technology and technology path. Where shared communications equipment is used as permitted by 26.6.3.12, test secondary (standby) power sources in accordance with item 7, 8, or 9, as applicable.
-		-	-	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-		-	-	
5. Emergency communications equipment				
-	(1) Amplifier/tone generators	X	Annually	Verify correct switching and operation of backup equipment.
-	(2) Call-in signal silence	X	Annually	Operate/function and verify receipt of correct visual and audible signals at control unit.
-	(3) Off-hook indicator (ring down)	X	Annually	Install phone set or remove phone from hook and verify receipt of
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

		down)		from hook and verify receipt of
Component	Initial Acceptance	Periodic Frequency	Method	
-	(4) Phone jacks	X	Annually	signal at control unit. Visually inspect phone jack and initiate communications path through jack.
-	(5) Phone set	X	Annually	Actuate each phone set and verify correct operation.
-	(6) System performance	X	Annually	Operate the system with a minimum of any five handsets simultaneously. Verify voice quality and clarity.
6.	Engine-driven generator	X	Monthly	If an engine-driven generator dedicated to the system is used as a required power source, verify operation of the generator and transfer switch in accordance with NFPA 110 by the building owner.
7.	Emergency power supply system/stored-emergency power supply system (EPSS/SEPSS)	X	Annually	If an EPSS/SEPSS dedicated to the system is used as a required power source, verify by the building owner operation of the EPSS/SEPSS in accordance with NFPA 111.
8.	Secondary (standby) power supply ^C	X	Annually	Disconnect all primary (main) power supplies and verify the occurrence of required trouble indication for loss of primary power. Measure or verify the system's standby and alarm current demand using the equipment manufacturer's
Component	Initial Acceptance	Periodic Frequency	Method	

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
			demand using the equipment manufacturer's data and verify the battery's rated capacity exceeds the system's power demand, including the safety margin. Operate general alarm systems for a minimum of 5 minutes and emergency voice communications systems for a minimum of 15 minutes. Reconnect primary (main) power supply at end of test.	
9.	VRLA battery and charger ^d	-	-	<p>Prior to conducting any battery testing, verify by the person conducting test that all system software stored in volatile memory is protected from loss.</p> <p>Upon initially opening the cabinet door, measure the internal ambient temperature of the enclosure. Measure the temperature of each battery cell/unit at the negative terminal with an infrared thermometer. Replace any battery cell/unit if its temperature is greater than 18°F (10°C) above the measured internal ambient temperature of the enclosure.</p>
-	(1) Temperature test	X	Semiannually	With the battery fully charged and
-	(2) Charger test	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(2) Charger test		Semiannually	With the battery fully charged and connected to the charger, measure the voltage across the battery with a voltmeter. Verify the voltage is within the battery/alarm equipment manufacturer's recommendations. If the voltage is outside of the specified limits, either adjust the charger to within limits or replace the charger. If the charger is adjustable, adjust the output voltage to 2.265 volts, ±0.015 volts, per cell at 77°F (25°C) or as specified by the alarm equipment manufacturer.
-	(3) Cell/Unit voltage test	X	Semiannually	With the battery fully charged and connected to the charger, measure the voltage of each cell/unit with a voltmeter. Replace the battery when any cell/unit measures a voltage less than 13.26 volts. When the battery is installed, establish a baseline ohmic value for each battery cell/unit or, where available, use baseline ohmic values provided by the battery or test equipment manufacturer. In either case, record the baseline ohmic value on each battery cell/unit.
-	(4) Ohmic test ^e	X	N/A	-
				Semiannually

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(5) Replacement/Load test ^f	-	Every 3 years	Replace the battery or conduct a load test of the battery capacity. Load test the battery, based on the manufacturer's specification for a discharge rate of 3 hours or more, by applying the current
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

indicated for the selected hourly

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	indicated for the selected hourly discharge rate continuously until the terminal voltage decreases to the end voltage specified by the manufacturer. Record the test duration and calculate the battery capacity including adjustment for ambient temperature. Replace the battery if capacity is less than or equal to 80 percent or at the next scheduled test interval if battery capacity is less than 85 percent.
Public emergency 10. alarm reporting system — wired system	X	Daily	Manually test the power supply for public reporting circuits and document the tests at least once during each 24-hour period. Test the following:	-	-
				-	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		-	-	-
		-	-	-

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
			-	-
			-	-
			-	-
11.	Remote annunciators	X	Annually	Verify the correct operation and identification of annunciators. If provided, verify the correct operation of annunciators under a fault condition.
12.	Reserved	-	-	-
13.	Reserved	-	-	-
14.	Wireless communications	X	Annually	Test in accordance with the manufacturer's published instructions.
15.	Conductors — metallic	-	-	-
	(1) Stray voltage	X	N/A	Test all installation conductors with a volt/ohmmeter to verify
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	volt/ohmmeter to verify <u>Method</u>
-	(2) Ground faults	X	N/A	<p>are no stray (unwanted) voltages between installation conductors or between installation conductors and ground. Verify the maximum allowable stray voltage does not exceed 1 volt ac/dc, unless a different threshold is specified in the manufacturer's published instructions for the installed equipment.</p> <p>Test all installation conductors, other than those intentionally and permanently grounded, for isolation from ground in accordance with the installed equipment manufacturer's published instructions.</p>
-	(3) Short-circuit faults	X	N/A	<p>Test all installation conductors, other than those intentionally connected together, for conductor-to-conductor isolation in accordance with the manufacturer's published instructions for the installed equipment. Also test these same circuits conductor-to-ground.</p>
-	(4) Loop resistance	X	N/A	<p>With each initiating and indicating circuit installation conductor pair short-circuited at the far end measure and</p>
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(5) Circuit integrity	X	N/A	<p>short-circuited at the far end measure and record the resistance of each circuit. Verify that the loop resistance does not exceed the limits specified in the manufacturer's published instructions for the installed equipment.</p> <p>For initial and reacceptance testing, confirm the introduction of a fault in any circuit monitored for integrity results in a trouble indication at the FACU. Open one connection at not less than 10 percent of the initiating devices, notification appliances, and controlled devices on every initiating device circuit, notification appliance circuit, and signaling line circuit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.</p>
-	-	N/A	Annually	<p>For periodic testing, test each initiating device circuit, notification appliance circuit, and signaling line circuit for correct indication at the control unit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.</p>
16.	Nonmetallic pathway	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

16.	Nonmetallic pathways	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
					Test the transmission characteristics of optical fibers with an optical power meter or with an optical time domain reflectometer used to measure the relative power loss of the line.
		(1) Optical fiber cables	X	N/A	Test result data must meet or exceed ANSI/TIA 568.3, <i>Optical Fiber Cabling and Components Standard</i> , related to fiber-optic lines and connection/splice losses and the control unit manufacturer's published specifications.
		(2) Circuit integrity	X	N/A	For initial and reacceptance testing, confirm the introduction of a fault in any circuit monitored for integrity results in a trouble indication at the FACU. Open one connection at not less than 10 percent of the initiating devices, notification appliances, and controlled devices on every initiating device circuit, notification appliance circuit, and signaling line circuit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.
				N/A	Annually
					For periodic testing, test each initiating device circuit, notification appliance circuit, and signaling line
		<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<p>appliance circuit, and signaling line circuit for correct indication at the control unit. Confirm all circuits perform as indicated in Sections 23.6, and 23.7.</p>
17.	Initiating devices ^h	-	-	-	
-	(1) Electromechanical releasing device	-	-	-	
-	(a) Nonrestorable-type link	X	Annually	Verify correct operation by removal of the fusible link and operation of the associated device.	
-	(b) Restorable-type link ⁱ	X	Annually	Verify correct operation by removal of the fusible link and operation of the associated device.	
-	(2) Fire extinguishing system(s) or suppression system(s) alarm switch	X	Annually	Operate the switch mechanically or electrically and verify receipt of signal by the FACU.	
-	(3) Fire-gas and other detectors	X	Annually	Test fire-gas detectors and other fire detectors as prescribed by the manufacturer and as necessary for the application.	
-	(4) Heat detectors	-	-	-	
-	(a) Fixed-temperature, rate-of-rise, rate of compensation, restorable line, spot type (excluding pneumatic tube type)	X	Annually (see 14.4.4.5)	Perform heat test with a listed and labeled heat source or in accordance with the manufacturer's published instructions. Assure that the test method for the installed	
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	<p>equipment does not damage the nonrestorable</p>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(b) Fixed-temperature, nonrestorable line type	X	Annually	<p>equipment does not damage the nonrestorable fixed-temperature element of a combination rate-of-rise/fixed-temperature element detector.</p> <p>Do not perform heat test. Test functionality mechanically and electrically. Measure and record loop resistance. Investigate changes from acceptance test.</p> <p>After 15 years from initial installation, replace all devices or have 2 per every 100 detectors laboratory tested. Replace the 2 detectors with new devices. If a failure occurs on any of the detectors removed, remove and test additional detectors to determine either a general problem involving faulty detectors or a localized problem involving 1 or 2 defective detectors.</p>
-	(c) Fixed-temperature, nonrestorable spot type	X	See Method column	
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-
		-	-		-
		-	-		-
		-	-		-
		-	-		-
-	(7) Smoke detectors — functional test	-	-	-	
-	(a) In other than one- and two-family dwellings, system detectors	X	Annually	Test smoke detectors in place to ensure smoke entry into the sensing chamber and an alarm response. Use smoke or a listed and labeled product.	
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	and labeled product <u>Method</u>
-	(b) Single- and multiple-station smoke alarms connected to protected premises systems	X	Annually	acceptable to the manufacturer or in accordance with their published instructions. Other methods listed in the manufacturer's published instructions that ensure smoke entry from the protected area, through the vents, or into the sensing chamber can be used. Magnets are not acceptable for smoke entry tests. Perform a functional test on all single- and multiple-station smoke alarms connected to a protected premises fire alarm system by putting the smoke alarm into an alarm condition.
-	(c) System smoke detectors used in one- and two-family dwellings	X	Annually	Conduct functional tests according to the manufacturer's published instructions.
-	(d) Air sampling	X	Annually	Test with smoke or a listed and labeled product acceptable to the manufacturer or in accordance with their published instructions. In the absence of an automatic, listed airflow supervision feature, test from the end sampling port or point on each pipe run and verify airflow through all other ports or points.
-	(e) Duct type	X	Annually	In addition to the testing required in item (17)(7)(a)
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	and item (17)(8), test d <u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	and item (17)(8), test d <u>Method</u>
-	(f) Projected beam type	X	Annually	detectors that use sampling tubes to ensure that they will properly sample the airstream in the duct using a method acceptable to the manufacturer or in accordance with their published instructions. Test the detector by introducing smoke, other aerosol, or an optical filter into the beam path.
-	(g) Smoke detector with built-in thermal element	X	Annually	Operate both portions of the detector independently as described for the respective devices.
-	(h) Smoke detectors with control output functions	X	Annually	Verify that the control capability remains operable even if all of the initiating devices connected to the same initiating device circuit or signaling line circuit are in an alarm state.
-	(8) Smoke detectors in other than one- and two-family dwellings, system detectors — sensitivity testing	N/A	See 14.4.4.3	Perform any of the following tests to ensure that each smoke detector is within its listed and marked sensitivity range: ^k
-		-	-	-
-		-	-	-
-		-	-	-
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-
-	(9) Carbon monoxide (CO) detectors/CO alarms connected to protected premises systems	-	-	Test the devices in place to ensure CO entry to the sensing chamber by introduction through the vents, to the sensing chamber of listed and labeled product acceptable to the manufacturer or in accordance with manufacturer's published instructions.	-
-	(a) CO entry test	X	Annually	In accordance with test methods documented in the manufacturer's published instructions, verify detector alarm response through the end sampling port on each pipe run; verify airflow through all other ports as well.	-
-	(b) Air sampling	X	Annually	Test or inspect air duct detectors to ensure that the device will sample the airstream in accordance with	-
-	(c) Duct type	X	Annually	the manufacturer's	-

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> the manufacturer's published instructions.
-	(d) CO detector with control output functions	X	Annually	Within each protected space, verify that the control capability remains operable even if all of the initiating devices connected to the same initiating device circuit or signaling line circuit are in an alarm state.
-	(10) Initiating devices, supervisory	-	-	Operate valve and verify signal receipt to be within the first two revolutions of the handwheel or within one-fifth of the travel distance, or in accordance with the manufacturer's published instructions. Continue to cycle outside stem and yoke valves and verify switch does not reset during full travel of the valve stem.
-	(a) Control valve switch	X	Semiannually	Operate switch and verify receipt of signal is obtained where the required pressure is increased or decreased a maximum 10 psi (70 kPa) from the required pressure level or in accordance with the manufacturer's published instructions.
-	(b) High- or low-air pressure switch	X	Annually	Operate switch and verify receipt of signal is obtained before pressure
-	(c) Steam pressure	X	Annually	<u>Method</u>
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> obtained before pressure
-	(d) Pressure supervisory devices for other sources	X	Annually	decreases to 110 percent of the minimum operating pressure of the steam-operated equipment. Operate switch and verify receipt of signal is obtained where the required pressure is increased or decreased from the normal operating pressure by an amount specified in approved design documents.
-	(e) Room temperature switch	X	Annually	Operate switch and verify receipt of signal to indicate the decrease in room temperature to 40°F (4.4°C) and its restoration to above 40°F (4.4°C).
-	(f) Water level switch	X	Annually	Operate switch and verify receipt of signal indicating the water level raised or lowered a maximum 3 in. (70 mm) from the required level within a pressure tank, or a maximum 12 in. (300 mm) from the required level of a nonpressure tank. Also verify its restoration to required level.
-	(g) Water temperature switch	X	Annually	Operate switch and verify receipt of signal to indicate the decrease in water temperature to 40°F (4.4°C) and its restoration to above 40°F (4.4°C).
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	(4.4°C).	<u>Method</u>
-	(11) Mechanical, electrosonic, or pressure-type waterflow device	X	Semiannually		Flow water through an inspector's test connection indicating the flow of water equal to that from a single sprinkler of the smallest orifice size installed in the system or other listed and approved waterflow switch test methods for wet-pipe systems, or an alarm test bypass connection for dry-pipe, pre-action, or deluge systems in accordance with NFPA 25.
-	(12) Multi-sensor fire detector or multi-criteria fire detector or combination fire detector	X	Annually		(1) Test each detector in accordance with the manufacturer's published instructions. Test each of the sensors present within the detector (e.g., smoke, heat, CO) independently for the specific detection principle, regardless of the configuration status at the time of testing, or test individual sensors together if the technology allows individual sensor responses to be verified. Where sensors cannot be tested individually, test the primary sensor. ¹
-		-	-		-
-		-	-		-

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
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	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(2) Abort switch (recycling type)	X	Annually	Activate suppression system initiating device. Operate abort switch and verify countdown cycle restarts and suppression system actuators remain de-energized. Allow countdown to complete and verify that actuators energize.
-	(3) Abort switch (special type)	X	Annually	Activate suppression system initiating device. Operate abort switch and verify operation in accordance with the sequence of operation as specified on as-built drawings.
-	(4) Cross-zone detection circuit	X	Annually	Activate one detector in each zone. Verify occurrence of correct sequence of operation for the first zone and then the second zone.
-	(5) Matrix-type circuit	X	Annually	Operate all sensors in system. Verify development of correct matrix with each sensor operated.
-	(6) Release solenoid circuit ^m	X	Annually	Verify operation of solenoid.
-	(7) Squibb release circuit	X	Annually	Use AGI flashbulb or other test light approved by the manufacturer. Verify operation of flashbulb or light.
-	(8) Verified, sequential, or counting zone circuit	X	Annually	Operate required sensors at a minimum of four locations in circuit. Verify correct sequence of operation with both the first and second detector in alarm.
	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	alarm. <u>Method</u>
-	(9) All above devices or circuits or combinations thereof	X	Annually	Verify supervision of circuits by creating an open circuit.
19.	Combination systems	-	-	<p>Test communication between the device connecting the fire extinguisher electronic monitoring device/system and the FACU to ensure proper signals are received at the FACU and remote annunciator(s), if applicable.</p> <p>Test communication between the device connecting the CO device/system and the FACU to ensure proper signals are received at the FACU and remote annunciator(s), if applicable.</p>
-	(1) Fire extinguisher electronic monitoring device/system	X	Annually	<p>Test communication between the device connecting the fire extinguisher electronic monitoring device/system and the FACU to ensure proper signals are received at the FACU and remote annunciator(s), if applicable.</p>
-	(2) CO device/system	X	Annually	<p>Test communication between the device connecting the CO device/system and the FACU to ensure proper signals are received at the FACU and remote annunciator(s), if applicable.</p>
20.	Interface equipment ⁿ	X	See 14.4.4.4	<p>Test interface equipment connections by operating or simulating the equipment being supervised. Verify signals required to be transmitted are received at the control unit. Test frequency for interface equipment is the same as the frequency required by the applicable NFPA standard(s) for the equipment being supervised.</p>
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
21. Guard's tour equipment	X	Annually	Test the device in accordance with the manufacturer's published instructions.	
22. Alarm notification appliances	-	-	-	
-	(1) Audible ^o	X	N/A	For initial and reacceptance testing, measure sound pressure levels for alert tone signals and evacuation signal tones with a sound level meter meeting ANSI/ASA S1.4/Part 1, <i>Electroacoustics — Sound Level Meters — Part 1: Specifications, Type 2</i> requirements. Measure sound pressure levels to determine if they comply with Chapter 18 and the required performance, as documented in accordance with 7.3.4. Set the sound level meter in accordance with ANSI/ASA S3.41, <i>Audible Emergency Evacuation (E2) and Evacuation Signals with Relocation Instructions (ESRI)</i> , using the time-weighted characteristic F (FAST).
-	-	-	N/A	Annually For periodic testing, verify the operation of the notification appliances.
-	(2) Audible textual notification appliances (loudspeakers and	X	N/A	For initial and reacceptance testing, measure sound pressure
	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	text notification appliances (loudspeakers and other appliances to convey voice messages)	<u>Initial</u> Acceptance	<u>Periodic</u> Frequency	reacceptance testing, measure sound pressure levels for signals with a sound level meter meeting ANSI/ASA S1.4/Part 1, <i>Electroacoustics</i> — <i>Sound Level</i> <i>Meters — Part 1:</i> <i>Specifications,</i> Type 2 requirements. Measure sound pressure levels throughout the protected area to determine if they comply with Chapter 18 and the required performance, as documented in accordance with 7.3.4. Set the sound level meter in accordance with ANSI/ASA S3.41, <i>Audible</i> <i>Emergency</i> <i>Evacuation (E2)</i> <i>and Evacuation</i> <i>Signals with</i> <i>Relocation</i> <i>Instructions</i> (ESRI), using the time-weighted characteristic F (FAST).	<u>Method</u>
-		-	N/A	Annually	
-	(3) Visual	X	N/A	Perform initial and reacceptance testing in accordance with the manufacturer's published instructions. Verify appliance locations to be in accordance with the applicable	
-	<u>Component</u>	<u>Initial</u> Acceptance	<u>Periodic</u> Frequency	reacceptance testing, measure sound pressure levels for signals with a sound level meter meeting ANSI/ASA S1.4/Part 1, <i>Electroacoustics</i> — <i>Sound Level</i> <i>Meters — Part 1:</i> <i>Specifications,</i> Type 2 requirements. Measure sound pressure levels throughout the protected area to determine if they comply with Chapter 18 and the required performance, as documented in accordance with 7.3.4. Set the sound level meter in accordance with ANSI/ASA S3.41, <i>Audible</i> <i>Emergency</i> <i>Evacuation (E2)</i> <i>and Evacuation</i> <i>Signals with</i> <i>Relocation</i> <i>Instructions</i> (ESRI), using the time-weighted characteristic F (FAST).	<u>Method</u>

For periodic testing, verify the operation of the notification appliances.

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	-	N/A	Annually	<p>accordance with the approved layout and confirm that no floor plan changes affect the approved layout. Verify the candela rating or method of candela control marking on each visual appliance and rating when reported by the FACU agrees with the approved drawings. Confirm that each appliance flashes.</p> <p>For periodic testing, verify that each appliance flashes.</p>
23.	Exit marking audible notification appliance	X	Annually	Perform tests in accordance with the manufacturer's published instructions.
24.	Emergency control functions ⁹	X	Annually	<p>For initial, reacceptance, and periodic testing, verify emergency control function interface device activation. Where an emergency control function interface device is disabled or disconnected during initiating device testing, verify that the disabled or disconnected emergency control function interface device has been properly restored, including electromagnetic devices used for door releasing services as part of a fire alarm system.</p>
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
25.	Two-way emergency communications systems	X	Annually	system. Use the manufacturer's published instructions and the as-built drawings provided by the system supplier to verify correct operation after the initial testing phase has been performed by the supplier or by the supplier's designated representative.
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			-	-
			-	-
			-	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		-	-	-
		-	-	-
26.	Special procedures	-	-	
-	(1) Alarm verification	X	Annually	Verify time delay and alarm response for smoke detector circuits identified as having alarm verification.
-	(2) Multiplex systems	X	Annually	Verify communications between sending and receiving units under both primary and secondary power.
		-	-	-
		-	-	-
		-	-	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
Supervising station alarm systems — receiving equipment	(1) All equipment	X	Monthly	Perform tests on all system functions and features in accordance with the equipment manufacturer's published instructions for correct operation in conformance with the applicable sections of Chapter 26.
-	(2) Digital alarm communicator receiver (DACR)	X	Monthly	Disconnect each transmission means in turn from the DACR, and verify audible and visual annunciation of a trouble signal in the supervising station.
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	the supervising station <u>Method</u>	-
-	(3) Digital alarm radio receiver (DARR)	X	Monthly	Cause the following conditions of all DARRs on all subsidiary and repeater station receiving equipment. Verify receipt at the supervising station of correct signals for each of the following conditions:	-
					-
					-
					-
					-
					-
-	(4) McCulloh system	X	Monthly	Test and record the current on each circuit at each supervising and subsidiary station under the following conditions:	-
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-
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-	(5) Radio alarm supervising station receiver (RASSR) and radio alarm repeater station receiver (RARSR)	X	Monthly	Cause each of the following conditions at each of the supervising or subsidiary stations and all repeater station radio transmitting and receiving equipment; verify receipt of correct signals at the	
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> receipt of correct signals at the supervising station:
-	(6) Private microwave radio systems	X	Monthly	Cause each of the following conditions at each of the supervising or subsidiary stations and all repeater station radio transmitting and receiving equipment; verify receipt of correct signals at the supervising station:
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-	(7) Performance-based technologies	X	Monthly	Perform tests to ensure the monitoring of integrity of the transmission technology and technology path. Where a single communications path is used, disconnect the communication path. Verify that failure of the path is annunciated at the supervising station within 60 minutes of the failure (within 5 minutes for communication equipment
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	5 minutes for communication equipment <u>Method</u>
				<p>installed prior to adoption of the 2013 edition of <i>NFPA 72</i>. Restore the communication path. Where multiple communication paths are used, disconnect all communication paths and confirm that failure of the paths is annunciated at the supervising station within 6 hours of the failure (within 24 hours for communication equipment installed prior to adoption of the 2013 edition of <i>NFPA 72</i>). Restore all communication paths.</p>
28.	Public emergency alarm reporting system transmission equipment	-	-	-
-	(1) Publicly accessible alarm box	X	Semiannually	Actuate publicly accessible initiating device(s) and verify receipt of not less than three complete rounds of signal impulses. Perform this test under normal circuit conditions. If the device is equipped for open circuit operation (ground return), test it in this condition as one of the semiannual tests.
-	(2) Auxiliary box	X	Annually	Test each initiating circuit of the auxiliary box by actuation of a protected
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> premises initiating device connected

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(3) Master box	-	-	protected premises initiating device connected to that circuit. Verify receipt of not less than three complete rounds of signal impulses.
-	(a) Manual operation	X	Semiannually	Perform the tests prescribed for 28(1).
-	(b) Auxiliary operation	X	Annually	Perform the tests prescribed for 28(2).
Low-power 29. radio (wireless systems)	X	N/A	The following procedures describe additional acceptance and reacceptance test methods to verify wireless protection system operation:	
			-	-
			-	-
			-	-
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		-	-	-
		-	-	-

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(2) Fuses	X	Annually	detection of open circuits; ground faults; and power supply supervision for detection of loss of ac power and disconnection of secondary batteries.
-	(3) Interfaced equipment	X	Annually	Verify the rating and supervision. Verify integrity of single or multiple circuits providing interface between two or more control units. Test interfaced equipment connections by operating or simulating operation of the equipment being supervised. Verify signals required to be transmitted at the control unit.
-	(4) Lamps and LEDs	X	Annually	Illuminate lamps and LEDs. Disconnect all secondary (standby) power and test under maximum load, including all alarm appliances requiring simultaneous operation. Reconnect all secondary (standby) power at end of test. For redundant power supplies, test each separately.
-	(5) Primary (main) power supply	X	Annually	Measure sound pressure level with a sound level meter meeting ANSI/ASA S1.4/Part 1, <i>Electroacoustics — Sound Level Meters — Part 1: Specifications, Type 2</i> requirements.
-	(6) Audible textual notification appliances (loudspeakers and other appliances to convey voice messages)	X	Annually	<u>Measure and record levels throughout</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	record levels throughout <u>Method</u>
				protected area. Set the sound level meter in accordance with ANSI/ASA S3.41, <i>Audible Emergency Evacuation (E2) and Evacuation Signals with Relocation Instructions (ESRI)</i> , using the time-weighted characteristic F (FAST). Record the maximum output when the audible emergency evacuation signal is on.
-	(7) Visual	X	Annually	Perform test in accordance with manufacturer's published instructions. Verify appliance locations to be in accordance with the approved layout and confirm that no floor plan changes affect the approved layout. Verify that the candela rating or method of candela control marking on each visual appliance and rating when reported by the FACU agrees with the approved drawings. Confirm that each appliance flashes.
-	(8) Control unit functions and no diagnostic failures are indicated	X	Annually	Review event log file and verify that the correct events were logged. Review system diagnostic log file;
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	correct deficiencies noted <u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> diagnostic log file, correct deficiencies noted
-	(9) Control unit reset	X	Annually	in file. Delete unneeded log files. Delete unneeded error files. Verify that sufficient free disk space is available. Verify unobstructed flow of cooling air is available. Change/clean filters, cooling fans, and intake vents.
-	(10) Control unit security	X	Annually	Power down the central control unit computer and restart it. If remote control software is loaded onto the system, verify that it is disabled to prevent unauthorized system access.
-	(11) Audible/visual functional test	X	Annually	Send out an alert to a diverse set of predesignated receiving devices and confirm receipt. Include at least one of each type of receiving device.
-	(12) Software backup	X	Annually	Make full system software backup. Rotate backups based on accepted practice at site.
-	(13) Secondary power test	X	Annually	Disconnect ac power. Verify the ac power failure alarm status on central control unit. With ac power disconnected, verify battery voltage under load.
-	(14) Wireless signals	X	Annually	Check forward/reflected radio power is within specifications.
-	(15) Antenna	X	Annually	Check forward/reflected
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

	(15) Antenna Component	X Initial Acceptance	Annually Periodic Frequency	Check forwarded Method
				radio power is within specifications. Verify solid electrical connections with no observable corrosion. Verify proper operation and mounting is not compromised.
	(16) Transceivers	X	Annually	

N/A: Not applicable, no minimum requirement established.

^aSome transmission equipment (e.g., cable modems, fiber-optic interface nodes, VoIP interfaces) are typically powered by the building's electrical system using a secondary (standby) power supply that does not meet the requirements of this Code. This is intended to ensure that the testing authority verifies full secondary (standby) power as required by Chapter 10. Additionally, refer to items 7 through 9 for secondary (standby) power supply testing.

^bThe automatic transmission of the check-in (handshake) signal can take up to 60 minutes to occur.

^cSee item 4(1) for the testing of transmission equipment. A control unit's charger/power supply that is listed for the purpose of verifying secondary power demand is permitted to be approved for equivalency with this section.

^dThe battery tests in item 9 are based on VRLA batteries and it is intended that the tests specified in (1) through (4) be performed in order. FACU automated load testing of VRLA batteries in accordance with item 9(5) with record of ambient temperature is an acceptable alternative to prescriptive manual methods using test equipment. For other secondary battery types, refer to the battery manufacturer's published instructions or IEEE 450, *Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications*, for vented lead-acid batteries, and IEEE 1106, *Recommended Practice for Installation, Maintenance, Testing, and Replacement of Vented Nickel-Cadmium Batteries for Stationary Applications*, for nickel-cadmium batteries.

^eSee item 9(4).

^fSee item 9(5).

^gThe voltmeter sensitivity has been changed from 1000 ohms per volt to 100 ohms per volt so that the false ground readings (caused by induced voltages) are minimized.

^hInitiating devices such as smoke detectors used for elevator recall, closing dampers, or releasing doors held in the open position that are permitted by the Code (see 9.6.6 of NFPA 101) to initiate supervisory signals at the FACU should be tested at the same frequency (annually) as those devices when they are generating an alarm signal. They are not supervisory devices, but they initiate a supervisory signal at the FACU.

ⁱFusible thermal link detectors are commonly used to close fire doors and fire dampers electrically connected to the FACU. They are actuated by the presence of external heat, causing a solder element in the link to fuse, or by an electric thermal device which, when energized, generates heat within the body of the link, causing the link to fuse and separate.

^jIt is customary for the manufacturer of the smoke detector to test a particular product from an aerosol provider to determine acceptability for use in smoke entry testing of their smoke detector/smoke alarm. Magnets are not acceptable for smoke entry tests.

^kThere are some detectors that use magnets as a manufacturer's calibrated sensitivity test instrument. For example, it might not be possible to individually test the heat sensor in a thermally enhanced smoke detector.

Instrument.

For example, it might not be possible to individually test the heat sensor in a thermally enhanced smoke detector.

^mManufacturer's published instructions should be consulted to ensure a proper operational test. No suppression gas or agent is expected to be discharged during the test of the solenoid. See 14.2.10.

ⁿA monitor module installed on an interface device is not considered a supervisory device and therefore not subject to the quarterly testing frequency requirement. Test frequencies for interface devices should be in accordance with the applicable standard. For example, fire pump controller alarms such as phase reversal are required to be tested annually. If a monitor module is installed to identify phase reversal on the FACU, it is not necessary to test for phase reversal four times a year.

^oChapter 18 would require 15 dB over average ambient sound for public mode spaces. Sometimes the ambient sound levels are different from what the design was based upon. Private operating mode would require 10 dB over average ambient at the location of the device.

^pWhere building, system, or occupancy changes have been observed, the owner should be notified of the changes. New devices might need to be installed and tested in accordance with the initial acceptance testing criteria.

^qSee A.14.4.3.2 and item 24.

14.4.3.3

Video image smoke and flame detectors shall be inspected, tested, and maintained in accordance with the manufacturer's published instructions.

14.4.3.4

Thermal image fire detectors shall be inspected, tested, and maintained in accordance with the manufacturer's published instructions.

14.4.3.5

Gas detectors shall be inspected, tested, and maintained in accordance with manufacturers' published instructions.

14.4.3.6 Testing of Carbon Monoxide System Detectors.

For all carbon monoxide system detectors carbon monoxide tests shall be performed at initial acceptance and annually by the introduction of carbon monoxide into the sensing chamber or element.

14.4.4* Testing Frequency.

Unless otherwise permitted by other sections of this Code, testing shall be performed in accordance with the authority having jurisdiction or with the schedules provided in Table 14.4.3.2, whichever is more frequent.

14.4.4.1*

Devices or equipment that are inaccessible for safety considerations (e.g., continuous process operations, energized electrical equipment, radiation, and excessive height) shall be permitted to be tested during scheduled shutdowns if approved by the authority having jurisdiction and if the extended intervals do not exceed 18 months.

14.4.4.2

If automatic testing is performed at least weekly by a remotely monitored fire alarm control unit specifically listed for the application, the manual testing frequency shall be permitted to be extended to annually in accordance with Table 14.4.3.2.

14.4.4.3*

In other than one- and two-family dwellings, sensitivity of smoke detectors shall be tested in accordance with 14.4.4.3.1 through 14.4.4.3.6.

14.4.4.3.1

Sensitivity shall be checked within 1 year after installation.

14.4.4.3.2

Sensitivity shall be checked every alternate year thereafter unless otherwise permitted by

14.4.4.3.2

Sensitivity shall be checked every alternate year thereafter unless otherwise permitted by compliance with 14.4.4.3.3.

14.4.4.3.3

After the second required calibration test, if sensitivity tests indicate that the device has remained within its listed and marked sensitivity range, the length of time between calibration tests shall be permitted to be extended to a maximum of 5 years.

14.4.4.3.3.1

If the frequency is extended, records of nuisance alarms and subsequent trends of these alarms shall be maintained.

14.4.4.3.3.2

In zones or in areas where nuisance alarms show any increase over the previous year, calibration tests shall be performed.

14.4.4.3.4

Unless otherwise permitted by 14.4.4.3.5, smoke detectors found to have a sensitivity outside the listed and marked sensitivity range shall be cleaned and recalibrated or be replaced.

14.4.4.3.5

Smoke detectors listed as field adjustable shall be permitted to either be adjusted within the listed and marked sensitivity range, cleaned, and recalibrated, or be replaced.

14.4.4.3.6

The detector sensitivity shall not be tested or measured using any device that administers an unmeasured concentration of smoke or other aerosol into the detector or smoke alarm.

14.4.4.4

Test frequency of interfaced equipment shall be the same as specified by the applicable NFPA standards for the equipment being supervised.

14.4.4.5

Restorable fixed-temperature, spot-type heat detectors shall be tested in accordance with 14.4.4.5.1 through 14.4.4.5.4.

14.4.4.5.1

Two or more detectors shall be tested on each initiating circuit annually.

14.4.4.5.2

Different detectors shall be tested each year.

14.4.4.5.3

Test records shall be kept by the building owner specifying which detectors have been tested.

14.4.4.5.4

Within 5 years, each detector shall have been tested.

14.4.4.6

Carbon monoxide apparatus that require resetting to maintain normal operation shall be restored to normal as promptly as possible after each test and alarm and kept in normal condition for operation.

14.4.4.6.1

All carbon monoxide test signals received shall be recorded to indicate date and time.

14.4.4.7*

Circuit and pathway testing of each monitored circuit or pathway shall be conducted with initial acceptance or reacceptance testing to verify signals are indicated at the control unit for each of the abnormal conditions specified in Sections 23.5 through 23.7.

14.4.4.8

Unless otherwise permitted by 14.4.4.9, the retransmission means as defined in Section 26.3

14.4.4.8

Unless otherwise permitted by 14.4.4.9, the retransmission means as defined in Section 26.3 shall be tested at intervals of not more than 12 hours.

14.4.4.9

When the retransmission means is the public-switched telephone network, testing shall be permitted at weekly intervals to confirm its operation to each communications center.

14.4.4.10

As a part of the testing required in 14.4.4.8, the retransmission signal and the time and date of the retransmission shall be recorded in the central station.

14.4.5 Single- and Multiple-Station Alarms. (SIG-HOU)**14.4.5.1**

Single- and multiple-station alarms and connected appliances shall be inspected, tested, and maintained in accordance with Table 14.3.1, Table 14.4.3.2, and the manufacturer's published instructions.

14.4.5.2

Alarms and connected appliances shall be inspected and tested at least monthly.

14.4.5.3*

The responsibility for inspection, testing, and maintenance of smoke alarms and connected appliances shall be in accordance with 14.2.3.

14.4.5.4*

Notwithstanding other requirements of 14.2.3, the occupant of a dwelling unit shall be deemed qualified to perform inspection, testing, and maintenance on single- and multiple-station alarms protecting that dwelling unit when provided with information from the manufacturer or a manufacturer's certified representative.

14.4.5.5

Alarms and connected appliances shall be replaced when they fail to respond to operability tests.

14.4.5.6

Smoke alarms shall not remain in service longer than 10 years from the date of manufacture, unless otherwise provided by the manufacturer's published instructions.

14.4.5.7

Carbon monoxide alarms shall be replaced when either the end-of-life signal is actuated or the manufacturer's replacement date is reached.

14.4.5.8

Combination smoke/carbon monoxide alarms shall be replaced when the end-of-life signal actuates or 10 years from the date of manufacture, whichever comes first, unless otherwise provided by the manufacturer's published instructions.

14.4.5.9

Where batteries are used as a source of energy for alarms, the batteries shall be replaced in accordance with the alarm equipment manufacturer's published instructions.

14.4.6 Household Fire Alarm Systems. (SIG-HOU)**14.4.6.1**

Household alarm systems shall be inspected, tested, and maintained at least annually according to Table 14.3.1, Table 14.4.3.2, and the manufacturer's published instructions.

14.4.6.2

The responsibility for inspection, testing, and maintenance of smoke alarms and connected appliances shall be in accordance with 14.2.3.

14.4.6.3*

Notwithstanding other requirements of 14.2.3, the occupant of a dwelling unit shall be deemed

14.4.6.3*

Notwithstanding other requirements of 14.2.3, the occupant of a dwelling unit shall be deemed qualified to perform inspection, testing, and maintenance on a household alarm system protecting that dwelling unit when provided with information and/or training from the manufacturer or a manufacturer's certified representative.

14.4.6.4

The installing contractor shall be required to provide the information in 14.4.6.3 in writing to the customer upon completion of the system installation.

14.4.6.5

Carbon monoxide detectors shall be replaced when the end-of-life signal is actuated, the manufacturer's replacement date is reached, or when they fail to respond to operability tests.

14.4.6.6

Maintenance of household alarm systems shall be conducted according to the manufacturer's published instructions.

14.4.7 Circuits from Central Station. (SIG-SSS)

Circuits extending from the central station that have had no signal activity in the preceding 24 hours shall be tested at intervals of not more than 24 hours.

14.4.8 Household Carbon Monoxide Detection Systems. (SIG-HOU)**14.4.8.1** Testing of Household Carbon Monoxide Detection Systems.**14.4.8.1.1**

Household carbon monoxide detection systems shall be tested by a qualified service technician at least every 3 years according to the methods in line 1 of Table 14.4.3.2.

14.4.8.1.2

Household carbon monoxide detection systems shall be tested in accordance with the manufacturer's published instructions.

14.4.8.1.3*

Notwithstanding other requirements of 14.2.3.6, the occupant of a dwelling unit shall be deemed qualified to perform inspection, testing, and maintenance on an alarm system protecting that dwelling unit when provided with information and training from the manufacturer or a manufacturer's certified representative.

14.4.9 Public Emergency Alarm Reporting Systems. (SIG-PRS)**14.4.9.1**

Emergency power sources other than batteries shall be tested at least weekly in accordance with 14.4.9.1.1 and 14.4.9.1.2.

14.4.9.1.1

Testing shall include operation of the power source to supply the system for a continuous period of 1 hour.

14.4.9.1.2

Testing shall require simulated failure of the normal power source.

14.4.9.2

Unless otherwise permitted by 14.4.9.3, testing facilities shall be installed at the communications center and each subsidiary communications center, if used.

14.4.9.3

Testing facilities for systems leased from a nonmunicipal organization shall be permitted to be installed at locations other than the communications center if approved by the authority having jurisdiction.

14.4.10 In-Building Emergency Radio Communication Systems. (SIG-ECS)

In-building emergency radio communication systems shall be inspected and operationally tested in accordance with the requirements of NFPA 1225.

Ancillary functions of emergency communications systems (ECSs) shall be inspected and tested

14.4.11 Emergency Communications Systems (ECSs) Ancillary Functions. (SIG-ECS)
 In-building emergency radio communication systems shall be inspected and operationally tested in accordance with the requirements of NFPA 1225.

Ancillary functions of emergency communications systems (ECSs) shall be inspected and tested annually to verify they will not impair operation of the fire alarm system or the mass notification system.

14.4.12* Voice Intelligibility.

14.4.12.1

Voice communication using prerecorded messages and manual voice announcements shall be verified as being intelligible in accordance with the requirements of 18.4.11.

14.4.12.2

Intelligibility shall not be required to be determined through quantitative measurements.

14.4.12.3

Quantitative measurements as described in Annex D shall be permitted.

14.5 Maintenance.

14.5.1

System equipment shall be maintained in accordance with the manufacturer's published instructions.

14.5.2

The frequency of maintenance of system equipment shall depend on the type of equipment and the local ambient conditions.

14.5.3

The frequency of cleaning of system equipment shall depend on the type of equipment and the local ambient conditions.

14.5.4

All apparatus requiring rewinding or resetting to maintain normal operation shall be rewound or reset as promptly as possible after each test and alarm.

14.6 Records.

14.6.1* Permanent Records.

After successful completion of acceptance tests approved by the authority having jurisdiction, the requirements in 14.6.1.1 through 14.6.1.3 shall apply.

14.6.1.1*

A set of reproducible as-built installation drawings, operation and maintenance manuals, and a written sequence of operation shall be provided to the building owner or the owner's designated representative.

14.6.1.2*

The requirements of 7.5.7 shall apply to site-specific software.

14.6.1.3

The system owner shall be responsible for maintaining these records for the life of the system for examination by any authority having jurisdiction.

14.6.1.4

Paper or electronic media shall be permitted.

14.6.2 Maintenance, Inspection, and Testing Records.

14.6.2.1

The system owner shall be responsible for retaining maintenance, inspection, and testing records until the next test and for 1 year thereafter.

14.6.2.2

For systems with restorable fixed-temperature, spot-type heat detectors tested over multiple years, records shall be retained for the 5 years of testing and for 1 year thereafter.

14.6.2.3
 The records shall be on a medium that will survive the retention period.

For systems with recoverable fixed temperature, spot type heat detectors tested over multiple years, records shall be retained for the 5 years of testing and for 1 year thereafter.

The records shall be on a medium that will survive the retention period.

14.6.2.4

Paper or electronic media shall be permitted.

14.6.2.5

A record of all inspections, testing, and maintenance shall be provided in accordance with 7.6.6.

14.6.3 Supervising Station Records.

For supervising station alarm systems, records pertaining to signals received at the supervising station that result from maintenance, inspection, and testing shall be maintained for not less than 12 months.

14.6.3.1

Records shall be permitted to be maintained on either paper or electronic media.

14.6.3.2

Upon request, a hard copy record shall be provided to the authority having jurisdiction.

14.6.4 Simulated Operation Note.

If the operation of a device, circuit, fire alarm control unit function, or special hazard system interface is simulated, it shall be noted on the inspection/test form that the operation was simulated.

Statement of Problem and Substantiation for Public Comment

This would reduce the cost of operating and still maintain safe facilities.

Related Item

- NFPA 72

Submitter Information Verification

Submitter Full Name: Paul Hayes

Organization: Mount Saint Francis

Affiliation: Mount Saint Francis

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 25 11:56:58 EDT 2023

Committee: SIG-TMS

Committee Statement

Committee Action: Rejected

Resolution: The visual inspection and testing requirements of Chapter 14 apply to all fire alarm systems. There is no data to support not requiring certain fire alarm systems from these requirements. The supervision of the equipment does not supersede the periodic inspection of the equipment.



Public Comment No. 200-NFPA 72-2023 [New Section after 14.1.5]

TITLE OF NEW CONTENT

New Section

14.1.6 This chapter does not require inspection, test, or maintenance personnel to verify the adequacy of the design of existing, previously approved systems.

Statement of Problem and Substantiation for Public Comment

The term "Observation" was added in the 2022 edition of NFPA 72. The Automatic Fire Alarm Association is in favor of ITM technicians being able to point out possible improvements to the fire alarm or signaling system, even if these items are not impairments or deficiencies. However, we feel additional clarifications are needed in order to reduce the liability of ITM companies who have ITM technicians servicing systems and making good faith observations that the owner may want to consider. It needs to be clear that an observation made about one part of a system, or the protected premise, does not mean that the ITM technician has done a complete review of the entire system and the building and that the observation, or observations cover all possible hazards. ITM technicians are not design professionals or trained fire protection engineers and their opinions on possible improvements to the fire life safety of a premise should not be considered to be a complete or thorough review of all of the hazards or code requirements that may come into play. In my previous public inputs, We refer to this type of system and premise review as a "Design Review" which was proposed to be defined as "A review of an installed system by a qualified design professional for compliance to the original or current installation codes and standards." (Public Input 342)

As the code now is written, ITM companies will discourage ITM technicians from making any observations, as these may be considered to be part of a "Design Review", which could open the ITM company up to litigation. For example, if an ITM technician noticed that a building owner was storing flammable chemicals in a closet that did not have a smoke detector, in good faith, the technician could make the observation to the building owner that they might want to consider adding a smoke detector to that closet. So the owner adds a smoke detector to that closet. But, sometime down the road, there is a fire in a different closet that does not have a smoke detector in it, in a completely different area of the building that also had some chemicals in it, that the ITM technician never entered. It is not hard to imagine a building owner initiating litigation against the ITM company because the technician did not tell them about the other closet and it not having a smoke detector, even though the ITM technician was never in that room. ITM companies will simply tell their ITM technicians to not make any observations.

Mr. Jason Dupuis submitted public inputs 340, 341, and 342 which were intended to help address this concern. PI 340 was identical to this public comment, looking to amend the definition of "Observation". PI 341 looked to add a definition for "Design Review" as mentioned above. PI 342 looked to add section 14.1.6 which would state that "This chapter does not require inspection, test, or maintenance personnel to verify the adequacy of the design of existing previously approved systems." This language was borrowed from NFPA 25 - section 1.1.3.1. We are resubmitting these three Public Inputs as Public Comments and hope that the technical committee will reconsider them.

Mr. Walter Orsini, Mr. Dennis P. and I submitted this public comment as we believe we are the submitting. We

technical
 Committee. We would also like to see the Public Input 201 and 202 by this public comment address this issue. We urge the committee to reconsider their initial position and add some language that will allow ITM technicians to make good faith life safety observations to building owners that will not at the same time open up the ITM companies to litigation.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 201-NFPA 72-2023 [New Section after 3.3.75]	Group with Public Input 200, 202
Public Comment No. 202-NFPA 72-2023 [Section No. 3.3.196]	Group with Public Input 200, 201
Public Comment No. 201-NFPA 72-2023 [New Section after 3.3.75]	
Public Comment No. 202-NFPA 72-2023 [Section No. 3.3.196]	

Related Item

- PI 340, 341, 342

Submitter Information Verification

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Affiliation: Automatic Fire Alarm Association
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State:
Zip:
Submittal Date: Tue May 30 23:31:54 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5044-NFPA 72-2023](#)
Statement: This revision clarifies that it is not the responsibility of the inspection, testing, and maintenance personnel to verify the design of existing approved systems during periodic inspection, testing, and maintenance.



Public Comment No. 40-NFPA 72-2023 [New Section after 14.1.5]

New Section

14.1.6 This chapter does not require inspection, test, or maintenance personnel to verify the adequacy of the design of existing previously approved systems.

Statement of Problem and Substantiation for Public Comment

The term "Observation" was added in the 2022 edition of NFPA 72. I am in favor of ITM technicians being able to point out possible improvements to the fire alarm or signaling system, even if these items are not impairments or deficiencies. However, I feel additional clarifications are needed in order to reduce the liability of ITM companies who have ITM technicians servicing systems and making good faith observations that the owner may want to consider. It needs to be clear that an observation made about one part of a system, or the protected premise, does not mean that the ITM technician has done a complete review of the entire system and the building and that the observation, or observations cover all possible hazards. ITM technicians are not design professionals or trained fire protection engineers and their opinions on possible improvements to the fire life safety of a premise should not be considered to be a complete or thorough review of all of the hazards or code requirements that may come into play. In my previous public inputs, I refer to this type of system and premise review as a "Design Review" which I proposed be defined as "A review of an installed system by a qualified design professional for compliance to the original or current installation codes and standards." (Public Input 342).

As the code now is written, ITM companies will discourage ITM technicians from making any observations, as these may be considered to be part of a "Design Review", which could open the ITM company up to litigation. For example, if an ITM technician noticed that a building owner was storing flammable chemicals in a closet that did not have a smoke detector, in good faith, the technician could make the observation to the building owner that they might want to consider adding a smoke detector to that closet. So the owner adds a smoke detector to that closet. But, sometime down the road, there is a fire in a different closet that does not have a smoke detector in it, in a completely different area of the building that also had some chemicals in it, that the ITM technician never entered. It is not hard to imagine a building owner initiating litigation against the ITM company because the technician did not tell them about the other closet and it not having a smoke detector, even though the ITM technician was never in that room. ITM companies will simply tell their ITM technicians to not make any observations.

I submitted public inputs 340, 341, and 342 which were intended to help address this concern. PI 340 was identical to this public comment, looking to amend the definition of "Observation". PI 341 looked to add a definition for "Design Review" as mentioned above. PI 342 looked to add section 14.1.6 which would state that "This chapter does not require inspection, test, or maintenance personnel to verify the adequacy of the design of existing previously approved systems." This language was borrowed from NFPA 25 - section 1.1.3.1. I am resubmitting these three Public Inputs as Public Comments and hope that the technical committee will reconsider them.

Warren Olsen also submitted Public Input 204 which also looked to address this issue. I urge the technical committee to review Warren's PI, and presumably his public comments which I believe he is submitting. I urge the committee to reconsider their initial position and add some language that will allow ITM technicians to make good faith life safety observations to building owners that will not at the same time open up the ITM companies to litigation.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 38-NFPA 72-2023 [Section No. 3.3.196]</u>	Group with public comments 38, 39, and 40
<u>Public Comment No. 39-NFPA 72-2023 [New Section after 3.3.75]</u>	Group with public comments 38, 39, and 40
<u>Public Comment No. 38-NFPA 72-2023 [Section No. 3.3.196]</u> <u>Public Comment No. 39-NFPA 72-2023 [New Section after 3.3.75]</u>	

Related Item

~~Public Comment No. 38-NFPA 72-2023 [Section No. 3.3.196]~~
~~Public Comment No. 39-NFPA 72-2023 [New Section after 3.3.75]~~

Related Item

- Public Inputs 340, 341, and 342 • Public Comments 38 and 39

Submitter Information Verification

Submitter Full Name: Jason Dupuis
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Submittal Date: Wed Apr 26 17:07:19 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5044-NFPA 72-2023](#)
Statement: This revision clarifies that it is not the responsibility of the inspection, testing, and maintenance personnel to verify the design of existing approved systems during periodic inspection, testing, and maintenance.



Public Comment No. 124-NFPA 72-2023 [New Section after 14.2.10.1]

14.2.10.2*

Where a risk assessment demonstrates that a temporary condition will result in personnel safety being compromised, inspection and testing activities shall be delayed when approved by the authority having jurisdiction.

A.14.2.10.2

Although some specific tasks might be delayed, it is not the intent that all activities under the scope of the standard be deferred. A reasonable attempt should be made to verify that the system is operational. Inspection and testing of equipment and components in other areas where personnel safety is not compromised should still be performed.

Statement of Problem and Substantiation for Public Comment

The proposed language is the result of situations that arose during the COVID-19 public health emergency. Health care facilities, with staff that were not able to keep up with tasks directly related to patient care and with portions of the facility treating very contagious patients, were being told that they had to continue to meet ITM requirements. While one could argue that some other provisions could apply, those paragraphs are more related to industrial operations that include a planned shutdown. Post COVID-19, most health care facilities were not going to shutdown. The provision includes two restrictions: a risk assessment and approval from the AHJ. The Annex not is intended to guide facilities to a point in which only those tasks that directly impact personnel safety should be deferred. Note that this will not address the burden on staff what may already be over-committed but it does address the personnel safety issue to patients, staff, visitors, and contractors. In some instances, some of which were directed by regulators, contractors were not permitted into the health care facility due to the risk they might pose (if COVID-19 positive) to the patients and staff in the facility.

The Committee resolved the Public Input saying that Paragraphs 14.3.2 and 14.3.4.1 already address the issue. Unfortunately, that is not accurate. Paragraph 14.3.2 allows for a similar modification but it is really more directed towards industrial facilities. The paragraph refers to scheduled shutdowns. Facilities, such as health care facilities, that were impacted by COVID 19 will not have a scheduled shutdown period. The reference to Paragraph 14.3.4.1 most likely was intended to refer to 14.4.4.1, which again refers to shutdown periods. The proposed language is more restrictive than the two paragraphs referenced in that it limits the revised frequencies to those determined appropriate by a risk analysis. Admittedly, the proposed language is broader than the paragraphs referenced in that it is not limited to industrial type facilities that have a planned shutdown.

Similar language has been included in the 2023 Edition of NFPA 25 (4.9.7.3 and A.4.9.7.3). The Committee is encouraged to reconsider their previous position to address this situation and to provide consistency between NFPA 25 and NFPA 72.

Related Item

- Public Input 569

Submitter Information Verification

Submitter Full Name: William Koffel

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City:

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Submitted Date: Thu May 18 21:34:10 EDT 2023

Committee: SIG-TMS

Committee: Deleted

Committee Statement

Thu May 18 21:34:10 EDT 2023

Committee: SIG-TMS

Committee Action: Rejected

Resolution: Delaying testing due to emergencies can be coordinated between the building owner and the AHJ on a case-by-case basis, the proposed language is not necessary.



Public Comment No. 205-NFPA 72-2023 [Section No. 14.4.3.2]

14.4.3.2*

14.4.3.2*

Systems and associated equipment shall be tested according to Table 14.4.3.2.

Table 14.4.3.2 Testing

Systems and associated equipment shall be tested according to Table 14.4.3.2.

Table 14.4.3.2 Testing

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
1. All equipment	X	-	-	See Table 14.3.1.
2. Control unit	-	-	-	Verify correct receipt of alarm, supervisory, and trouble signals (inputs); operation of evacuation signals and auxiliary functions (outputs); circuit supervision, including detection of open circuits and ground faults; and power supply supervision for detection of loss of ac power and disconnection of secondary batteries.
-	(1) Functions	X	Annually	Verify rating and supervision.
-	(2) Fuses	X	Annually	Verify integrity of single or multiple circuits providing interface between two or more control units. Test interfaced equipment connections by operating or simulating operation of the equipment being supervised. Verify signals required to be transmitted at the control unit.
-	(3) Interfaced equipment	X	Annually	Illuminate lamps and LEDs.
-	(4) Lamps and LEDs	X	Annually	Disconnect all secondary (standby) power and test under maximum load, including all alarm appliances requiring simultaneous operation. Reconnect all secondary
-	(5) Primary (main) power supply	X	Annually	secondary (standby) power at end of test. Test
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	secondary (standby) power at end of test. Test Method redundant power supplies separately.
3.	Alarm control unit trouble signals	-	-	<p>Verify operation of control unit trouble signals. Verify ring-back feature for systems using a trouble-silencing switch that requires resetting.</p> <p>If control unit has disconnect or isolating switches, verify performance of intended function of each switch. Verify receipt of trouble signal when a supervised function is disconnected.</p> <p>If the system has a ground detection feature, verify the occurrence of ground-fault indication whenever any installation conductor is grounded.</p> <p>Actuate an initiating device and verify receipt of alarm signal at the off-premises location.</p>
-	(1) Audible and visual	X	Annually	
-	(2) Disconnect switches	X	Annually	
-	(3) Ground-fault monitoring circuit	X	Annually	
-	(4) Transmission of signals to off-premises location	X	Annually	
		-		-
		-		-
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
4. Supervising station alarm systems — transmission equipment	-	-	-	
-	(1) All equipment	X	Annually	Test all system functions and features in accordance with the equipment manufacturer's published instructions for correct operation in conformance with the applicable sections of Chapter 26. ^a
			-	-
			-	-
-	(2) Digital alarm communicator	X	Annually	Except for DACTs installed prior to

-	=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		(2) Digital alarm communicator transmitter (DACT)			Except for DACTs installed prior to adoption of the 2013 edition of <i>NFPA 72</i> that are connected to a telephone line (number) that is also supervised for adverse conditions by a derived local channel, ensure connection of the DACT to two separate means of transmission.
	=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-
-	(3) Digital alarm radio transmitter (DART)	X	Annually	Disconnect the primary telephone line. Verify transmission of a trouble signal to the supervising station by the DART occurs within 4 minutes.	-
-	(4) McCulloh transmitter	X	Annually	Actuate initiating device. Verify production of not less than three complete rounds of not less than three signal impulses each by the McCulloh transmitter.	-
-	(2) Ground	-	-	-	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-		-	-	-
-		-	-	-
-		-	(2) Ground	-
-	(5) Radio alarm transmitter (RAT)	X	Annually	Cause a fault between elements of the transmitting equipment. Verify indication of the fault at the protected premises, or transmission of trouble signal to the supervising station.
-	(6) Performance-based technologies	X	Annually	Perform tests to ensure the monitoring of integrity of the transmission technology and technology path. Where shared communications equipment is used as permitted by 26.6.3.12, test secondary (standby) power sources in accordance with item 7, 8, or 9, as applicable.
-		-	-	-

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-		-	-	
5.	Emergency communications equipment	-	-	-
-	(1) Amplifier/tone generators	X	Annually	Verify correct switching and operation of backup equipment.
-	(2) Call-in signal silence	X	Annually	Operate/function and verify receipt of correct visual and audible signals at control unit.
-	(3) Off-hook indicator (ring down)	X	Annually	Install phone set or remove phone from hook and verify receipt of
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	from hook and verify receipt of <u>Method</u>
-	(4) Phone jacks	X	Annually	signal at control unit. Visually inspect phone jack and initiate communications path through jack.
-	(5) Phone set	X	Annually	Actuate each phone set and verify correct operation.
-	(6) System performance	X	Annually	Operate the system with a minimum of any five handsets simultaneously. Verify voice quality and clarity.
6.	Engine-driven generator	X	Monthly	If an engine-driven generator dedicated to the system is used as a required power source, verify operation of the generator and transfer switch in accordance with NFPA 110 by the building owner.
7.	Emergency power supply system/stored-emergency power supply system (EPSS/SEPSS)	X	Annually	If an EPSS/SEPSS dedicated to the system is used as a required power source, verify by the building owner operation of the EPSS/SEPSS in accordance with NFPA 111.
8.	Secondary (standby) power supply ^C	X	Annually	Disconnect all primary (main) power supplies and verify the occurrence of required trouble indication for loss of primary power. Measure or verify the system's standby and alarm current demand using the equipment manufacturer's
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
			demand using the equipment manufacturer's data and verify the battery's rated capacity exceeds the system's power demand, including the safety margin. Operate general alarm systems for a minimum of 5 minutes and emergency voice communications systems for a minimum of 15 minutes. Reconnect primary (main) power supply at end of test.	
9.	VRLA battery and charger ^d	-	-	<p>Prior to conducting any battery testing, verify by the person conducting test that all system software stored in volatile memory is protected from loss.</p> <p>Upon initially opening the cabinet door, measure the internal ambient temperature of the enclosure. Measure the temperature of each battery cell/unit at the negative terminal with an infrared thermometer. Replace any battery cell/unit if its temperature is greater than 18°F (10°C) above the measured internal ambient temperature of the enclosure.</p>
-	(1) Temperature test	X	Semiannually	With the battery fully charged and
-	(2) Charger test	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

		<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	=	(2) Charger test		Semiannually	With the battery fully charged and connected to the charger, measure the voltage across the battery with a voltmeter. Verify the voltage is within the battery/alarm equipment manufacturer's recommendations. If the voltage is outside of the specified limits, either adjust the charger to within limits or replace the charger. If the charger is adjustable, adjust the output voltage to 2.265 volts, ±0.015 volts, per cell at 77°F (25°C) or as specified by the alarm equipment manufacturer.
-		(3) Cell/Unit voltage test	X	Semiannually	With the battery fully charged and connected to the charger, measure the voltage of each cell/unit with a voltmeter. Replace the battery when any cell/unit measures a voltage less than 13.26 volts. When the battery is installed, establish a baseline ohmic value for each battery cell/unit or, where available, use baseline ohmic values provided by the battery or test equipment manufacturer. In either case, record the baseline ohmic value on each battery cell/unit.
-		(4) Ohmic test ^e	X	N/A	-
					Semiannually

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(5) Replacement/Load test ^f	-	Every 3 years	Replace the battery or conduct a load test of the battery capacity. Load test the battery, based on the manufacturer's specification for a discharge rate of 3 hours or more, by applying the current
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

indicated for the selected hourly

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	indicated for the selected hourly discharge rate continuously until the terminal voltage decreases to the end voltage specified by the manufacturer. Record the test duration and calculate the battery capacity including adjustment for ambient temperature. Replace the battery if capacity is less than or equal to 80 percent or at the next scheduled test interval if battery capacity is less than 85 percent.
Public emergency 10. alarm reporting system — wired system	X	Daily	Manually test the power supply for public reporting circuits and document the tests at least once during each 24-hour period. Test the following:	-	-
				-	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		-	-	-
		-	-	-

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
			-	-
			-	-
			-	-
11.	Remote annunciators	X	Annually	Verify the correct operation and identification of annunciators. If provided, verify the correct operation of annunciators under a fault condition.
12.	Reserved	-	-	-
13.	Reserved	-	-	-
14.	Wireless communications	X	Annually	Test in accordance with the manufacturer's published instructions.
15.	Conductors — metallic	-	-	-
	(1) Stray voltage	X	N/A	Test all installation conductors with a volt/ohmmeter to verify
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	volt/ohmmeter to verify <u>Method</u>
-	(2) Ground faults	X	N/A	<p>are no stray (unwanted) voltages between installation conductors or between installation conductors and ground. Verify the maximum allowable stray voltage does not exceed 1 volt ac/dc, unless a different threshold is specified in the manufacturer's published instructions for the installed equipment.</p> <p>Test all installation conductors, other than those intentionally and permanently grounded, for isolation from ground in accordance with the installed equipment manufacturer's published instructions.</p>
-	(3) Short-circuit faults	X	N/A	<p>Test all installation conductors, other than those intentionally connected together, for conductor-to-conductor isolation in accordance with the manufacturer's published instructions for the installed equipment. Also test these same circuits conductor-to-ground.</p>
-	(4) Loop resistance	X	N/A	<p>With each initiating and indicating circuit installation conductor pair short-circuited at</p>
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	the far end <u>Method</u> measure and

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(5) Circuit integrity	X	N/A	<p>Short-circuited at the far end measure and record the resistance of each circuit. Verify that the loop resistance does not exceed the limits specified in the manufacturer's published instructions for the installed equipment.</p> <p>For initial and reacceptance testing, confirm the introduction of a fault in any circuit monitored for integrity results in a trouble indication at the FACU. Open one connection at not less than 10 percent of the initiating devices, notification appliances, and controlled devices on every initiating device circuit, notification appliance circuit, and signaling line circuit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.</p>
-	-	N/A	Annually	<p>For periodic testing, test each initiating device circuit, notification appliance circuit, and signaling line circuit for correct indication at the control unit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.</p>
16.	Nonmetallic pathway	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

16.	Nonmetallic pathways	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		(1) Optical fiber cables	X	N/A	<p>Test the transmission characteristics of optical fibers with an optical power meter or with an optical time domain reflectometer used to measure the relative power loss of the line. Test result data must meet or exceed ANSI/TIA 568.3, <i>Optical Fiber Cabling and Components Standard</i>, related to fiber-optic lines and connection/splice losses and the control unit manufacturer's published specifications.</p>
		(2) Circuit integrity	X	N/A	<p>For initial and reacceptance testing, confirm the introduction of a fault in any circuit monitored for integrity results in a trouble indication at the FACU. Open one connection at not less than 10 percent of the initiating devices, notification appliances, and controlled devices on every initiating device circuit, notification appliance circuit, and signaling line circuit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.</p>
				N/A	<p>Annually</p>
		<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

For periodic testing, test each initiating device circuit, notification appliance circuit, and signaling line

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	circuit, and signaling line circuit for correct indication at the control unit. Confirm all circuits perform as indicated in Sections 23.6, and 23.7.
17.	Initiating devices ^h	-	-	-	
-	(1) Electromechanical releasing device	-	-	-	
-	(a) Nonrestorable-type link	X	Annually	Verify correct operation by removal of the fusible link and operation of the associated device.	
-	(b) Restorable-type link ⁱ	X	Annually	Verify correct operation by removal of the fusible link and operation of the associated device.	
-	(2) Fire extinguishing system(s) or suppression system(s) alarm switch	X	Annually	Operate the switch mechanically or electrically and verify receipt of signal by the FACU.	
-	(3) Fire-gas and other detectors	X	Annually	Test fire-gas detectors and other fire detectors as prescribed by the manufacturer and as necessary for the application.	
-	(4) Heat detectors	-	-	-	
-	(a) Fixed-temperature, rate-of-rise, rate of compensation, restorable line, spot type (excluding pneumatic tube type)	X	Annually (see 14.4.4.5)	Perform heat test with a listed and labeled heat source or in accordance with the manufacturer's published instructions. Assure that the test method for the installed	
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	equipment does not damage the nonrestorable

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(b) Fixed-temperature, nonrestorable line type	X	Annually	<p>equipment does not damage the nonrestorable fixed-temperature element of a combination rate-of-rise/fixed-temperature element detector.</p> <p>Do not perform heat test. Test functionality mechanically and electrically. Measure and record loop resistance. Investigate changes from acceptance test.</p> <p>After 15 years from initial installation, replace all devices or have 2 per every 100 detectors laboratory tested. Replace the 2 detectors with new devices. If a failure occurs on any of the detectors removed, remove and test additional detectors to determine either a general problem involving faulty detectors or a localized problem involving 1 or 2 defective detectors.</p>
-	(c) Fixed-temperature, nonrestorable spot type	X	See Method column	
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-
		-	-		-
		-	-		-
		-	-		-
		-	-		-
-	(7) Smoke detectors — functional test	-	-	-	
-	(a) In other than one- and two-family dwellings, system detectors	X	Annually	Test smoke detectors in place to ensure smoke entry into the sensing chamber and an alarm response. Use smoke or a listed and labeled product.	
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	and labeled product <u>Method</u>
-	(b) Single- and multiple-station smoke alarms connected to protected premises systems	X	Annually	acceptable to the manufacturer or in accordance with their published instructions. Other methods listed in the manufacturer's published instructions that ensure smoke entry from the protected area, through the vents, or into the sensing chamber can be used. Magnets are not acceptable for smoke entry tests. Perform a functional test on all single- and multiple-station smoke alarms connected to a protected premises fire alarm system by putting the smoke alarm into an alarm condition.
-	(c) System smoke detectors used in one- and two-family dwellings	X	Annually	Conduct functional tests according to the manufacturer's published instructions.
-	(d) Air sampling	X	Annually	Test with smoke or a listed and labeled product acceptable to the manufacturer or in accordance with their published instructions. In the absence of an automatic, listed airflow supervision feature, test from the end sampling port or point on each pipe run and verify airflow through all other ports or points.
-	(e) Duct type	X	Annually	In addition to the testing required in item (17)(7)(a)
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	and item (17)(8), test d <u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	and item (17)(8), test d <u>Method</u>
-	(f) Projected beam type	X	Annually	detectors that use sampling tubes to ensure that they will properly sample the airstream in the duct using a method acceptable to the manufacturer or in accordance with their published instructions. Test the detector by introducing smoke, other aerosol, or an optical filter into the beam path.
-	(g) Smoke detector with built- in thermal element	X	Annually	Operate both portions of the detector independently as described for the respective devices.
-	(h) Smoke detectors with control output functions	X	Annually	Verify that the control capability remains operable even if all of the initiating devices connected to the same initiating device circuit or signaling line circuit are in an alarm state.
-	(8) Smoke detectors in other than one- and two- family dwellings, system detectors — sensitivity testing	N/A	See 14.4.4.3	Perform any of the following tests to ensure that each smoke detector is within its listed and marked sensitivity range: ^k
-		-	-	-
-		-	-	-
-		-	-	-
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-
-	(9) Carbon monoxide (CO) detectors/CO alarms connected to protected premises systems	-	-	Test the devices in place to ensure CO entry to the sensing chamber by introduction through the vents, to the sensing chamber of listed and labeled product acceptable to the manufacturer or in accordance with manufacturer's published instructions.	-
-	(a) CO entry test	X	Annually	In accordance with test methods documented in the manufacturer's published instructions, verify detector alarm response through the end sampling port on each pipe run; verify airflow through all other ports as well.	-
-	(b) Air sampling	X	Annually	Test or inspect air duct detectors to ensure that the device will sample the airstream in accordance with	-
-	(c) Duct type	X	Annually	the manufacturer's	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(d) CO detector with control output functions	X	Annually	the manufacturer's published instructions. Within each protected space, verify that the control capability remains operable even if all of the initiating devices connected to the same initiating device circuit or signaling line circuit are in an alarm state.
-	(10) Initiating devices, supervisory	-	-	-
-	(a) Control valve switch	X	Semiannually	Operate valve and verify signal receipt to be within the first two revolutions of the handwheel or within one-fifth of the travel distance, or in accordance with the manufacturer's published instructions. Continue to cycle outside stem and yoke valves and verify switch does not reset during full travel of the valve stem.
-	(b) High- or low-air pressure switch	X	Annually	Operate switch and verify receipt of signal is obtained where the required pressure is increased or decreased a maximum 10 psi (70 kPa) from the required pressure level or in accordance with the <u>dry pipe or preaction</u> manufacturer's published instructions.
-	(c) Steam pressure	X	Annually	Operate switch and verify receipt of signal is obtained before
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	of signal is obtained before <u>Method</u>
-	(d) Pressure supervisory devices for other sources	X	Annually	pressure decreases to 110 percent of the minimum operating pressure of the steam-operated equipment. Operate switch and verify receipt of signal is obtained where the required pressure is increased or decreased from the normal operating pressure by an amount specified in approved design documents.
-	(e) Room temperature switch	X	Annually	Operate switch and verify receipt of signal to indicate the decrease in room temperature to 40°F (4.4°C) and its restoration to above 40°F (4.4°C).
-	(f) Water level switch	X	Annually	Operate switch and verify receipt of signal indicating the water level raised or lowered a maximum 3 in. (70 mm) from the required level within a pressure tank, or a maximum 12 in. (300 mm) from the required level of a nonpressure tank. Also verify its restoration to required level.
-	(g) Water temperature switch	X	Annually	Operate switch and verify receipt of signal to indicate the decrease in water temperature to 40°F (4.4°C) and its restoration to above 40°F (4.4°C)
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	above 40°F (4.4°C) <u>Method</u>
-	(11) Mechanical, electrosonic, or pressure-type waterflow device	X	Semiannually	Flow water through an inspector's test connection indicating the flow of water equal to that from a single sprinkler of the smallest orifice size installed in the system or other listed and approved waterflow switch test methods for wet-pipe systems, or an alarm test bypass connection for dry-pipe, pre-action, or deluge systems in accordance with NFPA 25.
-	(12) Multi-sensor fire detector or multi-criteria fire detector or combination fire detector	X	Annually	(1) Test each detector in accordance with the manufacturer's published instructions. Test each of the sensors present within the detector (e.g., smoke, heat, CO) independently for the specific detection principle, regardless of the configuration status at the time of testing, or test individual sensors together if the technology allows individual sensor responses to be verified. Where sensors cannot be tested individually, test the primary sensor. ¹
-		-	-	-
-		-	-	

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-		-	-	
-		-	-	
-		-	-	
18.	Special hazard equipment	-	-	
-	(1) Abort switch (dead-man type)	X	Annually	Activate suppression system initiating device. Operate and hold the abort switch. Verify that suppression system actuators remain de-energized after completion of discharge countdown. Release abort switch and verify that actuators energize.
-	(2) Abort switch (red button type)	X	Annually	Activate suppression
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(2) Abort switch (recycling type)	X	Annually	Activate suppression system initiating device. Operate abort switch and verify countdown cycle restarts and suppression system actuators remain de-energized. Allow countdown to complete and verify that actuators energize.
-	(3) Abort switch (special type)	X	Annually	Activate suppression system initiating device. Operate abort switch and verify operation in accordance with the sequence of operation as specified on as-built drawings.
-	(4) Cross-zone detection circuit	X	Annually	Activate one detector in each zone. Verify occurrence of correct sequence of operation for the first zone and then the second zone.
-	(5) Matrix-type circuit	X	Annually	Operate all sensors in system. Verify development of correct matrix with each sensor operated.
-	(6) Release solenoid circuit ^m	X	Annually	Verify operation of solenoid.
-	(7) Squibb release circuit	X	Annually	Use AGI flashbulb or other test light approved by the manufacturer. Verify operation of flashbulb or light.
-	(8) Verified, sequential, or counting zone circuit	X	Annually	Operate required sensors at a minimum of four locations in circuit. Verify correct sequence of operation with both the first and second detector in alarm.
	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	alarm. <u>Method</u>
-	(9) All above devices or circuits or combinations thereof	X	Annually	Verify supervision of circuits by creating an open circuit.
19.	Combination systems	-	-	<p>Test communication between the device connecting the fire extinguisher electronic monitoring device/system and the FACU to ensure proper signals are received at the FACU and remote annunciator(s), if applicable.</p> <p>Test communication between the device connecting the CO device/system and the FACU to ensure proper signals are received at the FACU and remote annunciator(s), if applicable.</p>
-	(1) Fire extinguisher electronic monitoring device/system	X	Annually	
-	(2) CO device/system	X	Annually	
20.	Interface equipment ⁿ	X	See 14.4.4.4	<p>Test interface equipment connections by operating or simulating the equipment being supervised. Verify signals required to be transmitted are received at the control unit. Test frequency for interface equipment is the same as the frequency required by the applicable NFPA standard(s) for the equipment being supervised.</p>
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
21. Guard's tour equipment	X	Annually	Test the device in accordance with the manufacturer's published instructions.	
22. Alarm notification appliances	-	-	-	
-	(1) Audible ^o	X	N/A	For initial and reacceptance testing, measure sound pressure levels for alert tone signals and evacuation signal tones with a sound level meter meeting ANSI/ASA S1.4/Part 1, <i>Electroacoustics — Sound Level Meters — Part 1: Specifications, Type 2</i> requirements. Measure sound pressure levels to determine if they comply with Chapter 18 and the required performance, as documented in accordance with 7.3.4. Set the sound level meter in accordance with ANSI/ASA S3.41, <i>Audible Emergency Evacuation (E2) and Evacuation Signals with Relocation Instructions (ESRI)</i> , using the time-weighted characteristic F (FAST).
-	-	-	N/A	Annually For periodic testing, verify the operation of the notification appliances.
-	(2) Audible textual notification appliances (loudspeakers and	X	N/A	For initial and reacceptance testing, measure sound pressure

-	textual notification appliances (loudspeakers and other appliances to convey voice messages)	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	reacceptance testing, measure sound pressure levels for signals with a sound level meter meeting ANSI/ASA S1.4/Part 1, <i>Electroacoustics — Sound Level Meters — Part 1: Specifications, Type 2</i> requirements. Measure sound pressure levels throughout the protected area to determine if they comply with Chapter 18 and the required performance, as documented in accordance with 7.3.4. Set the sound level meter in accordance with ANSI/ASA S3.41, <i>Audible Emergency Evacuation (E2) and Evacuation Signals with Relocation Instructions (ESRI)</i> , using the time-weighted characteristic F (FAST).	<u>Method</u>
-		-	N/A		Annually
-	(3) Visual	X	N/A	Perform initial and reacceptance testing in accordance with the manufacturer's published instructions. Verify appliance locations to be in accordance with the applicable	
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>		<u>Method</u>

For periodic testing, verify the operation of the notification appliances.

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	accordance with the approved <u>Method</u>
		-	N/A	<p>layout and confirm that no floor plan changes affect the approved layout. Verify the candela rating or method of candela control marking on each visual appliance and rating when reported by the FACU agrees with the approved drawings. Confirm that each appliance flashes.</p> <p>For periodic testing, verify that each appliance flashes.</p>
23.	Exit marking audible notification appliance	X	Annually	Perform tests in accordance with the manufacturer's published instructions.
24.	Emergency control functions ⁹	X	Annually	For initial, reacceptance, and periodic testing, verify emergency control function interface device activation. Where an emergency control function interface device is disabled or disconnected during initiating device testing, verify that the disabled or disconnected emergency control function interface device has been properly restored, including electromagnetic devices used for door releasing services as part of a fire alarm system.
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
25.	Two-way emergency communications systems	X	Annually	system. Use the manufacturer's published instructions and the as-built drawings provided by the system supplier to verify correct operation after the initial testing phase has been performed by the supplier or by the supplier's designated representative.
			-	-
			-	-
			-	-
			-	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		-	-	-
		-	-	-
26.	Special procedures	-	-	-
-	(1) Alarm verification	X	Annually	Verify time delay and alarm response for smoke detector circuits identified as having alarm verification.
-	(2) Multiplex systems	X	Annually	Verify communications between sending and receiving units under both primary and secondary power.
		-	-	-
		-	-	-
		-	-	-
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
Supervising station alarm systems — receiving equipment	(1) All equipment	X	Monthly	Perform tests on all system functions and features in accordance with the equipment manufacturer's published instructions for correct operation in conformance with the applicable sections of Chapter 26.
-	(2) Digital alarm communicator receiver (DACR)	X	Monthly	Disconnect each transmission means in turn from the DACR, and verify audible and visual annunciation of a trouble signal in the supervising station.
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	the supervising station <u>Method</u>	-
-	(3) Digital alarm radio receiver (DARR)	X	Monthly	Cause the following conditions of all DARRs on all subsidiary and repeater station receiving equipment. Verify receipt at the supervising station of correct signals for each of the following conditions:	-
					-
					-
					-
					-
					-
-	(4) McCulloh system	X	Monthly	Test and record the current on each circuit at each supervising and subsidiary station under the following conditions:	-
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	-
		-	-		-
		-	-		-
		-	-		-
		-	-		-
		-	-		-
		-	-		-
		-	-		-
-	(5) Radio alarm supervising station receiver (RASSR) and radio alarm repeater station receiver (RARSR)	X	Monthly	Cause each of the following conditions at each of the supervising or subsidiary stations and all repeater station radio transmitting and receiving equipment; verify receipt of correct signals at the	
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>	

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> receipt of correct signals at the supervising station:
-	(6) Private microwave radio systems	X	Monthly	Cause each of the following conditions at each of the supervising or subsidiary stations and all repeater station radio transmitting and receiving equipment; verify receipt of correct signals at the supervising station:
-		-	-	-
-		-	-	-
-		-	-	-
-	(7) Performance- based technologies	X	Monthly	Perform tests to ensure the monitoring of integrity of the transmission technology and technology path. Where a single communications path is used, disconnect the communication path. Verify that failure of the path is annunciated at the supervising station within 60 minutes of the failure (within 5 minutes for communication equipment
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> communication equipment

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	5 minutes for communication equipment <u>Method</u>
				<p>installed prior to adoption of the 2013 edition of <i>NFPA 72</i>. Restore the communication path. Where multiple communication paths are used, disconnect all communication paths and confirm that failure of the paths is annunciated at the supervising station within 6 hours of the failure (within 24 hours for communication equipment installed prior to adoption of the 2013 edition of <i>NFPA 72</i>). Restore all communication paths.</p>
28.	Public emergency alarm reporting system transmission equipment	-	-	-
-	(1) Publicly accessible alarm box	X	Semiannually	<p>Actuate publicly accessible initiating device(s) and verify receipt of not less than three complete rounds of signal impulses. Perform this test under normal circuit conditions. If the device is equipped for open circuit operation (ground return), test it in this condition as one of the semiannual tests.</p>
-	(2) Auxiliary box	X	Annually	<p>Test each initiating circuit of the auxiliary box by actuation of a protected</p>
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> premises initiating device connected

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
		-	-	-
		-	-	-

:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
			-	-
			-	-
	Mass			
	30. notification			
	system (MNS)			
	-			
	(1) Functions	X	Annually	At a minimum, test control unit to verify correct receipt of alarm, supervisory, and trouble signals (inputs); operation of evacuation signals and auxiliary functions (outputs); circuit supervision, including
				detection of open circuit
:	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-	(2) Fuses	X	Annually	detection of open circuit ground faults; and power supply supervision for detection of loss of ac power and disconnection of secondary batteries. Verify the rating and supervision.
-	(3) Interfaced equipment	X	Annually	Verify integrity of single or multiple circuits providing interface between two or more control units. Test interfaced equipment connections by operating or simulating operation of the equipment being supervised. Verify signals required to be transmitted at the control unit.
-	(4) Lamps and LEDs	X	Annually	Illuminate lamps and LEDs. Disconnect all secondary (standby) power and test under maximum load, including all alarm appliances requiring simultaneous operation. Reconnect all secondary (standby) power at end of test. For redundant power supplies, test each separately.
-	(5) Primary (main) power supply	X	Annually	Measure sound pressure level with a sound level meter meeting ANSI/ASA S1.4/Part 1, <i>Electroacoustics — Sound Level Meters — Part 1: Specifications, Type 2</i> requirements. <u>Measure and</u>
-	(6) Audible textual notification appliances (loudspeakers and other appliances to convey voice messages)	X	Annually	record levels throughout

=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
-				record levels throughout protected area. Set the sound level meter in accordance with ANSI/ASA S3.41, <i>Audible Emergency Evacuation (E2) and Evacuation Signals with Relocation Instructions (ESRI)</i> , using the time-weighted characteristic F (FAST). Record the maximum output when the audible emergency evacuation signal is on.
-	(7) Visual	X	Annually	Perform test in accordance with manufacturer's published instructions. Verify appliance locations to be in accordance with the approved layout and confirm that no floor plan changes affect the approved layout. Verify that the candela rating or method of candela control marking on each visual appliance and rating when reported by the FACU agrees with the approved drawings. Confirm that each appliance flashes.
-	(8) Control unit functions and no diagnostic failures are indicated	X	Annually	Review event log file and verify that the correct events were logged. Review system diagnostic log file;
=	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>
				correct deficiencies noted

-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u> diagnostic log file, correct deficiencies noted
-	(9) Control unit reset	X	Annually	in file. Delete unneeded log files. Delete unneeded error files. Verify that sufficient free disk space is available. Verify unobstructed flow of cooling air is available. Change/clean filters, cooling fans, and intake vents.
-	(10) Control unit security	X	Annually	Power down the central control unit computer and restart it. If remote control software is loaded onto the system, verify that it is disabled to prevent unauthorized system access.
-	(11) Audible/visual functional test	X	Annually	Send out an alert to a diverse set of predesignated receiving devices and confirm receipt. Include at least one of each type of receiving device.
-	(12) Software backup	X	Annually	Make full system software backup. Rotate backups based on accepted practice at site.
-	(13) Secondary power test	X	Annually	Disconnect ac power. Verify the ac power failure alarm status on central control unit. With ac power disconnected, verify battery voltage under load.
-	(14) Wireless signals	X	Annually	Check forward/reflected radio power is within specifications.
-	(15) Antenna	X	Annually	Check forward
-	<u>Component</u>	<u>Initial Acceptance</u>	<u>Periodic Frequency</u>	<u>Method</u>

	(15) Antenna Component	X Initial Acceptance	Annually Periodic Frequency	Check forwarded Method
				radio power is within specifications. Verify solid electrical connections with no observable corrosion. Verify proper operation and mounting is not compromised.
	(16) Transceivers	X	Annually	

N/A: Not applicable, no minimum requirement established.

^aSome transmission equipment (e.g., cable modems, fiber-optic interface nodes, VoIP interfaces) are typically powered by the building's electrical system using a secondary (standby) power supply that does not meet the requirements of this Code. This is intended to ensure that the testing authority verifies full secondary (standby) power as required by Chapter 10. Additionally, refer to items 7 through 9 for secondary (standby) power supply testing.

^bThe automatic transmission of the check-in (handshake) signal can take up to 60 minutes to occur.

^cSee item 4(1) for the testing of transmission equipment. A control unit's charger/power supply that is listed for the purpose of verifying secondary power demand is permitted to be approved for equivalency with this section.

^dThe battery tests in item 9 are based on VRLA batteries and it is intended that the tests specified in (1) through (4) be performed in order. FACU automated load testing of VRLA batteries in accordance with item 9(5) with record of ambient temperature is an acceptable alternative to prescriptive manual methods using test equipment. For other secondary battery types, refer to the battery manufacturer's published instructions or IEEE 450, *Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications*, for vented lead-acid batteries, and IEEE 1106, *Recommended Practice for Installation, Maintenance, Testing, and Replacement of Vented Nickel-Cadmium Batteries for Stationary Applications*, for nickel-cadmium batteries.

^eSee item 9(4).

^fSee item 9(5).

^gThe voltmeter sensitivity has been changed from 1000 ohms per volt to 100 ohms per volt so that the false ground readings (caused by induced voltages) are minimized.

^hInitiating devices such as smoke detectors used for elevator recall, closing dampers, or releasing doors held in the open position that are permitted by the Code (see 9.6.6 of NFPA 101) to initiate supervisory signals at the FACU should be tested at the same frequency (annually) as those devices when they are generating an alarm signal. They are not supervisory devices, but they initiate a supervisory signal at the FACU.

ⁱFusible thermal link detectors are commonly used to close fire doors and fire dampers electrically connected to the FACU. They are actuated by the presence of external heat, causing a solder element in the link to fuse, or by an electric thermal device which, when energized, generates heat within the body of the link, causing the link to fuse and separate.

^jIt is customary for the manufacturer of the smoke detector to test a particular product from an aerosol provider to determine acceptability for use in smoke entry testing of their smoke detector/smoke alarm. Magnets are not acceptable for smoke entry tests.

^kThere are some detectors that use magnets as a manufacturer's calibrated sensitivity test instrument. For example, it might not be possible to individually test the heat sensor in a thermally enhanced smoke detector.

Instrument.

For example, it might not be possible to individually test the heat sensor in a thermally enhanced smoke detector.

^mManufacturer's published instructions should be consulted to ensure a proper operational test. No suppression gas or agent is expected to be discharged during the test of the solenoid. See 14.2.10.

ⁿA monitor module installed on an interface device is not considered a supervisory device and therefore not subject to the quarterly testing frequency requirement. Test frequencies for interface devices should be in accordance with the applicable standard. For example, fire pump controller alarms such as phase reversal are required to be tested annually. If a monitor module is installed to identify phase reversal on the FACU, it is not necessary to test for phase reversal four times a year.

^oChapter 18 would require 15 dB over average ambient sound for public mode spaces. Sometimes the ambient sound levels are different from what the design was based upon. Private operating mode would require 10 dB over average ambient at the location of the device.

^pWhere building, system, or occupancy changes have been observed, the owner should be notified of the changes. New devices might need to be installed and tested in accordance with the initial acceptance testing criteria.

^qSee A.14.4.3.2 and item 24.

Statement of Problem and Substantiation for Public Comment

prior to low pressure actuated dry valves 10 psi off normal signal was the norm. Now that low pressure actuated valves are typically installed, 10 psi above or below normal pressure is too large of a range. Some manufacturers suggest a 2-4 psi range and others are 3-5 psi. The air normal pressure is based on the valve manufacturer and the incoming water supply, there is no "normal" air pressure for dry pipe valves and the hi/low air pressure signals must be set according to manufacturer and water pressure. Also adding this language will clarify that the valve manufacture's requirements should be followed and is not dictated by the pressure switch manufacturer.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 204-NFPA 72-2023 [Section No. 17.19.2.2.2(B)]	low air switch testing requirements
Public Comment No. 207-NFPA 72-2023 [New Section after A.14.3.2]	
<u>Related Item</u>	
• PI 179	

Submitter Information Verification

Submitter Full Name: Vincent Powers
Organization: National Fire Sprinkler Associ
Affiliation: National Fire Sprinkler Association Engineering and Standards Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 10:35:36 EDT 2023
Committee: SIG-TMS

Committee Statement Rejected but see related SR
Action:

Committee Statement

Rejected but see related SR
Action:

Resolution: [SR-5051-NFPA 72-2023](#)

Statement: This revision adds clarification for the operation of new technology for low pressure dry pipe and preaction valves regarding the supervisory pressure setting.



Public Comment No. 246-NFPA 72-2023 [New Section after 14.4.10]

14.4.10.2

Emergency responder communication enhancement systems' supervisory signals monitored by a fire alarm system per 24.9.1 shall be tested in accordance with Table 14.4.3.2 Item 20.

Statement of Problem and Substantiation for Public Comment

FR-5368 added a new section 24.9.1 which requires ERCES supervisory signals to be monitored by a building fire alarm system when required by governing laws, codes or standards. When a building fire alarm system is monitoring these supervisory signals, they should be tested. This change makes the testing frequency to be dictated by Table 14.4.3.2 Item 20, which is for Interface Equipment. It states that the supervisory interface is tested at the frequency required by the equipment being supervised, in this case NFPA 1225.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 245-NFPA 72-2023 [Section No. 14.4.10] <u>Related Item</u>	Reference, numbering
• FR-5368 • FR-5273 • FR-5342	

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 18:39:18 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5046-NFPA 72-2023
Statement: Chapter 24 requires ERCES supervisory signals to be monitored by a building fire alarm system when required by governing laws, codes or standards. When a building fire alarm system is monitoring these supervisory signals, they should be tested. This change makes the testing frequency to be dictated by Table 14.4.3.2 Item 20, which is for Interface Equipment. It states that the supervisory interface is tested at the frequency required by the equipment being supervised, in this case NFPA 1225.



Public Comment No. 245-NFPA 72-2023 [Section No. 14.4.10]

14.4.10 ~~In-Building Emergency Radio Communication~~ Emergency Responder Communication Enhancement Systems. (SIG-ECS)

~~In-building emergency radio communication~~ 14.4.10.1 Emergency responder communication enhancement systems shall be inspected and operationally tested in accordance with the requirements of NFPA 1225.

Statement of Problem and Substantiation for Public Comment

FR-5273 for section 24.9 (SIG-ECS) changed the name of these systems to the new name of Emergency Responder Communication Enhancement Systems (ERCES) rather than the old names shown in Chapter 14 and 24. This change is in line with the changes made with FR-5342 (for PI-262) and Correlating Committee Note No. 32. Changing this statement to be 14.4.10.1 as a second testing requirement will be added to this ERCES section as 14.4.10.2 with Public Comment No. 246.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 246-NFPA 72-2023 [New Section after 14.4.10]</u>	
<u>Related Item</u>	
• FR-5342 • FR-5273 • Correlating Committee Note No. 32	

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 18:19:23 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5045-NFPA 72-2023
Statement: This revisions changes the name of Emergency Radio Communication Systems to Emergency Responder Communications Enhancement Systems (ERCES) to match the naming convention from NFPA 1225.



Public Comment No. 28-NFPA 72-2023 [Section No. 14.4.10]

14.4.10 ~~In-Building Emergency- Radio Communication Systems~~ - Responder Communications Enhancement Systems (ERCES). (SIG-ECS TMS)

In-building emergency radio communication systems shall be inspected and operationally tested in accordance with the requirements of NFPA 1225.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._32.pdf	NFPA 72 Correlating Note No. 32	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 32 appeared in the First Draft Report on First Revisions No. 5342.

Review the language of section 14.4.10 which was relocated from Chapter 24 into Chapter 14 by SIG ECS. Recommend removing SIG ECS acronym from 14.4.10 and 14.4.11 as these now should belong to SIG TMS. Review the heading and body of 14.4.10 for consistency with NFPA 1225 3.3.66, recommend revising the heading to "In-Building Emergency Responder Communications Enhancement Systems (ERCES)."

Related Item

- FR-5342

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC
Organization: NFPA Signaling Systems for the Protection of Life and Property
Street Address:
City:
State:
Zip:
Submittal Date: Tue Apr 11 12:26:01 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5045-NFPA 72-2023
Statement: This revisions changes the name of Emergency Radio Communication Systems to Emergency Responder Communications Enhancement Systems (ERCES) to match the naming convention from NFPA 1225.



Public Comment No. 247-NFPA 72-2023 [New Section after 14.4.12.3]

14.4.13 Restricted Audible Mode Operation (RAMO) Notification

Where RAMO notification is used in accordance with 18.4.1.8, annual testing shall include all of the following:

14.4.13.1 The ambient and maximum sound pressure levels shall be recorded annually in the protected space and compared against the RAMO design documentation.

14.4.13.2 RAMO areas shall be reviewed annually to determine if the occupancy has changed.

14.4.14 Maximum Public Mode Audible Levels

Where maximum public mode audible levels is used in accordance with 18.4.1.9, annual testing shall include all of the following:

14.4.14.1 The ambient and maximum sound pressure levels shall be recorded annually in the protected space and compared against the design documentation required by 18.4.1.9.

14.4.14.2 Each area where the public mode sound pressure level has been reduced shall be reviewed annually to determine if the application has changed.

Statement of Problem and Substantiation for Public Comment

FR-5352 added two new sections in Chapter 18 (18.4.1.8 and 18.4.1.9). This FR-5352 included annual testing requirements that should not be located in Chapter 18 but need to be moved to Chapter 14 as new sections. These two new sections have been added using the language provided in FR-5352. Changes made at Second Draft to 18.4.1.8 or 18.4.1.9 should be coordinated with these new requirements in Chapter 14 via the SIG-NAS task group on this topic.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 248-NFPA 72-2023 [Section No. 18.4.1.8.8]	
Public Comment No. 249-NFPA 72-2023 [Section No. 18.4.1.9.1.2]	
Public Comment No. 250-NFPA 72-2023 [New Section after 7.3.4.6]	

Related Item

- FR-5352

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 18:58:50 EDT 2023
Committee: SIG-TMS

Committee Statement

Resubmitter: ~~Section 14.4.13.1 and 14.4.14.1~~ SR
Action: Section 14.4.13.1 and 14.4.14.1 SR
Statement: Annual testing requirements should be located in Chapter 14. These two new sections



Public Comment No. 29-NFPA 72-2023 [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- ~~and 17.5.3.1.3~~ , both of the following shall apply:

- (1) The areas shall be made accessible.
- (2) The areas shall be provided with detection.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._6.pdf	NFPA 72 Correlating Note No. 6	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 6 appeared in the First Draft Report on First Revisions No. 5275.

This sections requires inaccessible spaces to be made accessible, but the change in the text makes 17.5.3.1.3 an exception to this requirement. However, 17.5.3.1.3 speaks to detectors below open grid ceilings. An open grid ceilings does not create an inaccessible space (see definition of accessible space 3.3.4) so 17.5.3.1.3 should not be an exception to the requirement for inaccessible spaces in 17.5.3.1.1. Consider revising the text by removing 17.5.3.1.3 from 17.5.3.1.1. It would still appropriately be an exception to the base paragraph of 17.5.3.1.

Related Item

- FR-5275

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 12:33:45 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5018-NFPA 72-2023](#)

Statement: The public comment correctly noted 17.5.3.1.3 did not address the conditions of 17.5.3.1.1, but upon review of the section it was found that 17.5.3.1.4 does meet the conditions of 17.5.3.1.1, so the section is amended to change 17.5.3.1.3 to 17.5.3.1.4. This accomplishes the goal of PC#30, so it is incorporated into this change.

This accomplishes the goal of PC#30, so it is incorporated into this change.



Public Comment No. 30-NFPA 72-2023 [Section No. 17.5.3.1.4]

17.5.3.1.4

Where the concealed space is entirely filled with noncombustible insulation in solid joist construction as described in 17.5.3.1.2, 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.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._7.pdf	NFPA 72 Correlating Note No. 7	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 7 appeared in the First Draft Report on First Revision No. 5364.

Consider moving 17.5.3.1.4 up to be 17.5.3.1.3 as it applies to 17.5.3.1.2. Then existing 17.5.3.1.3 moves down to 17.5.3.1.4 as it is separate. 17.5.3.1.4 addresses concealed spaces and is supposed to be an exception to 17.5.3.1.2. However, 17.5.3.1 doesn't appear to address concealed spaces so this paragraph should not be an exception to 17.5.3.1. Consider coordinating the text with 17.5.3.1.

Related Item

- FR-5364

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 11 12:39:24 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5018-NFPA 72-2023](#)

Statement: The public comment correctly noted 17.5.3.1.3 did not address the conditions of 17.5.3.1.1, but upon review of the section it was found that 17.5.3.1.4 does meet the conditions of 17.5.3.1.1, so the section is amended to change 17.5.3.1.3 to 17.5.3.1.4. This accomplishes the goal of PC#30, so it is incorporated into this change.



Public Comment No. 83-NFPA 72-2023 [Section No. 17.6.1.2]

17.6.1.2

Designs not in accordance with 17.6.1.3 shall be ~~both of the following~~:

- ~~Deemed as prescriptive designs~~

~~Designed~~ designed in accordance with the prescriptive requirements of this chapter .

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._17.pdf	NFPA 72 Correlating Note No. 17	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 17 appeared in the First Draft Report on First Revision No. 5282.

Review the language of 17.6.1.2. During editorial review, the editors recommended changes to this section to make the language easier to understand by keeping the language as a single section if revised such as: "17.6.1.2 Designs not in accordance with 17.6.1.3 shall be designed in accordance with the prescriptive requirements of this chapter."

Related Item

- FR-5282

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 16 12:05:20 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Accepted

Resolution: SR-5014-NFPA 72-2023

Statement: The revision simplifies the normative text without creating any issues.



Public Comment No. 146-NFPA 72-2023 [Section No. 17.6.1.4]

17.6.1.4

Heat sensing fire detectors shall be listed in accordance with applicable standards such as ~~UL 524~~ with UL 521 , *Heat Detectors for Fire Protective Signaling Systems*.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
Organization: Edwards/ Carrier
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 23 16:25:25 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5015-NFPA 72-2023](#)
Statement: The manual of style does not permit examples to be contained within the text. This revision moved the examples to Appendix A which avoids changing the mandatory text to limit the standard applicable to heat detectors to only UL 521.

to limit the standard applicable to heat detectors to only UL 521.



Public Comment No. 1-NFPA 72-2023 [Section No. 17.6.2.1]

17.6.2.1 Classification.

Heat-sensing fire detectors of the fixed-temperature or rate-compensated, spot type shall be classified as to the temperature of operation in accordance with Table 17.6.2.1.

Table 17.6.2.1 Temperature Classification and Color Code for Heat-Sensing Fire Detectors

<u>Temperature Classification</u>	<u>Temperature Rating Range</u>		-	<u>Maximum Ceiling Temperature</u>		<u>Color Code</u>
	<u>°F</u>	<u>°C</u>		<u>°F</u>	<u>°C</u>	
Low	100–134	38–56	-	80	28	Uncolored
Ordinary	135–174	57–79	-	115	47	Uncolored
Intermediate	175–249	80–121	-	155	69	White
High	250–324	122–162	-	230	111	Blue
Extra high	325–399	163–204	-	305	152	Red
Very extra high	400–499	205–259	-	380	194	Green
Ultra high	500–575	260–302	-	480	249	Orange

Statement of Problem and Substantiation for Public Comment

Clause 17.6.2.3.2 states "The temperature rating of the detector shall be at least 20°F (11°C) above the maximum expected temperature at the ceiling." This means that the column in Table 17.6.2.1 for "maximum ceiling temperature" is not required. While the two requirements are not in conflict, it may be confusing to users. The table only allows one ceiling temperature that corresponds to a range of heat detector set points. For example, according to the table, a heat detector with a set point of 135 degrees or 174 degrees both may only be installed at 115 degrees. The suggestion is to delete the column in the table labeled "maximum ceiling temperature." Doing so will allow greater installation flexibility without sacrificing nuisance alarm immunity.

Related Item

- FR 5283

Submitter Information Verification

Submitter Full Name: Scott Lang
Organization: Honeywell International
Street Address:
City:
State:
Zip:
Submittal Date: Fri Mar 10 09:23:15 EST 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but held

Resolution: This public comment is new material, not tied to any Public Input/First Revision. The subject should be brought back in the next revision cycle.

Resolution: This public comment is new material, not tied to any Public Input/First Revision. The subject should be brought back in the next revision cycle.



Public Comment No. 11-NFPA 72-2023 [New Section after 17.6.3.3.2]

17.6.3.3.4 Girders

17.6.3.3.4.1

Where the top of the girder is within 4 in. (100 mm) of the ceiling, the girder shall be considered a beam.

17.6.3.3.4.2

Where the top of the girder is more than 4 in. (100 mm) from the ceiling, the girder shall not be a factor in detector location.

Statement of Problem and Substantiation for Public Comment

The content of this requirement is not new material but rather is included in the definition of a Girder. Because this content clarifies how girders are considered for spacing of spot detectors, it does not comply with the Manual of Style. Correlating committee Note No 11 referenced the definition of a girder as a possible conflict with first revision 5297. In review of that definition and correlation as suggested, this MoS issue was discovered, and the correlation is best corrected by moving content from the definition to the appropriate sections in chapter 17. Note the original FR 5297 was only applicable to spot smoke detectors however this relocated content and necessary correlation is required for both smoke and heat detectors. As such, the content from the definition needs to be relocated to two sections even though the FR 5297 only applied to smoke detection. This proposed revision clarifies how girders are to be applied thereby correlating the definition with the first revision and correcting a manual of style issue.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 10-NFPA 72-2023 [Section No. 3.3.43.2]</u>	Source of relocated content
<u>Public Comment No. 15-NFPA 72-2023 [New Section after 17.7.4.2.4.1]</u>	Duplicate relocated content for smoke detection
<u>Public Comment No. 10-NFPA 72-2023 [Section No. 3.3.43.2]</u>	
<u>Public Comment No. 15-NFPA 72-2023 [New Section after 17.7.4.2.4.1]</u>	

Related Item

- First Revision No. 5297-NFPA 72-2022 • Correlating Committee Note No. 11-NFPA 72-2023

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: Bp Inc.
Street Address:
City:
State:
Zip:
Submittal Date: Tue Mar 21 08:39:04 EDT 2023
Committee: SIG-IDS

Committee Statement Rejected but see related SR
Action:

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5031-NFPA 72-2023](#)

Statement: Corrects a Manual of Style issue by relocating requirements previously found in the definition of girder into chapter 17.



Public Comment No. 86-NFPA 72-2023 [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:~~

- ~~Deemed as prescriptive designs~~

~~Designed- designed~~ in accordance with the prescriptive requirements of this chapter .

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._16.pdf	NFPA 72 Correlating Note No. 16	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 16 appeared in the First Draft Report on First Revision No. 5345.

Review the language of 17.7.1.2. During editorial review, the editors recommended changes to this section to make the language easier to understand by keeping the language as a single section if revised such as: "17.7.1.2 Designs not in accordance with 17.7.1.3 shall be designed in accordance with the prescriptive requirements of this chapter."

Related Item

- FR-5345

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 16 12:48:42 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Accepted

Resolution: SR-5023-NFPA 72-2023

Statement: This revision makes the language clearer and easier to understand.



Public Comment No. 156-NFPA 72-2023 [Section No. 17.7.2]

17.7.2* Protection During Construction.

17.7.2.1

Detectors installed for signal initiation during new construction or building alterations shall comply with one of the following:

- (1) Detectors shall be cleaned and verified to be operating in accordance with the listed ~~sensitivity~~ sensitivity at the completion of the construction or alteration project but prior to final acceptance test of the system .
- (2) Detectors shall be replaced prior to the final acceptance test of the system.

17.7.2.2

Detectors installed but not operational during ~~construction~~ building alterations shall comply with one of the following:

- (1) Detectors 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 at the completion of the construction or alteration project but prior to final acceptance test of the system .
- (2) Detectors shall be replaced prior to the final acceptance test of the system.

17.7.2.3

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

Statement of Problem and Substantiation for Public Comment

There are three conditions that this section needs to address. First, where detection is required during any construction or alteration project. This is now covered by 17.7.2.1. Second, where detection is already in place, but not operational during a building alteration (new construction is covered by the next section). This is addressed in 17.7.2.2. And, third, new construction where detection is not required. This is addressed in 17.7.2.3.

Additionally, the timing of the sensitivity testing is clarified in each appropriate condition.

Related Item

- PI No. 244 • PI No. 534 • PI No. 535

Submitter Information Verification

Submitter Full Name: Jason Webb
Organization: Potter Electric Signal Company
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 24 12:17:22 EDT 2023
Committee: SIG-IDS

Committee Statement: Rejected but see related SR

Committee Statement

Action: Rejected but see related SR

Resolution: [SR-5024-NFPA 72-2023](#)

Statement: This revision clarifies that cleaning and/or replacement shall be performed prior to the final acceptance of the system.



Public Comment No. 87-NFPA 72-2023 [Section No. 17.7.2.1]

17.7.2.1

Detectors installed for signal initiation during construction shall comply with one of the following:

- (1) Detectors shall be cleaned and verified to be operating in accordance with the listed sensitivity.
- (2) Detectors shall be replaced prior to the final acceptance test of the system.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._9.pdf	NFPA 72 Correlating Note No. 9	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 9 appeared in the First Draft Report on First Revision No. 5289.

Consider adding "prior to the final acceptance test of the system" or "after construction is complete" to subparagraph (1) of the 17.7.2.1 to clarify the intent. The original text gave two options and both of those options should have been done after the construction (prior to the final acceptance test of the system). However, the new text would allow the detector to be cleaned and verified to be operating in accordance with the listed sensitivity, without requiring the sensitivity testing to be done after the construction activities took place.

Related Item

- FR-5289

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 16 13:03:59 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5024-NFPA 72-2023](#)

Statement: This revision clarifies that cleaning and/or replacement shall be performed prior to the final acceptance of the system.



Public Comment No. 126-NFPA 72-2023 [Section No. 17.7.2.2]

17.7.2.2

Detectors installed but not operational during construction shall comply with one of the following:

- (1) Detectors 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.
- (2) Detectors shall be replaced prior to the final acceptance test of the system.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._10.pdf	NFPA 72 Correlating Note No. 10	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 10 appeared in the First Draft Report on First Revision No. 5290.

Consider adding "prior to the final acceptance test of the system" or "after construction is complete" to subparagraph (1) of the 17.7.2.2 to clarify the intent. The original text gave two options and both of those option should have been done after the construction(prior to the final acceptance test of the system). However, the new text would allow the detector to be cleaned and verified to be operating in accordance with the listed sensitivity, without requiring sensitivity testing to be done after the construction activities took place.

Related Item

- FR-5290

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 19 16:00:27 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5024-NFPA 72-2023](#)

Statement: This revision clarifies that cleaning and/or replacement shall be performed prior to the final acceptance of the system.



Public Comment No. 73-NFPA 72-2023 [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 40 feet (12.2 meters) in height, detectors shall be spaced in accordance with either of the following:

- (1) The detectors shall comply with the following:
 - (2) The distance between detectors shall not exceed a nominal spacing of 30 ft (9.1 m).
 - (3) 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.

(4)* 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 (0.7S).

Statement of Problem and Substantiation for Public Comment

Based on the results of the FPRF research, Smoke Detector Spacing in High Ceiling Spaces, standard smoke detector spacing (30 foot nominal) can be used on ceilings from 10 to 40 feet without compromising the safety level afforded on 10 foot ceilings. This guidance is consistent with other installation standards around the world (except the UK, which is at 10.5 meters).

Related Item

- PI 186

Submitter Information Verification

Submitter Full Name: Scott Lang

Organization: Honeywell International

Street Address:

City:

State:

Zip:

Submittal Date: Mon May 15 15:13:25 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Accepted

Resolution: SR-5025-NFPA 72-2023

Statement: The revision places a maximum on the prescriptive spacing of smoke detectors on ceiling heights above 10 feet. 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 asked most frequently, is around how to space detectors on high ceilings. Using a height of 40 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 (39.4 feet). It is important to keep in mind that current smoke detector thresholds are based on beams 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. Data from the Fire

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. Data from the Fire Protection Research Foundation project, Smoke Detector Spacing in High Ceiling Spaces, and research that was identified in Part 1 of the FPRF project was used as the basis for this revision.



Public Comment No. 15-NFPA 72-2023 [New Section after 17.7.4.2.4.1]

17.7.4.2.4.2

For joist and beam construction using girders, the following shall apply:

- (1) Where the top of the girder is within 4in. (100 mm) of the ceiling, the girder shall be considered a beam.
- (2) Where the top of the girder is more than 4 in (100 mm) from the ceiling, the girder shall not be a factor in detector location.

Statement of Problem and Substantiation for Public Comment

The content of this requirement is not new material but rather is included in the definition of a Girder. Because this content clarifies how girders are considered for spacing of spot detectors, it does not comply with the Manual of Style. Correlating committee Note No 11 referenced the definition of a girder as a possible conflict with first revision 5297. In review of that definition and correlation as suggested, this MoS issue was discovered, and the correlation is best corrected by moving content from the definition to the appropriate sections in chapter 17. Note the original FR 5297 was only applicable to spot smoke detectors however this relocated content and necessary correlation is required for both smoke and heat detectors. As such, the content from the definition needs to be relocated to two sections even though the FR 5297 only applied to smoke detection.

Note: While a potential conflict may be viewed in the difference between the referenced 4" of a girder and FR 5297 utilization of 15% of the ceiling height specific to beams, one is in reference to a girder and the other to a beam. As currently required by the definition (acknowledged in error to the MoS), if the top of a girder is more than 4" from the ceiling, the girder does not impact spacing of the detectors. If FR 5297 is approved, this does not change that since FR 5297 is specific to a beam and is essentially more restrictive than what is permitted for a girder. If further correlation on changing the 4" value is required, this would be new content and as such not be valid at this stage of the document revision cycle. The proposed change keeps the existing technical material from the definition and just moves it to the appropriate sections thereby better correlating the content which is in line with CN 11.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 10-NFPA 72-2023 [Section No. 3.3.43.2]</u>	Source of relocated content
<u>Public Comment No. 11-NFPA 72-2023 [New Section after 17.6.3.3.2]</u>	Duplicate relocated content for heat detection
<u>Public Comment No. 10-NFPA 72-2023 [Section No. 3.3.43.2]</u>	
<u>Public Comment No. 11-NFPA 72-2023 [New Section after 17.6.3.3.2]</u>	

Related Item

- First Revision No. 5297-NFPA 72-2022 • Correlating Committee Note No. 11-NFPA 72-2023

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: Bp Inc.
Street Address:
City:
State:
Submittal Date: Tue Mar 21 13:51:50 EDT 2023

Zip State:

Submittal Date: Tue Mar 21 13:51:50 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5027-NFPA 72-2023](#)

Statement: This revision moves requirements from definition of Girder, which is not permitted in the Manual of Style, into the section for smoke sensing detectors.



Public Comment No. 127-NFPA 72-2023 [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:
 - (a) 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.
 - (b) Where beam spacing is less than 40 percent of the ceiling height ($0.4 H$), the following shall be permitted for spot detectors:
 - i. Smooth ceiling spacing in the direction parallel to the beams and at one-half smooth ceiling spacing in the direction perpendicular to the beams
 - ii. Location of detectors either on the ceiling or on the bottom of the beams
- (3)* For beam pockets formed by intersecting beams, including waffle or pan-type ceilings, the following shall apply:
 - (a) 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).
 - (b) 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).
- (4)* 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:
 - (a) Smooth ceiling spacing shall be permitted.
 - (b) Location of spot-type smoke detectors shall be permitted on ceilings, sidewalls, or the bottom of beams or solid joists.
- (5) For rooms of 900 ft² (84 m²) or less, the following shall apply:
 - (a) Use of smooth ceiling spacing shall be permitted.
 - (b) Location of spot-type smoke detectors shall be permitted on ceilings or on the bottom of beams.
- (6) For ceilings with beams, where there is a gap greater than 15 percent of the ceiling height above the beam, smooth ceiling spacing shall be permitted.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._11.pdf	NFPA 72 Correlating Note No. 11	

Statement of Problem and Substantiation for Public Comment

17.7.4.2.4.2(6) conflicts with the definition of girder:

NOTE: The following CC Note No. 11 appeared in the First Draft Report on First Revision No. 5297.

3.3.40.2 Girder. A support for beams or joists that runs at right angles to the beams or joists. If the top of

17.7.4.2.4.2(6) conflicts with the definition of girder:

NOTE: The following CC Note No. 11 appeared in the First Draft Report on First Revision No. 5297.

3.3.40.2 Girder. A support for beams or joists that runs at right angles to the beams or joists. If the top of the girder is within 4 in. (100 mm) of the ceiling, the girder is a factor in determining the number of detectors and is to be considered a beam. If the top of the girder is more than 4 in. (100 mm) from the ceiling, the girder is not a factor in detector location.

There appears to be a conflict between 17.7.4.2.4.2 and the definition of Girder. Review the definition and this section for correlation.

Related Item

- FR-5297

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 19 16:12:15 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected

Resolution: As the requirements for girders have been added to section 17.7, and this section speaks specifically to beams, there is no conflict.



Public Comment No. 128-NFPA 72-2023 [Section No. 17.7.4.6.4.1]

17.7.4.6.4.1 Air Duct Applications.

(A)

The air sampling system shall comply with the following:

- (1) It shall be listed for air duct applications.
- (2) It shall be installed in accordance with the manufacturer’s published instructions.

(B)

The inlet and exhaust sections of pipe that are installed inside the air duct shall comply with the following:

- (1) They shall be air-tight.
- (2) They shall exhaust the sampled air in accordance with the manufacturer’s published instructions.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._12.pdf	NFPA 72 Correlating Note No. 12	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 12 appeared in the First Draft Report on First Revision No. 5299.

Review the language of 17.7.4.6.4.1 for compliance with the Manual of Style.

Related Item

- FR-5299

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 19 16:28:47 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected

Resolution: The section complies with the Manual of Style.



Public Comment No. 8-NFPA 72-2023 [Section No. 17.7.6.5.4.2]

17.7.6.5.4.2

Detectors installed inside ducts shall be accessible for cleaning, inspection, and testing through access doors or panels provided in accordance with NFPA 90A.

Statement of Problem and Substantiation for Public Comment

This section applies to smoke detectors installed inside ducts. These changes made for clarification.

Related Item

- FR5300

Submitter Information Verification

Submitter Full Name: Merton Bunker

Organization: Merton Bunker & Associates, LL

Street Address:

City:

State:

Zip:

Submittal Date: Fri Mar 17 08:43:36 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5028-NFPA 72-2023](#)

Statement: This revision clarifies the intent of the section, but using language more consistent with the NFPA Standards.



Public Comment No. 133-NFPA 72-2023 [Section No. 17.8.5]

17.8.5 Video Image Flame Detection.

17.8.5.1

Video image flame detection systems and all of the components thereof, including hardware and software, shall be listed for the purpose of flame detection.

17.8.5.2

Video image flame detection systems shall comply with all of the applicable requirements of Chapters 1, 10, 14, 17, and 23 of this Code.

17.8.5.3*

Video signals generated by cameras that are components of video image flame 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 video system manufacturer.

17.8.5.4*

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

17.8.5.5

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

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._13.pdf	NFPA 72 Correlating Note No. 13	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 13 appeared in the First Draft Report on Public Input No. 183 and Public Input No. 182.

The TC did not incorporate PI-183 and PI-182, stating that the material is already contained in 17.8.3.1. However, 17.8.3.1 does not include the details proposed in the PI text. Other sections for Flame and for Spark/ember include a section on "Spacing Considerations for..." The TC should consider adding a similar section and annex material for Video using some of the proposed text.

Related Item

- PI - 183 • PI - 182

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC
Organization: NFPA CC on Signaling Systems for the Protection of Life and Property
Street Address:
City:
State:
Zip:

Submitted Date: Mon May 22 14:28:15 EDT 2023

Committee: SIG-IDS

Committee: Proposed

Committee Statement on May 22 14:28:15 EDT 2023

Committee: SIG-IDS

Committee Action: Rejected

Resolution: This PC does not contain any proposed changes to the text, but only a request for the committee to consider changes that it rejected during the first round of public inputs. If the submitter submits changes to the text in the future, those changes will be considered.



Public Comment No. 4-NFPA 72-2023 [New Section after 17.10.1]

Fuel gas detection and warning equipment shall be installed in accordance with NFPA 715, *Standard for the Installation of Fuel Gases Detection and Warning Equipment*.

Statement of Problem and Substantiation for Public Comment

Add new section 17.10.1.1 and renumber NFPA 715 is the new standard for fuel gas detection. This will point the reader to NFPA 715 if the gas to be detected as a fuel gas. If this is added, 17.10.1 will need to become 17.10.1.1 to conform to the Manual of Style. If the Committee designates this as new material, please carry over to the next cycle for consideration.

Related Item

- FR 5348

Submitter Information Verification

Submitter Full Name: Stephen Olenick
Organization: Combustion Science & Engineering, Inc.
Street Address:
City:
State:
Zip:
Submittal Date: Mon Mar 13 10:42:52 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5012-NFPA 72-2023](#)
Statement: The revision changed 'detection' to 'detector' to match NFPA 715 language. Fuel gas is one of the many gases that can be detected by gas type detectors. Pointing the reader to the specific standard for fuel gas detection and installation would lead them to a specific standard for fuel gas.



Public Comment No. 147-NFPA 72-2023 [Section No. 17.10.2.1]

17.10.2.1

Gas detection equipment shall be listed in accordance with applicable standards such as ~~UL 1484~~ with UL 1484, *Residential Gas Detectors*, or UL 2075, *Gas and Vapor Detectors and Sensors*, for the specific gas or vapor it is intended to detect.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
Organization: Edwards/ Carrier
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 23 16:30:33 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5013-NFPA 72-2023](#)

Statement: The manual of style does not permit examples to be contained within the text. This revision moved the examples to Appendix A which avoids changing the mandatory text to limit the standards applicable to gas detection equipment to only I II 1484 or I II 2075

Statement: The manual of style does not permit examples to be contained within the text. This revision moved the examples to Appendix A which avoids changing the mandatory text to limit the standards applicable to gas detection equipment to only UL 1484 or UL 2075.



Public Comment No. 91-NFPA 72-2023 [Section No. 17.11.2.1]

17.11.2.1*

Acoustic leak detectors shall ~~only be used where the leak source to be detected is a single-phase gas flow~~ be performance tested to validate characteristics of the leak are detectable by the respective device technology.

Statement of Problem and Substantiation for Public Comment

Revised to account for the various technologies to detect leaks. Primarily it is important the detector be tested to ensure the claimed performance can be achieved. Currently there exists no industry certification standards. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 90-NFPA 72-2023 [Section No. A.17.11.2.1]	
Public Comment No. 92-NFPA 72-2023 [Section No. 17.11.2.2]	
Public Comment No. 90-NFPA 72-2023 [Section No. A.17.11.2.1]	
Public Comment No. 92-NFPA 72-2023 [Section No. 17.11.2.2]	

Related Item

- FR 5360

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: BP America Inc.
Affiliation: SIG IDS Task Group for Acoustic Gas Detection.
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 17 07:38:45 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5034-NFPA 72-2023](#)
Statement: Section was revised to account for the various technologies to detect leaks. Primarily it is important that the detector be approved to ensure the claimed performance can be achieved. Currently there are limited industry certification standards. EN50724 is an example of a proposed industry certification standard which could be utilized as a basis for AHJ approval.



Public Comment No. 92-NFPA 72-2023 [Section No. 17.11.2.2]

17.11.2.2

Acoustic leak detectors shall only be used when the leak condition results in a choked flow that generates ultrasonic energy.

Statement of Problem and Substantiation for Public Comment

Current language limits some current technology for leak detection. The intent is now covered by the revised 17.11.2.1 submitted as public comment 91. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 91-NFPA 72-2023 [Section No. 17.11.2.1]	
Public Comment No. 90-NFPA 72-2023 [Section No. A.17.11.2.1]	
Public Comment No. 91-NFPA 72-2023 [Section No. 17.11.2.1]	

Related Item

- FR 5360

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: BP America Inc.
Affiliation: SIG IDS Task Group for Acoustic Gas Detection
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 17 07:46:45 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5035-NFPA 72-2023](#)
Statement: PC 90 and 91 were the referenced duplicate content in PC 92. PC-92 was rejected and revisions were made. The information is no longer redundant, however it does require modification to not prohibit various existing technologies. Proposed revision maintains the intent of the first revision but accounts for various technologies. Additionally, the second revision adds annex material which was the PC 92 mentioned duplicate content from the rejected PC 90.



Public Comment No. 93-NFPA 72-2023 [Section No. 17.11.3.1]

17.11.3.1- *

The placement of acoustic leak detectors shall be based on an engineering evaluation that includes the following:

- (1) Size of the leak to be detected
- (2) Properties of the material to be detected
- (3) Required coverage (i .e. area, volume, object)
- (4) Purpose of the detection system
- (5) Response time required

Statement of Problem and Substantiation for Public Comment

Revised to provide further clarification on minimum considerations for the engineering evaluation. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 94-NFPA 72-2023 [New Section after A.17.11.2.1]</u>	
<u>Public Comment No. 94-NFPA 72-2023 [New Section after A.17.11.2.1]</u>	

Related Item

- FR 5360

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: BP America Inc.
Affiliation: SIG IDS Task Group for Acoustic Gas Detection.
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 17 07:50:13 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5036-NFPA 72-2023
Statement: This revision provides further clarification on considerations for an engineering evaluation. Associated annex language helps clarify how the size of the leak is typically specified and examples of coverage.



Public Comment No. 95-NFPA 72-2023 [Section No. 17.11.3.4]

17.11.3.4-_*

The coverage area and spacing of acoustic leak detectors shall be adjusted to account for background noise interference which impacts its detection capability .

Statement of Problem and Substantiation for Public Comment

Revised to account for the various technologies to detect leaks. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Public Comments for This Document

Related Comment

Public Comment No. 96-NFPA 72-2023 [New Section after A.17.11.2.1]

Public Comment No. 96-NFPA 72-2023 [New Section after A.17.11.2.1]

Relationship

Related Item

- FR 5360

Submitter Information Verification

Submitter Full Name: Samuel Miller

Organization: BP America Inc.

Affiliation: SIG IDS Task Group for Acoustic Gas Detection.

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 08:00:56 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5037-NFPA 72-2023

Statement: This section was revised to account for various technologies to detect leaks. Associated annex material added to provide context as to the intent of the section to account for possible interference.



Public Comment No. 134-NFPA 72-2023 [Section No. 17.14.2]

17.14.2*

Carbon monoxide detectors shall meet the following requirements:

- (1) Carbon monoxide detectors shall be listed in accordance with applicable standards, such as UL 2075, *Gas and Vapor Detectors and Sensors*.
- (2) Carbon monoxide detectors shall be set to respond to the sensitivity limits specified in UL 2034, *Single and Multiple Station Carbon Monoxide Alarms*.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._18.pdf	NFPA 72 Correlating Note No. 18	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 18 appeared in the First Draft Report on First Revision No. 5365.

Review the language of 17.14.2(1). The NFPA Manual of Style requires examples to be located in the Annex. Consider revisions to this section, such as:

"17.14.2* Carbon monoxide detectors shall meet the following requirements:

- (1) Carbon monoxide detectors shall be listed in accordance with applicable standards.
- (2) Carbon monoxide detectors shall be set to respond to the sensitivity limits specified in UL 2034, *Single and Multiple Station Carbon Monoxide Alarms*.

A.17.14.2 Carbon monoxide detectors installed in unconditioned areas should be listed for the environment in accordance with 10.4.3. Unconditioned areas are intended to apply to enclosed areas, rooms, or spaces without continuous climate or HVAC controls. An example of an applicable standard is UL 2075, *Gas and Vapor Detectors and Sensors*."

Related Item

- FR - 5365

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Mon May 22 14:35:09 EDT 2023

Committee: SIG-IDS

Committee Statement

Action:
Committee Resolution: Rejected but see related SR [SR-5019-NFPA 72-2023](#)

Action:
Committee:
Resolution:

Rejected but see related SR
[SR-5019-NFPA 72-2023](#)

Statement: The proposed revision is needed to bring the text into accordance with the Manual of Style. A small editorial change was made to the proposed revision to specify Carbon Monoxide Detectors.



Public Comment No. 148-NFPA 72-2023 [Section No. 17.14.2]

17.14.2*

Carbon monoxide detectors shall meet the following requirements:

- (1) Carbon monoxide detectors shall be listed in accordance with applicable standards, such as ~~UL 2075,~~ with UL 2075, Gas and Vapor Detectors and Sensors.
- (2) Carbon monoxide detectors shall be set to respond to the sensitivity limits specified in UL 2034, Single and Multiple Station Carbon Monoxide Alarms.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
Organization: Edwards/ Carrier
Street Address:
City:
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Zip:
Submittal Date: Tue May 23 16:33:38 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: The proposed revision is needed to bring the text into accordance with the Manual of Style of NFPA 72-2023. A change was made to the proposed revision to specify Carbon Monoxide Detectors

Action: The proposed revision is needed to bring the text into accordance with the Manual of
Statement: ~~Style and Editorial~~
Resolution: ~~Style and Editorial~~ change was made to the proposed revision to specify Carbon
Monoxide Detectors.



Public Comment No. 149-NFPA 72-2023 [Section No. 17.17.1]

17.17.1

Manually actuated alarm-initiating devices shall be listed in accordance with applicable standards such as UL 38 with UL 38 , *Manual Signaling Boxes for Fire Alarm Systems*.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
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Submittal Date: Tue May 23 16:35:08 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5020-NFPA 72-2023](#)

Statement: The manual of style does not permit examples to be contained within the text. This revision moved the example to Appendix A. The revision does not change the mandatory text which would limit the standards applicable to manually actuated alarm-

Statement: The manual of style does not permit examples to be contained within the text. This revision moved the example to Appendix A. The revision does not change the mandatory text which would limit the standards applicable to manually actuated alarm-initiating devices to only UL 38.



Public Comment No. 210-NFPA 72-2023 [New Section after 17.17.2]

TITLE OF NEW CONTENT

17.17.2 Manual Stations connected for releasing systems. Manual stations utilized to activate releasing systems shall be identified either on the station or by proper signage in proximity to the station.

Statement of Problem and Substantiation for Public Comment

Many times releasing stations are not identified as being for the purpose of releasing a suppression system. Many systems are activated inadvertently during testing or other non-required times due to these stations not being identified. This proposal would require that these stations be properly identified as to the specific function of the station. This would reduce the number of non-required system operations.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 211-NFPA 72-2023 [New Section after 26.2.10.4]</u>	
<u>Related Item</u>	
• PI-525	

Submitter Information Verification

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Submittal Date: Wed May 31 12:28:10 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5021-NFPA 72-2023
Statement: Often releasing stations are not identified as being for the purpose of releasing a suppression systems. Many systems are activated inadvertently during testing or other non-required times due to these stations not being identified. This revision requires that these stations be properly identified as to the specific function of the station. This would reduce the number of non-required system operations. The language was clarified for identification and location.



Public Comment No. 204-NFPA 72-2023 [Section No. 17.19.2.2.2(B)]

(B)

Unless otherwise permitted by the ~~manufacturer's~~ dry pipe or preaction valve manufacturer's published installation instructions, the off-normal signal shall be initiated when the pressure increases or decreases by 10 psi (70 kPa).

Statement of Problem and Substantiation for Public Comment

prior to low pressure actuated dry valves 10 psi off normal signal was the norm. Now that low pressure actuated valves are typically installed, 10 psi above or below normal pressure is too large of a range. Some manufacturers suggest a 2-4 psi range and others are 3-5 psi. The air normal pressure is based on the valve manufacturer and the incoming water supply, there is no "normal" air pressure for dry pipe valves and the hi/low air pressure signals must be set according to manufacturer and water pressure.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 205-NFPA 72-2023 [Section No. 14.4.3.2]	
Public Comment No. 206-NFPA 72-2023 [Section No. A.17.19.2.2.2]	

Related Item

- CI5351

Submitter Information Verification

Submitter Full Name: Vincent Powers
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Submittal Date: Wed May 31 10:31:09 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5016-NFPA 72-2023](#)
Statement: The revision adds clarification to the section that the dry pipe or preaction valve manufacturer's instructions should be followed for the off normal signal threshold, and enhances the current section by specifying both dry pipe and preaction valve manufacturer's instructions. In addition pressure settings should be in accordance with NFPA 13.



Public Comment No. 135-NFPA 72-2023 [Section No. 17.19.4]

17.19.4 Water Temperature Supervisory-Signal-Initiating Device.

17.19.4.1

A temperature supervisory device for a water storage container exposed to freezing conditions shall initiate two separate and distinctive signals, as specified in 17.19.4.2.

17.19.4.2

One signal shall indicate a decrease in water temperature to 40°F (4.4°C), and the other indicate its restoration to above 40°F (4.4°C).

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._20.pdf	NFPA 72 Correlating Note No. 20	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 20 appeared in the First Draft Report.

Review the language of 17.19.4.1 and 17.19.4.2. During editorial review, the editors recommended changes to these sections to make the language easier to understand by combining these two sections into a list, such as:

"17.19.4 A temperature supervisory device for a water storage container exposed to freezing conditions shall initiate two separate and distinctive signals as follows:
 (1) A signal shall indicate a decrease in water temperature to 40 F (4.4 C).
 (2) A signal shall indicate restorage of the water temperature to above 40 F (4.4 C)."

Related Item

- CN - 20

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC
Organization: NFPA CC on Signaling Systems for the Protection of Life and Property
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Submittal Date: Mon May 22 14:57:47 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5022-NFPA 72-2023
Statement: wording to be consistent with other language in the document. The revision editorially changes the language to combine the sections into a single section for readability. The revision makes slight editorial changes to the proposed

~~REVISION:~~

Statement:

wording to be consistent with other language in the document.
The revision editorially changes the language to combine the sections into a single section for readability. The revision makes slight editorial changes to the proposed



Public Comment No. 244-NFPA 72-2023 [Section No. 18.3.7.1]

Updates to PI 542:

18.3.7 * Notification Appliance Circuits

18.3.7.1

* –

~~A notification appliance circuit shall comply with Chapter 12 :~~

Direct Current Notification Appliance Circuits (DCNACs) shall be designed and installed as follows:

18.3.7.1.1 DCNAC starting voltages shall be based on:

a) The Control Unit Start Terminal Voltage (CUSTV) of the power source and the current at the minimum input voltage rating of the appliances for circuits that are integrated directly into the Control Unit, and

b) The Control Module Start Terminal Voltage (CMSTV) of the Control Module (CM) at the minimum input voltage rating of the appliances for circuits that are connected to a CM.

18.3.7.1.2* NACs that use CMs that are not integrated directly with the Control Unit(s) assemblies shall be accounted for in circuit designs.

18.3.7.1.2.1* Module Voltage Adjustment (MVA) for DCNAC CMs, when used, shall be factored into each circuit.

18.3.7.1.2.2* CMs are permitted to be dually rated for MVA and Module Insertion Loss (MIL) when the modules are designed and Listed for DC (DCNAC) and Audio NAC (ACNAC) use.

18.3.7.1.3 All wiring for NACs shall be designed for a minimum of 167 F (75C), or the expected circuit operating temperature if the circuit will be subjected to temperatures above 167 F (75C).

18.3.7.1.4 NACs shall be designed based on one of the following:

18.3.7.1.4.1 End-Line-Loaded (ELL), where all the load is calculated to be at the end of the circuit.

18.3.7.1.4.2 Point-To-Point (PTP), where the load is distributed between different points on the circuit and each segment is accounted for in the overall circuit calculation.

A18.3.7

Notification Appliances. The goal of a properly designed and installed system is to ensure that the notification appliances will operate at the required output (sound pressure level, candela output, synchronization, etc.) and durations for system operations.

A key component of a notification appliance is its power consumption. The designer must account for the minimum and maximum power specifications of an appliance. Regulated “24VDC” appliances must operate at a low of 16 VDC and at a maximum of 28 VDC in order to ensure its output characteristics are correct. For example, the low of a voltage at the appliance may result in visual appliances losing synchronization or audible appliances having low or no output.

... a voltage at the appliance may result in visual appliances losing synchronization or low of audible appliances having low or no output.

When designing DCNACs the appliance nameplate (Listed) voltage and current consumption values are used. This will typically be X mA @ 16 VDC (for a 24 VDC appliance) where X is the actual Listed/Certified current draw of the appliance.

Power Sources. The type of power supply will impact the system design and operation. The system output, overcurrent protection methods, loading ratings/factors, inrush capabilities and voltages must be evaluated. Some power supplies may have their worst-case output condition at brownout, which is when the incoming AC mains are at its lowest value, just before the power supply transfers to battery power. The manufacturer's documentation and direction should be adhered to.

A18.3.7.1.2

Control Modules. These typically field-installed (not integrated directly into Control Units) addressable control modules (CM) provide electrical supervision of the DCNAC and/or may provide some control of the power riser coming into the CM. Any module or device that is in the power riser electrical path or that may impact the performance of the riser must be accounted for in the system design, installation and testing. Other examples of CMs may be, but are not limited to:

- Relays
- Coders
- Supervision
- Synchronization

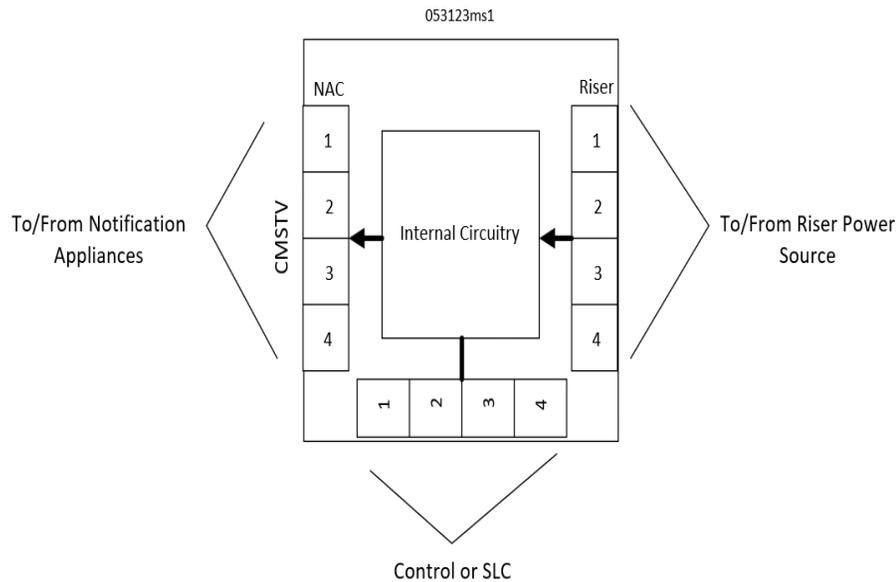
A18.3.7.1.2.1

- (1) **Figure E** provides a block diagram of the internal sections of a typical DCNAC CM. The DCNAC CM may impact the voltage of the connected NAC. This is typically a voltage drop. Some may boost the voltage. In either case, in DCNACs, this is referred to as Module Voltage Adjustment (MVA) and must be accounted for in the overall system design.
- (1) **Figure E – NAC CM Internal Block Diagram**

Notification Appliance Circuit

CONFIDENTIAL (CMA)

Notification Appliance Circuit Control Module (CM)



For a CM on a DCNAC, the following is the formula for the unit:

$$\text{CMSTV} = \text{Riser Terminal} \text{ -/+ Internal Circuitry}$$

Control Module Start Terminal Voltage (CMSTV)

Example with Values:

$$\underline{17.41446 = 18.11446 - 0.7}$$

In the above example:

- (1) The incoming CM Power Riser provides 18.11446 VDC.
- (2) The MVA is 0.7 VDC
- (3) The CMSTV is 17.41446
- (4) The NAC that is being controlled by this CM could tolerate up to a 1.41446 voltage drop on the circuit. This is calculated by:
 - (5) CSMTV of 17.41446
 - (6) Notification Appliance low voltage rating of 16
 - (7) 1.41446 = 17.41446 - 16

A18.3.7.1.4

Voltage Drop Calculations: This is the key design factor. There are two acceptable methods. They are:

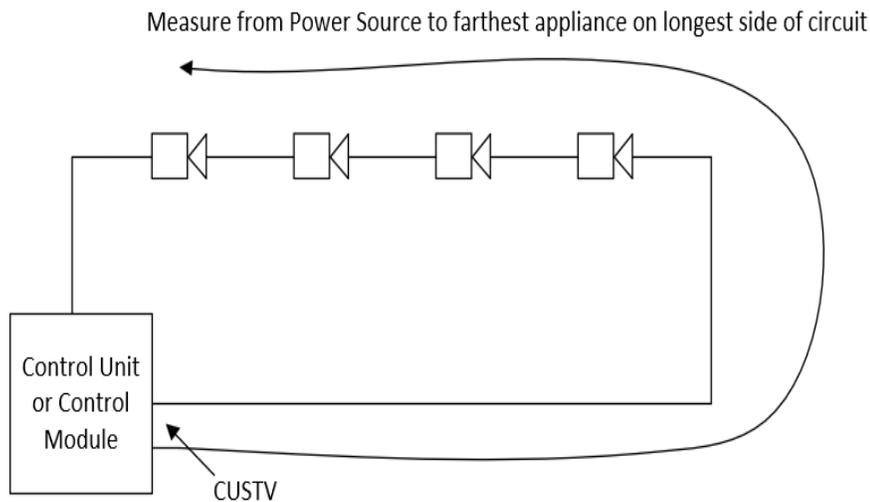
- **End Line Loading - (ELL)** this assumes that all the appliances are at the end of the circuit and are activated at one time. This is the most conservative method and is the recommended design method for all systems.
 - ELL circuits are designed and tested based on the total circuit resistance and
- **Point-To-Point - (PTP)** this method requires that the designer know the exact wire distance between each and every appliance. If the installed values are different than the

- **Point-To-Point** – (PTP) this method requires that the designer know the exact wire distance between each and every appliance. If the installed values are different than the design values, the circuit may not work correctly. This method requires close coordination with the design and field work.
 - PTP circuits are designed based on the individual segment and tested on total resistance and loss.

The following diagram depicts how to measure the circuit length for a Class A NAC:

Class A Measurement For Circuit Length

053123ms1



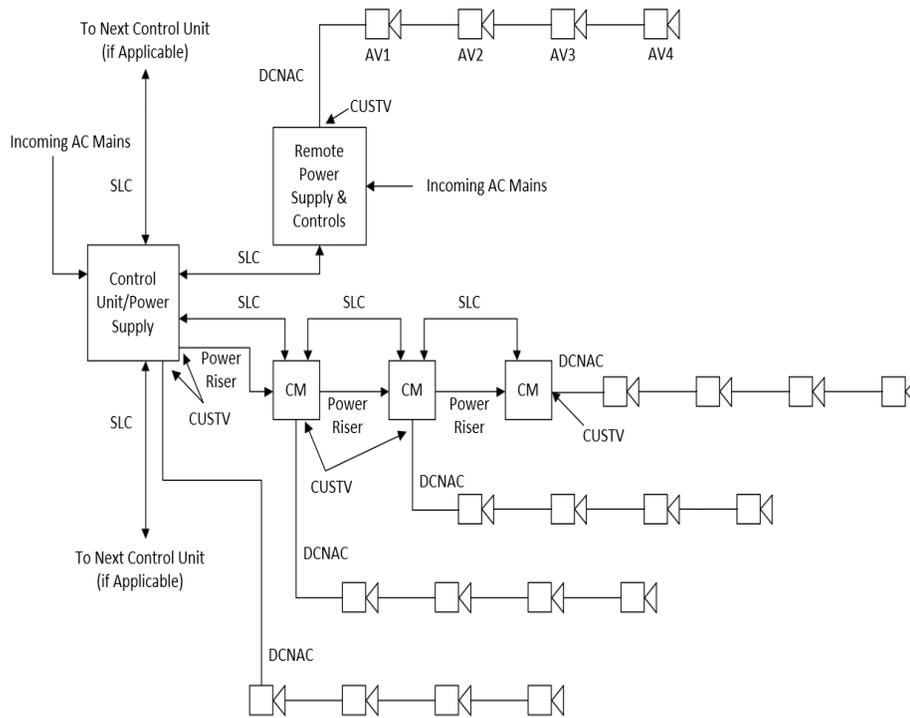
The following diagram depicts the overall power flow and areas of concern for a system:

DC NACS End-To-End Concept Diagram

053123ms1

DC NACS End-To-End Concept Diagram

053123ms1



Note – if the power riser is altered by the CM as the power comes in/out of the CM, that adjustment also needs to be included in the calculations.

A18.3.7.1.2.2 MIL stands for Module Insertion Loss, which is covered in Chapter 24, but is referenced here to provide overall continuity of system design.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
SIGNAS_DCNACS_updated_PI_053123ms1.docx	Complete updated file to revise 18.4.7 with PI 542 (updated)	

Statement of Problem and Substantiation for Public Comment

A Task Group on DCNACS was established to revise 72-2022 18.3.7. This started as PI 542. The attached document is the (updated) output of the Task Group.

Related Item

- Updates PI542

Submitter Information Verification

Submitter Full Name: Morris Stoops
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Street Address:
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Committee Statement: Wed May 31 17:26:06 EDT 2023

Committee: SIG-NAS
Committee: Deleted but see related SP

Committee Statement Wed May 31 17:26:06 EDT 2023

Committee: SIG-NAS
Committee: Rejected but see related SR
Action:
Resolution: [SR-5066-NFPA 72-2023](#)
Statement: This revision provides instruction on performing voltage drop calculations to standardize calculation procedures.



Public Comment No. 208-NFPA 72-2023 [Section No. 18.4.1.8]

Based on Task Group review, revise PI 157 & 158 to:

18.4.1.8 *

Based on Task Group review, revise PI 157 & 158 to:

18.4.1.8 *

–

Restricted Audible Mode Operation (RAMO) Notification

:

~~Where used, restricted audible mode operation (RAMO) shall be designed, installed, and tested in accordance with 18.4.1.8.~~

A18.4.1.8 The intent of RAMO is that it be used for areas where loud sounds may be detrimental to typical occupants of the protected areas, such as early-education classrooms, facilities that service people with Autism Spectrum Disorder or other conditions that include sensitivities to noise, etc. The goal is to ensure that the system signals are effective for the protected area, but that the signals used in RAMO areas are less likely to cause undue distress.

18.4.1.8.1

± –

~~Where maximum sound pressure levels are required for a protected space, this operation shall be referred to as RAMO:~~

Where the risk analysis of a protected area dictates the use of RAMO, or the AHJ requires it, the following shall apply:

18.4.1.8.

2–

1.1 RAMO areas shall be indicated on the project drawings.

18.4.1.8.

3–

1.2 RAMO shall be permitted to be used only where there is constantly

trained, awake and mobile staff in the protected area .

18.4.1.8.

4–

~~RAMO shall not be used in protected areas where people could be sleeping without constantly awake and mobile staff.~~

48

1.3* All audible signals within a RAMO protected area shall be in conformance with Section 18.4.6.3.

A18.4.1.8.

5–

~~Where required by the AHJ, the RAMO system shall be designed, installed, and maintained such that the sound pressure level produced by the RAMO notification appliances throughout the protected space is at least 5 dB above the maximum sound pressure level having a duration of at least 60 seconds, and not more than 20 dB above the average ambient sound pressure level, measured at 5 ft (1.5 m) above the finished floor in the protected space.~~

1.3 Lower frequency audible signals are less obtrusive to people with Autism Spectrum Disorder and people that have sensitivities to higher frequency and louder audible signals. Note that the referenced Section addresses sleeping areas; however, RAMO audible appliances should the capability to produce the 520 Hz +/- 10% signals.

5.1–

~~The minimum sound pressure level produced in the protected area by the RAMO system shall be~~

~~5.1- Audible appliances should the capability to produce the 520 Hz +/- 10% signals.~~

~~The minimum sound pressure level produced in the protected area by the RAMO system shall be 45 dBA.~~

~~18.4.1.8.6 -~~

~~Audible notification appliances for RAMO shall be listed for a minimum of 45 dBA at 10 ft (3 m) on axis.~~

~~48~~

~~1.4* The requirements of Section 18.4.5 shall apply to all RAMO protected areas.~~

~~A18.4.1.8.~~

~~7- RAMO Ramp-Up.~~

~~1.4 Section 18.4.~~

~~1.8.7.1-~~

~~RAMO audible appliances shall be permitted to ramp-up by starting their output cycle at 50 percent of the final volume for the first third of the output cycle.~~

~~18.4.1.8.7.2 -~~

~~RAMO ramp-up shall not be permitted on live paging operation.~~

~~18.4.1.8.7.3 -~~

~~RAMO audible output that use RAMO ramp-up shall be measured at the maximum tone output of the appliance.~~

~~18.4.1.8.8 -~~

~~RAMO areas shall be reviewed annually to determine if the occupancy has changed~~

~~5 is for written for Private Mode, but all of the requirements are applicable to RAMO protected areas. One of the key elements is that the system dB design is lowered from 15 dBA-fast over ambient to 10 dBA-fast and that visual notification appliances are required throughout the RAMO protected areas .~~

~~18.4.1.8.~~

~~9-~~

~~Visual notification appliances shall not be permitted to eliminate audible notification in the protected area~~

~~2 All audible and visual notification signals in a RAMO protected area shall be synchronized with adjoining notification zones .~~

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
72-2025_RAMO_PI_157-158_final_053123ms1.docx	full content in case there are any errors in uploading the update PI 157/158 information	

Statement of Problem and Substantiation for Public Comment

A Task Group was assigned to review PI 157 & 158. TG members consulted with medical and professionals about the audible operations. TG then revised and simplified the original PIs and has submitted this update. This is not new material.

Related Item

- 1st draft report PI 157 & 158

Submitter Information Verification

Organization: Carrier
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Submittal Date: Wed May 31 11:38:01 EDT 2023

Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5065-NFPA 72-2023](#)

Statement: The revision provides the designer with guidance within NFPA 72 for options in areas with Autism Spectrum Disorder individuals, Neurodiverse individuals, and other occupants with sensitivity to sound, light, or other stimuli. RAMO addresses the characteristics of the occupants where ADS addresses the characteristics of the space. Chapter 18 references Chapter 14 for inspection, testing, and maintenance of notification systems. The section was relocated to 18.4.8 to align with other notification mode requirements.



Public Comment No. 195-NFPA 72-2023 [Sections 18.4.1.8, 18.4.1.9]

Sections 18.4.1.8, 18.4.1.9

18.4.1.8* Restricted Audible Mode Operation (RAMO) Notification.

Where used, restricted audible mode operation (RAMO) shall be designed, installed, and tested in accordance with 18.4.1.8.

18.4.1.8.1*

Where maximum sound pressure levels are required for a protected space, this operation shall be referred to as RAMO.

18.4.1.8.2

RAMO areas shall be indicated on the project drawings.

18.4.1.8.3

RAMO shall be permitted to be used only where there is constantly awake and mobile staff.

18.4.1.8.4

RAMO shall not be used in protected areas where people could be sleeping without constantly awake and mobile staff.

18.4.1.8.5

Where required by the AHJ, the RAMO system shall be designed, installed, and maintained such that the sound pressure level produced by the RAMO notification appliances throughout the protected space is at least 5 dB above the maximum sound pressure level having a duration of at least 60 seconds, and not more than 20 dB above the average ambient sound pressure level, measured at 5 ft (1.5 m) above the finished floor in the protected space.

18.4.1.8.5.1

The minimum sound pressure level produced in the protected area by the RAMO system shall be 45 dBA.

18.4.1.8.6

Audible notification appliances for RAMO shall be listed for a minimum of 45 dBA at 10 ft (3 m) on axis.

18.4.1.8.7 RAMO Ramp-Up.

18.4.1.8.7.1

RAMO audible appliances shall be permitted to ramp-up by starting their output cycle at 50 percent of the final volume for the first third of the output cycle.

18.4.1.8.7.2

RAMO ramp-up shall not be permitted on live paging operation.

18.4.1.8.7.3

RAMO audible output that use RAMO ramp-up shall be measured at the maximum tone output of the appliance.

18.4.1.8.8

RAMO areas shall be reviewed annually to determine if the occupancy has changed.

18.4.1.8.9

Visual notification appliances shall not be permitted to eliminate audible notification in the protected area.

18.4.1.9 Maximum Public Mode Audible Levels or where design or actual testing indicates that the public mode audible notification SPL exceeds 45 dB above the average ambient sound pressure level or the maximum sound pressure level having a duration of 60 seconds,

Action:
Statement: The revision provides the designer with guidance within NFPA 72 for options in areas with
Resolution: ~~SR-5065-NFPA-72-2023~~ Autism Spectrum Disorder individuals, Neurodiverse individuals, and other occupants with sensitivity to sound, light, or other stimuli. RAMO addresses the characteristics of the occupants where ADS addresses the characteristics of the space. Chapter 18 references Chapter 14 for inspection, testing, and maintenance of notification systems. The section was relocated to 18.4.8 to align with other notification mode requirements.



Public Comment No. 248-NFPA 72-2023 [Section No. 18.4.1.8.8]

18.4.1.8.8

RAMO areas shall be ~~reviewed annually to determine if the occupancy has changed~~ tested in accordance with Chapter 14 .

Statement of Problem and Substantiation for Public Comment

FR-5352 added annual testing requirements that should be located in Chapter 14 and not in Chapter 18. Public Comment No. 247 has been added to Chapter 14 to cover these RAMO testing requirements as written in FR-5352. Changes to these requirements during the Second Draft should be coordinated with Chapter 14 and the new section 14.4.13.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 247-NFPA 72-2023 [New Section after 14.4.12.3]	Dependent
Public Comment No. 249-NFPA 72-2023 [Section No. 18.4.1.9.1.2]	

Related Item

- FR-5352

Submitter Information Verification

Submitter Full Name: Larry Rietz
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Submittal Date: Wed May 31 19:19:40 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5065-NFPA 72-2023](#)
Statement: The revision provides the designer with guidance within NFPA 72 for options in areas with Autism Spectrum Disorder individuals, Neurodiverse individuals, and other occupants with sensitivity to sound, light, or other stimuli. RAMO addresses the characteristics of the occupants where ADS addresses the characteristics of the space. Chapter 18 references Chapter 14 for inspection, testing, and maintenance of notification systems. The section was relocated to 18.4.8 to align with other notification mode requirements.



Public Comment No. 249-NFPA 72-2023 [Section No. 18.4.1.9.1.2]

18.4.1.9.1.2

Each area where the public mode sound pressure level has been reduced shall be ~~reviewed annually to determine if the application has changed~~ tested in accordance with Chapter 14 .

Statement of Problem and Substantiation for Public Comment

FR-5352 added annual testing requirements that should be located in Chapter 14 and not in Chapter 18. Public Comment No. 247 has been added to Chapter 14 to cover these maximum public mode audible level testing requirements as written in FR-5352. Changes to these requirements during the Second Draft should be coordinated with Chapter 14 and the new section 14.4.14.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 247-NFPA 72-2023 [New Section after 14.4.12.3]	Dependent
Public Comment No. 248-NFPA 72-2023 [Section No. 18.4.1.8.8]	Similar Change

Related Item

- FR-5352

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
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City:
State:
Zip:
Submittal Date: Wed May 31 19:23:24 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5065-NFPA 72-2023](#)
Statement: The revision provides the designer with guidance within NFPA 72 for options in areas with Autism Spectrum Disorder individuals, Neurodiverse individuals, and other occupants with sensitivity to sound, light, or other stimuli. RAMO addresses the characteristics of the occupants where ADS addresses the characteristics of the space. Chapter 18 references Chapter 14 for inspection, testing, and maintenance of notification systems. The section was relocated to 18.4.8 to align with other notification mode requirements.



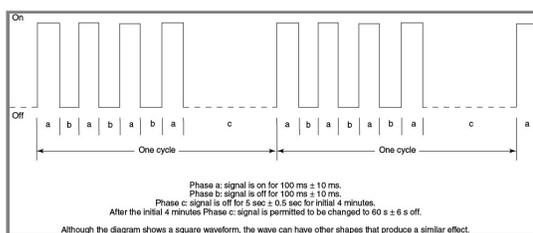
Public Comment No. 20-NFPA 72-2023 [Section No. 18.4.3.2]

18.4.3.2

Where an audible signal is required, the carbon monoxide signal shall be a four-pulse temporal pattern and comply with the following:

- (1) Signals shall be a pattern consisting of four cycles of 100 milliseconds \pm 10 percent "on" and 100 milliseconds \pm 10 percent "off," followed by 5 seconds \pm 10 percent "off," as demonstrated in Figure 18.4.3.2.
- (2) After the initial 4 minutes of the carbon monoxide signal, the 5-second "off" time shall be permitted to be changed to 60 seconds \pm 10 percent.
- (3) The alarm signal shall be repeated in compliance with 18.4.3.2(1) and 18.4.3.2(2) until the alarm resets or the alarm signal is manually silenced.

Figure 18.4.3.2 Temporal Pattern Parameters — Carbon Monoxide Signal.



Additional Proposed Changes

File Name

Description

Approved

NFPA72-18.4.3.2.png

The existing Figure 18.4.3.2 does not reflect the text of 18.4.3.2(1) accurately. Specifically, the text reads: Signals shall be a pattern consisting of four cycles of 100 milliseconds \pm 10 percent "on" and 100 milliseconds \pm 10 percent "off", followed by 5 seconds \pm 10 percent "off", as demonstrated in Figure 18.4.3.2. The figure does not show 4 cycles of "on" and "off" followed by 5 seconds of "off", what the figure does show is 3 cycles of "on" and "off", followed by 100 milliseconds "on", followed by 5 seconds "off". The final 100 milliseconds "off" of the 4th cycle, before the 5 seconds "off", is missing from the figure. The attached image shows the missing 100 milliseconds "off" segment in red.

Statement of Problem and Substantiation for Public Comment

The existing Figure 18.4.3.2 does not reflect the text of 18.4.3.2(1) accurately. Specifically, the text reads:

Signals shall be a pattern consisting of four cycles of 100 milliseconds \pm 10 percent "on" and 100 milliseconds \pm 10 percent "off", followed by 5 seconds \pm 10 percent "off", as demonstrated in Figure 18.4.3.2.

The existing figure does not show 4 cycles of "on" and "off" followed by 5 seconds of "off". What the figure does show is 3 cycles of "on" and "off", followed by 100 milliseconds "on", followed by 5 seconds "off".

The problem is the final 100 milliseconds "off" of the 4th cycle, before the 5 seconds "off", is missing from the figure. The attached image shows the missing 100 milliseconds Phase b "off" segment in red.

Related Item

Submitter Information Verification

Submitter Information Verification

Submitter Full Name: Greg Radion
Organization: AAI
Street Address:
City:
State:
Zip:
Submittal Date: Wed Apr 05 12:20:49 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected
Resolution: The off cycle, C, is 5 seconds and is to remain 5 seconds. There is no technical justification for adding any time to the overall signal. Adding 100 ms to C would increase the overall cycle time.



Public Comment No. 151-NFPA 72-2023 [Section No. 18.5.4]

18.5.4* Appliance Photometrics.

The light output shall comply with the polar dispersion requirements for public mode signaling as described in UL 1638, *Visible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories, or equivalent*.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
Organization: Edwards/ Carrier
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 23 16:39:55 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5058-NFPA 72-2023](#)

Statement: The administrative section of NFPA 72 already addresses equivalencies, therefore it does not need to be addressed in the body of the code.

Statement: The administrative section of NFPA 72 already addresses equivalencies, therefore it does not need to be addressed in the body of the code.



Public Comment No. 152-NFPA 72-2023 [Section No. 18.5.5.9.1]

18.5.5.9.1

Any design that provides a minimum of 0.0375 lumens/ft² (0.4036 lumens/m²) of illumination at any point within the covered area at all angles specified by the polar dispersion planes for wall- or ceiling-mounted public mode visual notification appliances in UL 1638, *Visible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories*, ~~or equivalent~~, ~~as~~ as calculated for the maximum distance from the nearest visual notification appliance, shall be permitted in lieu of the requirements of 18.5.5, excluding 18.5.5.10.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
Organization: Edwards/ Carrier
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 23 16:41:24 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR
Statement: The administrative section of NFPA 72 already addresses equivalencies, therefore it
Resolution: ~~SR 5061-NFPA 72-2023~~ addressed in the body of the code.

Action: The administrative section of NFPA 72 already addresses equivalencies, therefore it
Resolution: ~~§ 5061 of NFPA 72-2022~~ addressed in the body of the code.



Public Comment No. 153-NFPA 72-2023 [Section No. 18.5.5.9.2.1]

18.5.5.9.2.1

Documentation provided to the authority having jurisdiction shall include the inverse square law calculations using each of the vertical and horizontal polar distribution angles in UL 1638, *Visible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories, or equivalent*.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
Organization: Edwards/ Carrier
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 23 16:44:57 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5062-NFPA 72-2023](#)
Statement: The administrative section of NFPA 72 already addresses equivalencies, therefore it does not need to be addressed in the body of the code.

does not need to be addressed in the body of the code.



Public Comment No. 154-NFPA 72-2023 [Section No. 18.5.5.9.2.2]

18.5.5.9.2.2

The inverse square law calculations shall account for the effects of polar distribution using one of the following:

- (1) The percentages from the applicable table(s) in UL 1638, *Visible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories*, or equivalent
- (2) The actual results of laboratory tests of the specific appliance to be used as recorded by the listing organization

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
Organization: Edwards/ Carrier
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 23 16:46:18 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee: Rejected but see related SR
Resolution: [SR-3063-NFPA 72-2023](#)
Action:
Statement: The administrative section of NFPA 72 already addresses equivalencies, therefore it does not need to be addressed in the body of the code.

Resubmitter: [Rejected but see related SR](#)

Action:

Statement: The administrative section of NFPA 72 already addresses equivalencies, therefore it does not need to be addressed in the body of the code.



Public Comment No. 155-NFPA 72-2023 [Section No. 18.10.2]

18.10.2* Performance.

Tactile appliances shall meet the performance requirements of UL 1971, *Signaling Devices for the Hearing Impaired*, or equivalent.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
Organization: Edwards/ Carrier
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 23 16:48:16 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5064-NFPA 72-2023](#)
Statement: The administrative section of NFPA 72 already addresses equivalencies, therefore it does not need to be addressed in the body of the code.



Public Comment No. 98-NFPA 72-2023 [Section No. 21.1.1]

21.1.1

The requirements of this chapter shall not apply to Chapter 29 unless otherwise stated of Chapter 11 shall apply, unless otherwise noted .

Statement of Problem and Substantiation for Public Comment

Section 1.3.5 does not reference Chapter 11.

Related Item

- FR 5229

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 10:26:32 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Rejected

Resolution: The committee eliminated the reference to all chapters with FR-5229 with the following comment "This section is redundant with 1.3.5, therefore it is deleted. Renumber subsequent section." The submitter should have used the FR-5229 to change 1.3.5 rather than add it to the Chapters. Additionally, no reason was provided for the elimination of "of this chapter shall not apply to Chapter 29 unless otherwise stated".



Public Comment No. 214-NFPA 72-2023 [Section No. 21.2.1]

21.2.1*

Emergency control functions shall be automatic unless otherwise permitted by other governing laws, codes, standards, or sections of this document.

Statement of Problem and Substantiation for Public Comment

FR-5230 accidentally omitted the word "otherwise" in the statement. The added word makes the statement clear and is in line with multiple other provisions throughout NFPA 72 where the phrase used is "unless otherwise permitted" is used some 33 times. The phrase "unless permitted otherwise" is not used in NFPA 72. The word 'otherwise' was included in the Committee Statement, but did not make it into the FR language.

Related Item

- FR-5230

Submitter Information Verification

Submitter Full Name: Larry Rietz

Organization: Jensen Hughes

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 13:58:53 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Accepted

Resolution: [SR-5002-NFPA 72-2023](#)

Statement: The revision corrects a typographical error from the First Draft to use language that is consistent throughout NFPA 72.



Public Comment No. 97-NFPA 72-2023 [Section No. 21.2.4.1]

21.2.4.1

~~Emergency~~ Unless otherwise permitted by 21.2.4.2, emergency control function interface devices shall be located as follows:

- (1) Within 3 ft (0.9 m) of the component controlling the emergency control function where conductors are not installed in metal raceway or metal armored cables
- (2) Within 20 ft (6 m) of the component controlling the emergency control function where conductors are installed in metal raceway or metal armored cables

Statement of Problem and Substantiation for Public Comment

As currently written, 21.2.4.2 conflicts with 21.2.4.1.

Related Item

- FR 5005

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 10:20:45 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Rejected

Resolution: The statements 21.2.4.1 and 21.2.4.2 are not in conflict. Class D circuits are not required to meet the requirements of parts 1 and 2 of 21.2.4.1.



Public Comment No. 219-NFPA 72-2023 [Section No. 21.3.8]

21.3.8*

When sprinklers are required in elevator hoistways by other codes and standards, the following shall apply:

- (1) Fire alarm initiating devices shall be installed to initiate Elevator Phase I Emergency Recall Operation in accordance with ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.
- (2) Outputs from the fire alarm system to the elevator system shall comply with 21.3.14.
- (3) The fire alarm initiating device(s) shall be installed in accordance with Chapter 17.
- (4) Where sprinklers are located at the top of the hoistway, associated fire detection device(s) shall be located at the top of the hoistway.
- (5) Where sprinklers are located at the bottom of the hoistway (the pit), associated fire detection device(s) shall be ~~installed in the pit~~ located at the bottom of the hoistway .

Statement of Problem and Substantiation for Public Comment

FR-5013 revised the language of item (5). In doing so, it shows a clear difference in the language used in item (4) where the fire device is "located at the top of the hoistway" while item (5) says the fire device is "installed in the pit". The more accurate term is "located at the bottom of the hoistway". It should be noted that NFPA 72 has no installation location instructions for mounting a smoke detector at the bottom of the hoistway, either in Chapter 17 or 21. ASME A17.1 also does not provide installation location information for smoke detectors. NFPA 13 states that sprinkler heads should be located "not more than 24" from the bottom of the hoistway", and NFPA 72 21.4.2 states that heat detectors must be placed "within 24" of each sprinkler". So, while 21.3.8 item (5) says that fire devices shall be located at the bottom of the hoistway, NFPA 72 is silent on what that actually means.

Related Item

- FR-5013

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 15:20:49 EDT 2023
Committee: SIG-PRO

Committee Statement

Committee Action: Rejected
Resolution: The bottom of the hoistway as referred to in this section refers to the pit, therefore no changes are required.



Public Comment No. 232-NFPA 72-2023 [Section No. 23.3.5.2.4]

23.3.5.2.4

In facilities not required to have a building fire alarm system, suppression systems shall be permitted to be connected to ~~the~~ a dedicated function fire alarm system.

Statement of Problem and Substantiation for Public Comment

This new language was added by FR-5030. However, it used the phrase "to the dedicated fire alarm control unit". The more accurate term is the one used throughout NFPA 72, which is "to a dedicated fire alarm control unit". This will more closely match the existing requirements in 23.8.5.5.1 and 23.8.5.6.1, and others.

Related Item

- FR-5030

Submitter Information Verification

Submitter Full Name: Larry Rietz

Organization: Jensen Hughes

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 16:20:48 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Accepted

Resolution: [SR-5003-NFPA 72-2023](#)

Statement: The revision editorially corrects 'the dedicated function fire alarm system' to 'a dedicted function fire alarm system.' This will more closely match the existing requirements in 23.8.5.5.1 and 23.8.5.6.1, and others.



Public Comment No. 99-NFPA 72-2023 [Section No. 23.8.1.2.1.1]

23.8.1.2.1.1

The positive alarm sequence operation shall comply with the following:

- (1) To initiate the positive alarm sequence operation, unless otherwise permitted by 23.8.1.2.1.3, the signal from an automatic fire detection device selected for positive alarm sequence operation shall be acknowledged at the fire alarm control unit by qualified authorized or qualified emergency personnel within 15 seconds of annunciation.
- (2) If the signal is not acknowledged within 15 seconds, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately actuated.
- (3) If the positive alarm sequence operation is initiated in accordance with 23.8.1.2.1.1(1), qualified authorized or qualified emergency personnel shall have an alarm investigation phase of up to 180 seconds to evaluate the fire condition and reset the system.
- (4) If the system is not reset during the alarm investigation phase, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately actuated.
- (5) If a second automatic fire detector selected for positive alarm sequence is actuated during the alarm investigation phase, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately actuated.
- (6)* If any other fire alarm initiating device is actuated, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately actuated.

Statement of Problem and Substantiation for Public Comment

The requirement for authorized or emergency personnel to be qualified should not have been deleted. NEMA recommends that the technical committee define how qualification is established for positive alarm sequence alarm acknowledgement and investigation (e.g., training, skills, certification, etc.) as exemplified by 10.5.

Related Item

- FR 5040

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 10:32:44 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Rejected

Action: Qualified as defined in Chapter 3 requires approval of the AHJ. The authorized person is not required to be approved by the AHJ to perform this specific function. However, PAS is required to be approved by the AHJ. Adding the word 'qualified' in front of 'authorized'

Resolution: Qualified as defined in Chapter 3 requires approval of the AHJ. The authorized person is not required to be approved by the AHJ to perform this specific function. However, PAS is required to be approved by the AHJ. Adding the word 'qualified' in front of 'authorized' and 'emergency personnel' could cause confusion.



Public Comment No. 100-NFPA 72-2023 [Section No. 23.8.2.6.1]

23.8.2.6.1

~~All~~ Unless otherwise permitted by 23.8.2.6.2, all signal control and transport equipment (such as routers and servers) located in a critical fire alarm or emergency control function interface device signaling path shall be listed for fire alarm service.

Statement of Problem and Substantiation for Public Comment

As currently written without "unless otherwise permitted", 23.8.2.6.2 conflicts with 23.8.2.6.1.

Related Item

- FR 5046

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 10:38:08 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Rejected

Resolution: Sections 23.8.2.6.1 and 23.8.2.6.2 are not in conflict. 23.8.2.6.2 is clear that if all of the conditions 1-6 are met compliance to 23.8.2.6.1 is not required.



Public Comment No. 101-NFPA 72-2023 [Section No. 23.8.2.11.3]

23.8.2.11.3

Remote access shall be permitted for testing and maintenance activities, including resetting, silencing, or operation of emergency control functions provided all of the following are met:

- (1)* The system shall provide a means to manually terminate the remote access connection at the remote device and at the fire alarm or signaling system control unit at any time.
- (2)* Remote access shall be automatically terminated within a maximum of 1 hour of inactivity in the remote access mode.
- (3) Resetting, silencing, or operation of emergency control functions shall be limited to portion(s) of the system taken out of service.
- (4) Authorized and qualified service personnel shall be on-site to enable resetting, silencing, and operation of emergency control functions at the affected system(s) by password or limited access.

Statement of Problem and Substantiation for Public Comment

The requirement for authorized personnel to be qualified should not have been deleted. Qualifications for service personnel are contained in 10.5.

Related Item

- FR 5055

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 10:41:58 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Rejected

Resolution: Qualified as defined in Chapter 3 requires approval of the AHJ. The authorized service personnel are not required to be approved by the AHJ to perform this specific function.



Public Comment No. 137-NFPA 72-2023 [Section No. 24.2.2]

24.2.2

This chapter shall establish minimum required levels of performance, reliability, and quality of installation for ECSs but does not establish the only methods by which these requirements are to be achieved.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._35.pdf	NFPA 72 Correlating Note No. 35	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 35 appeared in the First Draft Report on First Revision No. 5293.

It is not intended that Chapter 24 establishes the only methods by which these the requirements are to be achieved. However, "But does not establish the only method by which these requirements are to be achieve." Does not provide guidance as to how other methods are acceptable to the code. The language needs to be corrected according to the manual of style and vague or open-ended requirements need to be cleaned up to provide clear guidance as to the committee's intent. The technical committee is directed to review the language of 24.2.2 for enforceability and clarity.

Related Item

- FR - 5293

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 23 09:44:33 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5073-NFPA 72-2023](#)

Statement: This revision removes vague and unenforceable language and added Annex A language to provide a direction to have unique items considered by the risk analysis.



Public Comment No. 138-NFPA 72-2023 [Section No. 24.2.3]

24.2.3

An ECS shall communicate information about emergencies-~~including~~ .

A.24.2.3

Emergencies include , but are not limited to, fire, human-caused events (accidental and intentional), other dangerous situations, accidents, and natural disasters.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._34.pdf	NFPA 72 Correlating Note No. 34	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 34 appeared in the First Draft Report on First Revision No. 5294.

Review the language of 24.2.3. The NFPA Manual of Style requires examples to be located in the Annex. Non-mandatory guidance language such as examples should be relocated to the Annex to comply with the NFPA Manual of Style. Consider revisions to this section, such as: "24.2.3* An ECS shall communicate information about emergencies.

A.24.2.3 Emergencies include, but are not limited to, fire, human-caused events(accidental and intentional), other dangerous situations, accidents, and natural disasters."

Related Item

- FR - 5294

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 23 09:50:44 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5071-NFPA 72-2023](#)

Statement: This revision moves examples from the mandatory text to the annex to comply with the Manual of Style.

includes the thought of accidents human-caused events and thus the word is red. This is the only use of the word "accidents" can only be determined as to whether the intent of an ECS is to address hazards to life and property whether they are accidental or

Provides the thought of accidents human caused events and the word is red. This is also an event that is an "accident" can only be determined as such after the fact and the intent of an ECS is to address hazards to life and property whether they are accidental or not.

Second, the term "natural disasters" is inappropriate, as a disaster can really only be determined after the fact. Rather, this term is replaced with 'natural hazards' as this more closely relates to an event that an ECS should communicate information about, whether it is ultimately deemed to be a disaster or not. This new language more closely aligns with the Risk Analysis Checklist provided in A.7.3.6.



Public Comment No. 78-NFPA 72-2023 [Section No. 24.2.3]

24.2.3

An ECS shall communicate information about emergencies including, but not limited to, fire, human-caused events (accidental and intentional), natural hazards, and other dangerous situations, ~~accidents, and natural disasters~~.

Statement of Problem and Substantiation for Public Comment

This paragraph was changed by Correlating Committee Note No. 34 and FR-5294. Upon review of the revised text shown in FR-5294, it became apparent that a few more edits are necessary. First, it is not the intent of an ECS to communicate information about “accidents”. This is the only use of the word “accidents” in the body of NFPA 72. The sentence already includes the thought of accidental human-caused events, and thus the word is redundant. Also, an event that is an “accident” can only be determined as such after the fact and the intent of an ECS is to address hazards to life and property whether they are accidental or not. Second, the term “natural disasters” is inappropriate, as a disaster can really only be determined after the fact. Rather, this term should be replaced with ‘natural hazards’ as this more closely relates to an event that an ECS should communicate information about, whether it is ultimately deemed to be a disaster or not. This new language more closely aligns with the Risk Analysis Checklist provided in A.7.3.6.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 79-NFPA 72-2023 [Section No. 3.3.267]</u>	
<u>Public Comment No. 80-NFPA 72-2023 [Section No. A.23.6.3.8]</u>	

Related Item

- FR-5294 • Correlating Committee Note No. 34

Submitter Information Verification

Submitter Full Name: Larry Rietz
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City:
State:
Zip:
Submittal Date: Mon May 15 18:16:20 EDT 2023
Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5071-NFPA 72-2023
Statement: This revision moves examples from the mandatory text to the annex to comply with the Manual of Style.

First, it is not the intent of an ECS to communicate information about “accidents”. This is the only use of the word “accidents” in the body of NFPA 72. The sentence already includes the thought of accidental human-caused events, and thus the word is redundant. Also, an event that is an “accident” can only be determined as such after the fact and the intent of an ECS is to address hazards to life and property whether they are accidental or not.

First, it is not the intent of an ECS to communicate information about "accidents." This is the only use of the word "accidents" in the body of NFPA 72. The standard already and the intent of an ECS is to address hazards to life and property whether they are accidental or not.

Second, the term "natural disasters" is inappropriate, as a disaster can really only be determined after the fact. Rather, this term is replaced with 'natural hazards' as this more closely relates to an event that an ECS should communicate information about, whether it is ultimately deemed to be a disaster or not. This new language more closely aligns with the Risk Analysis Checklist provided in A.7.3.6.



Public Comment No. 209-NFPA 72-2023 [Section No. 24.3.1.2]

24.3.1.2*

~~Where listed loudspeakers do not achieve the intelligibility requirements of the Code for a notification zone, non-listed loudspeakers shall be permitted to be installed to achieve the intelligibility for that notification zone~~

PI to update 24.3.1.2:

24.3.1.2* Loudspeakers, amplifiers, control and all associated equipment utilized for ECS shall be Listed or Certified for their intended use and application.

A24.3.1.2 When ECS was first being developed, in some cases, it was difficult to achieve intelligibility with loudspeaker appliances and equipment that were commercially available and Listed/Certified for their intended use. Due to that condition, it was permitted at the time to allow non Listed loudspeakers to be use. That has changed and there are now multiple Listed/Certified solutions in the market. With this change in availability, this section of the Code was changed in the 2025 version to return back to using only Listed/Certified appliances and equipment to ensure that systems are as reliable as possible. Also, the entire audio chain and the installed environment, not just the loudspeakers must be evaluated to achieve intelligibility and required system performance .

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
72-2025_update_for_Listed_appliances_053123ms1.docx	full text of PI in case there was an error updating Terra	

Statement of Problem and Substantiation for Public Comment

Listed and Certified equipment is now readily available from multiple vendors and should be used to help ensure system reliability and performance. In addition, in order to achieve intelligibility and required system audible performance, the entire audio chain from source(s), amplifiers, control equipment, wiring and loudspeakers, along with the acoustical environment must be evaluated. The previous version of the Code could be interpreted such that if one used a non-Listed loudspeaker in an ECS, that alone would allow one to achieve intelligibility, which is not the case. The proposed revisions to 24.3.1.2 update the Code to the markets and the new Annex material provides information to the design professionals and code officials on the fact that the systems must be looked at in their entirety.

Related Item

- Updating of 24.3.1.2

Submitter Information Verification

Submitter Full Name: Morris Stoops
Organization: Carrier
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Submittal Date: Wed May 31 11:54:12 EDT 2023
Committee: SIG-ECS

Committee Statement

Committee Rejected but held

Committee Statement SIG-EGS

Committee Action: Rejected but held

Resolution: This proposed change is new material and should be considered during the next revision cycle. A task group will be formed to review this and make recommendations for the next revision cycle.



Public Comment No. 251-NFPA 72-2023 [New Section after 24.3.10]

Insert after 72-2022 24.3.9 and before 23.3.10. Renumber subsequent sections. This PI updated PI 543 from the 1st draft

Insert after 72-2022 24.3.9 and before 23.3.10. Renumber subsequent sections. This PI updated PI 543 from the 1st draft

24.3.10 Audio Notification Appliance Circuits (ACNAC)

24.3.10.1 Audio Notification Appliance Circuits (ACNACs) that will have loudspeakers connected to them shall be designed and installed as follows:

24.3.10.1.1* Audio NACs (ACNACs) shall be designed for a maximum of 1.0 dB electrical loss.

24.3.10.1.1.1 The ACNAC shall be designed and installed to account for all electrical adjustments (loss or gain) from the primary audio source, through all circuit wiring, any Control Unit (CU) circuitry and any Control Module (CM) circuitry to the last loudspeaker on the circuit.

24.3.10.1.2* Module Insertion Adjustment (MIA) for ACNAC CMs, when used, shall be factored into each circuit.

24.3.10.1.3* CMs shall be permitted to be dually rated for MIA and Module Voltage Adjustment (MVA) when the modules are designed and Listed/Certified for ACNACs and DC NACs (DCNAC).

24.3.10.1.4 All wiring for ACNACs shall be designed for a minimum of 167 F (75C), or the expected circuit operating temperature if the circuit will be subjected to temperatures above 167 F (75C).

24.3.10.1.5 ACNACs shall be designed based on one of the following:

24.3.10.1.5.1 End-Line-Loaded (ELL), where all the load is calculated to be at the end of the circuit.

24.3.10.1.5.2 Point-To-Point (PTP), where the load is distributed between different points on the circuit and each segment is accounted for in the overall circuit calculation.

A24.3.10.1.1

ACNACs, when active, use alternating current (ac) derived from an audio amplifier and are typically designed for a 1 or 0.5 electrical dB loss. The following example is for a circuit designed for a 0.5 dB loss:

dB circuit loss = (20*LOG10(Load Impedance/(Load Impedance + Circuit Resistance))))

- **Load Impedance = Circuit Voltage ² /Circuit Wattage**

An example of this dB circuit loss for a 70.7 Vrms system with a 19.2 watt load on 16 AWG stranded wire would work out to be:

-0.15738=20*LOG10(260.338/(260.338+4.76))

Where the Load Impedance is calculated to be:

260.338=70.7 ² /19.2

To calculate wire length based on a given load, the following calculations can be used:

Where:

$$R_L = \frac{V^2}{P} = \text{Load Resistance (W)}$$

V = Amplifier output voltage (V)

P = Power in Load (W)

R_w = Wire resistance

To solve for wire r Wire resistance (RW) is converted to wire length as follows:



To solve for wire r Wire resistance (RW) is converted to wire length as follows:

$$D = \frac{R_w}{R_{/1000' \text{ pair}}} \times 1000$$

Where:

D = Distance in feet.

R_w = Maximum allowable wire resistance.

R/1000' pair = wire resistance per 1000'pair.

For a 0.5 dB loss calculation, the above equations may be simplified to:

$$\text{Max length} = \frac{59.25 \times \text{Amplifier output}^2}{\text{Wire resistance} \times \text{Circuit load}}$$

where:

- Amplifier output is the signal level in VRMS supplied by the amplifier driving the circuit
- Circuit load is the total watts required by the audio circuit
- Wire resistance is the resistance rating of the wire per 1000 ft pair

For 25.2 Vrms systems, the equation works out to be:

Maximum Circuit length based on the wire resistance =

$$59.25 \times 635$$

(Wire resistance x Circuit load)

For 70.7 Vrms systems, the equation works out to be:

Maximum Circuit length based on the wire resistance =

$$59.25 \times 4998$$

(Wire resistance x Circuit load)

A24.3.10.1.1

Control Modules. These typically field-installed (not integrated directly into Control Units) addressable control modules (CM) provide electrical supervision of the ACNAC and/or may provide some control of the audio power riser coming into the CM. Any module or device that is in the power riser electrical path or that may impact the performance of the riser must be accounted for in the system design and installation. Other examples of CMs may be, but are not limited to:

- **Relays**
- **Coders**
- **Supervision**
- **Synchronization**

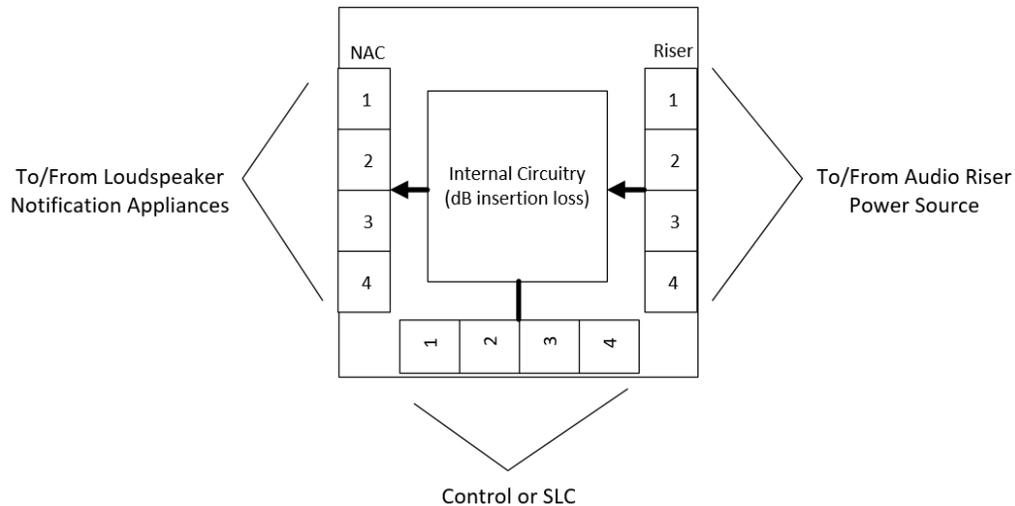
A24.3.10.1.2

Figure J provides a block diagram of the internal sections of a ACNAC CM. For ANACs, this is expressed as MIA.

Figure J – ANAC CM Internal Block Diagram

**Audio Notification
Appliance Circuit Control**

Audio Notification Appliance Circuit Control Module



For a CM on an ACNAC, the dB insertion loss is added to the circuit total dB loss.

A24.3.10.1.5

Line Loss Calculations: This is the key design factor. There are two acceptable methods. They are:

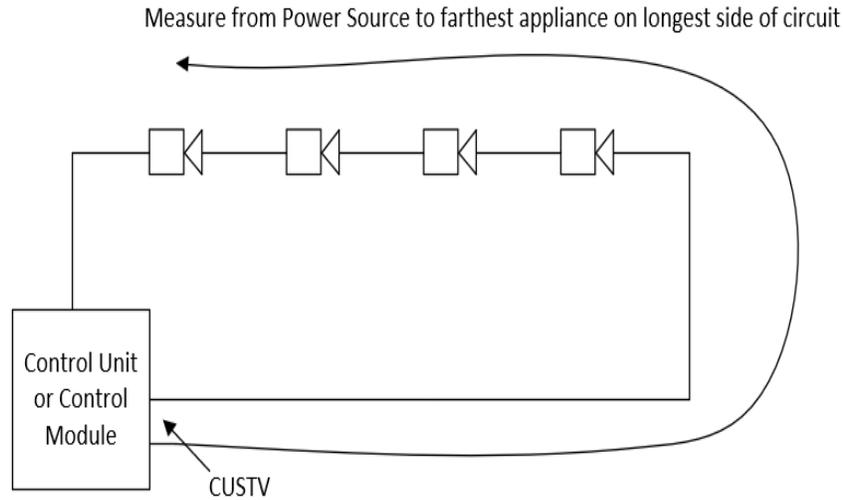
- **End Line Loading - (ELL) this assumes that all the appliances are at the end of the circuit and are activated at one time. This is the most conservative method and is the recommended design method for all systems.**
 - **ELL circuits are designed and tested based on the total circuit resistance and loss.**
- **Point-To-Point - (PTP) this method requires that the designer know the exact wire distance between each and every appliance. If the installed values are different than the design values, the circuit may not work correctly. This method requires close coordination with the design and field work.**
 - **PTP circuits are designed based on the individual segment and tested on total resistance and loss.**

The following diagram depicts how to measure the circuit length for a Class A NAC:

Class A Measurement For Circuit Length

Class A Measurement For Circuit Length

053123ms1



The following diagram depicts the overall power flow and areas of concern for a system:

Note – if the audio power riser is altered by the CM as the audio power comes in/out of the CM, that adjustment also needs to be included in the calculations.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72-2025_AC_NACS_for_C24_053123ms1.docx	New audio circuit calculation section	

Statement of Problem and Substantiation for Public Comment

Adding new section to clarify how to calculate Audio Notification Appliance Circuits (ACNACS). This section correlates to the DC-powered NACS (DCNACS) in Chapter 18 - PI 244. Goal is to standardize how ACNACS are calculated so that the design, authority, installation and related communities are all using the same methods.

Related Item

- Correlating NAC calcs for C24 to that of C18

Submitter Information Verification

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Committee: SIG-ECS
Submittal Date: Wed May 31 19:53:41 EDT 2023

Committee: SIG-ECS

Submittal Date: Wed May 31 19:53:41 EDT 2023

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5090-NFPA 72-2023](#)

Statement: Added new section to clarify how to calculate Audio Notification Appliance Circuits (A-NACS). The goal is to standardize how A-NACS are calculated so that the design, authority, installation, and related communities are all using the same methods. Specific requirements are provided for how to prepare and submit voltage drop calculations because vertical lengths and actual conduit lengths are frequently left out of voltage drop calculations. This will help to standardize the review process.

The correlating committee should correlate this with the work done by SIG NAS in Chapter 18. SIG ECS recommends relocation of both sections to Chapter 7 or Chapter 10.

Correlating committee should consider taking all of the calculation procedures in the code and relocating them into a chapter for the 2028 edition.



Public Comment No. 171-NFPA 72-2023 [Section No. 24.3.12.11]

24.3.12.11

The risk analysis shall consider cybersecurity risks in accordance with Chapter 11 and 7.3.6.

Statement of Problem and Substantiation for Public Comment

The FR changes to chapter 11 do not provide specific guidance for a Cybersecurity Risk Assessment. However, new FR annex material in A.7.3.6 does provides specific Cybersecurity Risk Analysis guidance. Adding the reference to Chapter 7 Risk Analysis Documentation increases the cohesiveness of Risk Analysis across the document.

Related Item

- FR-5192

Submitter Information Verification

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Submittal Date: Thu May 25 12:17:28 EDT 2023
Committee: SIG-ECS

Committee Statement

Committee Action: Accepted
Resolution: [SR-5075-NFPA 72-2023](#)
Statement: The first draft changes to chapter 11 do not provide specific guidance for a Cybersecurity Risk Assessment. However, new first draft annex material in A.7.3.6 does provides specific Cybersecurity Risk Analysis guidance. Adding the reference to Chapter 7 Risk Analysis Documentation increases the cohesiveness of Risk Analysis across the document.



Public Comment No. 139-NFPA 72-2023 [Section No. 24.4.1.2]

24.4.1.2

If acceptable to the authority having jurisdiction, the system shall permit the following:

- (1) Application of an automatic evacuation signal to one or more signaling zones
- (2) Manual voice paging to the other signaling zones selectively or in any combination

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._36.pdf	NFPA 72 Correlating Note No. 36	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 36 appeared in the First Draft Report on First Revision No. 5303.

Review the revised language of Section 24.4.1.2. The Manual of Style revision removed the words "at the same time" which appears to have changed the technical requirement. The language was revised to comply with the manual of style, however the technical meaning may have changed with the removal of the words, "at the same time." The previous language permits the automatic evacuation signal to one or more zones, and at the same time, permits manual paging to other signaling zones. The current language does not indicate that these should be able to be accomplished at the same time.

Related Item

- FR - 5303

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

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Submittal Date: Tue May 23 10:02:49 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5076-NFPA 72-2023

Statement: The revision corrects an inadvertent change in the first draft that removed the possibility of both operations at the same time.



Public Comment No. 108-NFPA 72-2023 [Section No. 24.4.8.3.2]

24.4.8.3.2*

When the message is recorded, the repeated message sequence of 24.4.8.3.1 shall itself be repeated after a pause as established by the ~~facility fire~~ emergency plan and approved by the authority having jurisdiction not to exceed 180 seconds, until manually silenced or reset by emergency personnel or automatically silenced .

Statement of Problem and Substantiation for Public Comment

Section 18.4.2.3 permits automatically silencing of the evacuation signal, so it should not be deleted here.

Section 24.4.8 specifically refers to relocation and partial evacuation during a fire condition. The fire emergency plan and not the facility emergency plan is the correct reference in this case.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 109-NFPA 72-2023 [Section No. A.24.4.8.3.2]	
Public Comment No. 109-NFPA 72-2023 [Section No. A.24.4.8.3.2]	

Related Item

- FR 5262

Submitter Information Verification

Submitter Full Name: Megan Hayes
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Submittal Date: Wed May 17 11:25:54 EDT 2023
Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5080-NFPA 72-2023](#)
Statement: These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.



Public Comment No. 123-NFPA 72-2023 [Section No. 24.4.8.3.2]

24.4.8.3.2*

When the message is recorded, the repeated message sequence of 24.4.8.3.1 shall itself be repeated after a pause ~~as established by the~~. The length of the pause is determined by the facility emergency plan in consideration of the purpose of the building and its intended occupants with:

- 1) a pause time of up to 180 seconds, or
- 2) another pause time approved by the authority having jurisdiction ~~not to exceed 180 seconds, until manually silenced or reset by emergency personnel.~~

24.4.8.3.3*

The repeated message sequence is to be continued until silence or reset in accordance with 18.4.2.2-18.4.2.3, 23.8.2.9-23.8.2.10, 24.4.5.7 (3), 24.11.1.7, and 24.11.3.

Statement of Problem and Substantiation for Public Comment

This section has multiple requirements in one section, so it is being separated to comply with Manual of Style.

In determining the pause time between message sequences, consideration of the type of facility and its occupants (particularly for facilities intended for those with disabilities or special needs), staff training, the specific reason for partial evacuation or relocation, and the intended emergency response, drives the pause length decision. The guidance of up to 180 seconds was considered by the technical committee to represent a range that would support a majority of circumstances. However, in consideration of the diversity possible within the special needs communities, and to accommodate flexibility in the emergency response plans, the allowance provided to the AHJ to approve other times is intended to make it clear to AHJs that circumstances may exist where other times are appropriate. By providing this option, we are empowering AHJs to consider special cases.

The word “maximum” was removed for clarity because it was contradictory with the option for the AHJ to consider other times that could be longer.

The code generally requires manual silence or reset by authorized personnel. However, the code also requires automatic silencing of recorded messages after a manual/live page. The code allows for circumstances where silencing operations could be conducted remotely (i.e., an emergency command center). The code allows for circumstances where an emergency command center could control output devices automatically, and based on a risk analysis, change the messages. The references to these parts of the code are intended to make the reader aware of various situations that could impact the silencing of messages.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 36-NFPA 72-2023 [Section No. A.24.4.8.3.2]	
<u>Related Item</u>	
• FR-5262	

Submitter Information Verification

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Submittal Date: Thu May 18 12:30:10 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR

Resolution:

[SR-5080-NFPA 72-2023](#)

Statement:

These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.



Public Comment No. 140-NFPA 72-2023 [Section No. 24.4.8.3.2]

24.4.8.3.2*

When the
 For a message that is recorded, the
 repeated message
 following shall apply:

(1) The sequence of 24.4.8.3.1 shall
 itself
 be repeated after a pause

as
 , not to exceed 180seconds, until manually silenced or reset by emergency personnel.

(2) The length of the pause shall be established by the facility emergency plan and approved by
 the authority having jurisdiction

~~not to exceed 180 seconds, until manually silenced or reset by emergency personnel~~

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._37.pdf	NFPA 72 Correlating Note No. 37	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 37 appeared in the First Draft Report on First Revision No. 5262.

Review the language of section 24.4.8.3.2. During the editorial review, editors had recommended changes to this section to make the language easier to understand by separating the existing language into a list of two items, such as: "24.4.8.3.2*

For a message that is recorded, the following shall apply:

- (1) The sequence of 24.4.8.3.1 shall be repeated after a pause, not to exceed 180seconds, until manually silenced or reset by emergency personnel.
- (2) The length of the pause shall be established by the facility emergency plan and approved by the authority having jurisdiction."

Related Item

- FR - 5262

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC
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Committee: SIG-ECS

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Submittal Date: Tue May 23 10:13:21 EDT 2023
Zip:
Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5080-NFPA 72-2023](#)

Statement: These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.



Public Comment No. 42-NFPA 72-2023 [Section No. 24.4.8.3.2]

24.4.8.3.2*

When the message is recorded, the repeated message sequence of 24.4.8.3.1 shall itself be repeated

1. after a pause as established by the facility emergency plan in consideration of the occupancy type and emergency response and approved by the authority having jurisdiction- ~~not to exceed 180 seconds~~;

2. until manually silenced or manually reset by emergency personnel.

Statement of Problem and Substantiation for Public Comment

The NFPA Disability Access Review Advisory Committee (DARAC) supplies this Public Comment to address the following concerns:

- List format to comply with the NFPA Manual of Style (MOS).
- 180 seconds is not established in any research as an appropriate maximum time.
- In some cases, the time should be less than 180 seconds, and while the language does not prohibit shorter times, inserting one specific pause time does not support the notion of evaluating each case on its own circumstances.
- The AHJ must approve emergency message contents already (24.3.6.1.2), so establishing a pause time with stakeholders and approving that along with the message should be encouraged.
- For emergency personnel to reset an alarm is a manual process, but the wording applies the word “manually” only to the silence operation potentially creating a language conflict.

Related Item

- FR 5262

Submitter Information Verification

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City:
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Submittal Date: Thu Apr 27 14:14:43 EDT 2023
Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5080-NFPA 72-2023
Statement: These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.



Public Comment No. 243-NFPA 72-2023 [Section No. 24.4.8.5]

24.4.8.5.1

Where provided, loudspeakers in each enclosed stairway, each exit passageway, each occupant evacuation elevator lobby, and each group of elevator cars within a common hoistway or bank shall be connected to separate notification zones for manual paging only.

24.4.8.5.1 2

The evacuation signal specified in 18.4.2 shall not operate in elevator cars, exit stair enclosures, and exit passageways.

24.4.8.5.2 3

Manually activated loudspeakers shall be permitted in exit stair enclosures, exit passageways, and elevators in buildings that have emergency voice/alarm communications systems in accordance with Section 24.4.

24.4.8.5.3

Where required by other governing laws, codes, or standards, loudspeakers shall be provided in locations specified in 24.4.8.5.1 through 24.4.8.5.

~~4~~

~~Loudspeakers shall conform to Section 24.4.3.~~

Statement of Problem and Substantiation for Public Comment

FR-5304 made a manual of style change that placed 24.4.8.5.3 as a stand-alone statement that stated "Where required by other governing laws, codes, or standards, loudspeakers shall be provided in locations specified in 24.4.8.5". This now seems out of place and would be better placed as the charging statement located at 24.4.8.5. Then the new 24.4.8.5 will reference and renumber the existing 24.4.8.5 as 24.4.8.5.1, and the two following statements as 5.2 and 5.3 accordingly. The existing 24.4.8.5.4 is out of place and Public Comment 241 has moved this statement to 24.4.6.3. This change will allow the text to flow more accurately.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 241-NFPA 72-2023 [Section No. 24.4.8.5.4]	Dependent
<u>Related Item</u>	
• FR-5304	

Submitter Information Verification

Submitter Full Name: Larry Rietz
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Submittal Date: Wed May 31 17:03:01 EDT 2023
Committee: SIG-ECS

Committee Action: Rejected but see related SR

Committee Action: Rejected but see related SR
Committee Statement**Resolution:** [SR-5083-NFPA 72-2023](#)**Statement:** The first draft made a manual of style change that placed 24.4.8.5.3 as a stand-alone statement that stated "Where required by other governing laws, codes, or standards, loudspeakers shall be provided in locations specified in 24.4.8.5". This now seems out of place and would be better placed as the charging statement located at 24.4.8.5. Then the new 24.4.8.5 will reference and renumber the existing 24.4.8.5 as 24.4.8.5.1, and the two following statements as 5.2 and 5.3 accordingly. The existing 24.4.8.5.4 is out of place and Public Comment 241 has moved this statement to 24.4.6.3. The second revision moves existing 24.4.8.5.4 to 24.4.6.3 in the loudspeaker section.

This change will allow the text to flow more accurately.



Public Comment No. 241-NFPA 72-2023 [Section No. 24.4.8.5.4]

24.4.8.5.4

Loudspeakers shall conform to Section 24.4.

Statement of Problem and Substantiation for Public Comment

FR-5304 made a manual of style change to make 24.4.8.5.4 its own stand-alone statement. Now that it is a stand-alone statement, the requirement seems to be in the wrong location. This public comment would seek to move this requirement to 24.4.6.3, which is in the "Loudspeakers" section and has other general requirements of loudspeakers.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 243-NFPA 72-2023 [Section No. 24.4.8.5]	
<u>Related Item</u>	
• FR-5304	

Submitter Information Verification

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Submittal Date: Wed May 31 16:49:23 EDT 2023
Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5156-NFPA 72-2023](#)
Statement: The existing 24.4.8.5.4 is out of place and is moved to 24.4.6.3, the loudspeaker section. This change will allow the text to flow more accurately.



Public Comment No. 129-NFPA 72-2023 [Section No. 24.5.18.4.1]

24.5.18.4.1

Primary textual and graphical visual appliances shall comply with Chapter 10 requirements for:

(1) monitoring of primary power;

(2) secondary power .

Statement of Problem and Substantiation for Public Comment

In the process of changing this paragraph for MOS reasons, the context of which Chapter 10 requirements the Primary Textual and Graphical Visual Appliances were subject to, was lost. This change restores that context, and maintains MOS.

Related Item

- FR-5308

Submitter Information Verification

Submitter Full Name: Michael Pallett

Organization: Pallett Corner Consulting

Street Address:

City:

State:

Zip:

Submittal Date: Sat May 20 13:40:08 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Rejected

Resolution: Other requirements in Chapter 10 could be lost by only referencing primary power and secondary power.



Public Comment No. 141-NFPA 72-2023 [Section No. 26.2.4.1.3.2]

26.2.4.1.3.2

Servicing of a system shall occur within 4 hours of the carbon monoxide alarm signal.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._22.pdf	NFPA 72 Correlating Note No. 22	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 22 appeared in the First Draft Report on First Revision No. 5026.

Review the language of 26.2.4.1.3.2. Consider revision to the language. The language indicates that servicing of the carbon monoxide alarm should be within 4 hours of the activation of the alarm. However, the servicing should be 4 hours after an all clear has been issued by the first responders. It is important that the service personnel are not put in harms way, if the CO event is still under investigation.

Related Item

- FR - 5026

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 23 10:22:47 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected

Resolution: The current language is sufficient. The responding technician would not be allowed into the facility when emergency responders are still operating. Technicians should also be equipped with their own CO detection equipment.



Public Comment No. 21-NFPA 72-2023 [Section No. 26.2.10]

~~26.2.10 – Emergency Monitoring Locations:~~

~~26.2.10.1 –~~

~~Upon an emergency declaration made by a national, state, or local authority that results in a business disruption event that inhibits normal operation of a supervising station, fire alarm system signals shall be permitted to be received at alternate locations other than a listed central station, proprietary supervising station, or remote supervising station.~~

~~26.2.10.2 –~~

~~The provision of 26.2.10.1 shall be permitted to remain in effect for the duration of the emergency declaration.~~

~~26.2.10.3 –~~

~~Specific authorization by local authorities having jurisdiction shall not be required for emergencies declared by a higher authority.~~

~~26.2.10.4 –~~

~~The provision of 26.2.10.1 shall be permitted to remain in place for not more than 30 calendar days following the termination of the declared emergency.~~

Statement of Problem and Substantiation for Public Comment

TIA 22-2 resulted in the placement of Section 26.10.2 in NFPA. This section permits supervising station operators to work from remote locations, such as a residence, during declared emergencies. Working remotely must be discontinued within 30 days following the termination of the declared emergency. Supervising stations are intended to receive life safety and property protection signals and re-transmit them to the public communications center and/or property owner.

Supervising stations are traditionally hardened locations to protect against environmental disasters, security breaches, power outages, communications outages, and so forth. Supervising stations must be always staffed with at least two operators. Subscribers pay for these services and expect a reliable service. Protection from unpredictable failures of power loss and/or internet connectivity requires mission critical equipment that the Central Station automatically switches to in the event of either or both of these pivotal sources failing. On the other hand, an operator working from home cannot duplicate this level of preparedness and protection, let alone know when these failures interrupt the operators ability to monitor subscriber's premises.

TIA 22-2 was intended to provide relief during the COVID-19 pandemic, when many local governments required citizens to quarantine. The text was incorporated as a new Section 26.10.2 and allows remote operators during a declared emergency. The text became a permanent part of the 2022 edition. Although intended to address the COVID-19 pandemic, these provisions may apply to other declared emergencies, both local and national.

The COVID-19 emergency enacted in March 2020 has not been terminated (at the time of submission of this PC), primarily for political reasons. However, most citizens believe the pandemic is over and has been for some time. Yet, many organizations are still allowing remote working. At the time of TIA 22-2 approval, nobody anticipated the emergency would last for more than three years.

Curiously, few if any, local public emergency communications centers permitted remote working. Operators reported to dispatch centers across the country on a daily basis during the pandemic. Dispatchers are considered essential employees and supervising station operators should be categorized the same way.

Working from home is fraught with foreseeable and unforeseeable distractions that are not permitted in a supervising station environment. These include but are not limited to personal use of cellular phones, power failures, lightning damage, texting, social media, noisy neighbors, and so forth. Additionally, television, family members, roommates, unauthorized viewing of security information by others, persons persons who monitor, tamper or are subject to the same risks that mentioned subscribers face. Enforcement of strict policies regarding distractions is very difficult, if not impossible when operators

power failures, lightning damage, texting, social media, noisy neighbors, and so forth. Additionally, television, family members, roommates, unauthorized viewing of security information by others, persons in the home, children, pets, and other people are subject to the same risks that monitored subscribers face. Enforcement of strict policies regarding distractions is very difficult, if not impossible when operators work remotely. Other concerns include use of the public Internet, security, power outages, communications outages/redundancy, lack of a dedicated workspace, a lack of fire protection, etc.

Consumers of alarm monitoring services were sold alarm systems that were represented to be monitored by operators who are stationed within the four-walls of a UL Listed Central Station. No work from home monitoring can match what for over one hundred years has stood the test of time and been the standard of care including but not limited to being an inherently distraction free environment when working inside a UL Central Station.

There is no security and/or life safety benefit whatsoever to work from home monitoring. Instead, the only thing that can be reliably quantified is that UL Listed Central Stations have increased their profitability by using this method.

Customers are paying for a service and have expectations of a certain quality of the product. Distracted operators working from home are not in the best interest of the industry and should be used only where there are no other options. For example, a hurricane, tornado, blizzard, or earthquake may damage a supervising station in a specific location or prevent staff from commuting. If there is no subsidiary station, then remote working may be warranted until such time the supervising station can be reopened.

Some supervising station owners are citing recruitment/retention issues. Some are additionally seeking to reduce their real estate footprint. This may be good for the bottom line but cost savings is hardly a valid reason to continue remote operation as it exists today. Supervising stations monitor life safety systems and are critical in nature. TIA 22-2 was implemented with the best of intentions. However, unintended consequences such as hand-offs/operator availability, infrastructure, and distractions were downplayed and must be addressed.

It is understood that UL is currently revising UL 827 so that operators to work remotely. The proposed provisions may help alleviate some of the concerns and risks stated above. If those changes find their way into UL 827, then Section 26.10.2 should be eliminated for redundancy because UL 827 would permit remote operators, regardless of whether an emergency is declared.

Related Item

- PI 162

Submitter Information Verification

Submitter Full Name: Merton Bunker
Organization: Merton Bunker & Associates, LLC
Affiliation: NONE
Street Address:
City:
State:
Zip:
Submittal Date: Thu Apr 06 11:39:25 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected

Resolution: These provisions are necessary to allow for temporary work from home in an emergency. It doesn't matter what the declared emergency is, it is critical to allow the continuity of supervising station monitoring.



Public Comment No. 211-NFPA 72-2023 [New Section after 26.2.10.4]

TITLE OF NEW CONTENT

26.2.11 Alternate Monitoring Location

Upon approval of AHJ fire alarm system signals shall be permitted to be received at alternative locations in accordance with UL 827 other than a listed central station, proprietary supervising station, or remote supervising station.

Statement of Problem and Substantiation for Public Comment

This section if allowed would allow monitoring to be provided from any location with no regard to the listing requirements of the monitoring station. This would be a large step back from what is currently required for listed centers. This has provided a means to provide service during a declared emergency but there is no guidance as to which emergencies the previous sections allow this to be in effect and would open the door for monitoring to be completed remotely from the listed station with no rules on secondary power, IT security and facility security. this section would be a large step backwards for the code and I propose not adding it.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 210-NFPA 72-2023 [New Section after 17.17.2]</u>	
<u>Related Item</u>	
• PI-403, PI-476, PI-522	

Submitter Information Verification

Submitter Full Name: Tom Parrish
Organization: Telgian
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 12:49:46 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected
Resolution: NFPA 72 already gives the ability to approve an alternative monitoring location in an emergency to the AHJ. UL 827 is still in a draft form.



Public Comment No. 142-NFPA 72-2023 [Section No. 26.5.7.2]

26.5.7.2

The status of all alarm, supervisory, and trouble signals shall be noted and recorded.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._23.pdf	NFPA 72 Correlating Note No. 23	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 23 appeared in the First Draft Report on First Revision No. 5125.

Review the language of 26.5.7.2. The status of alarm, supervisory, and trouble signals should be recorded and should be performed at the beginning of each shift or change in personnel. As it written it is not clear when this is to be done. The language of the section was revised to comply with the manual of style, however it appears that the technical meaning was changed as the requirement to record the status of alarm, supervisory, and trouble signals is now not required at the beginning of each shift or change in personnel.

Related Item

- FR - 5125

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 23 10:28:44 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5111-NFPA 72-2023

Statement: The language of the section was revised to comply with the manual of style. It appears that the technical meaning was changed as the requirement to record the status of alarm, supervisory, and trouble signals was inadvertently deleted. The revision corrects the language to require the status of the signals to be recorded at the beginning of each shift or change in personnel.



Public Comment No. 136-NFPA 72-2023 [Section No. 26.6.1.1]

26.6.1.1

Section 26.6 shall apply to the following:

- (1) Transmitter located at the protected premises
- (2) * Transmission channel between the protected premises and the supervising station or subsidiary station

Add Annex: 26.6.1.1 For fire alarm systems that rely on digital alarm communicator systems to establish communications channels between the protected premises and the central station via the public switched telephone network or another MFVN, the requirement to supervise circuits between the protected premises and the central station is considered to be met if the communications channel is periodically tested in accordance with 26.6.4.2.5. It is not the intent of this section to regulate the PSTN or other MFVNs.

- (1) If used, any subsidiary station and its communications channel
- (2) Signal receiving, processing, display, and recording equipment at the supervising station

Statement of Problem and Substantiation for Public Comment

26.6.1.1 (2) implies that chapter 26 applies to the entirety of the transmission channel between the protected premises and the supervising station, but this is often not the case. It is recommended to add an Annex note consistent with an annex note already in section 10.6.9.2 highlighting that the PSTN and other MFVNs are not regulated by chapter 26.

See 10.6.9.2 * Power supply sources and electrical supervision for digital alarm communications systems shall be in accordance with Section 10.6, 10.6.9, Section 10.19, and Section 12.6.

Annex 10.6.9.2 Because digital alarm communicator systems establish communications channels between the protected premises and the central station via the public switched telephone network, the requirement to supervise circuits between the protected premises and the central station (see 12.6.1 and 12.6.2) is considered to be met if the communications channel is periodically tested in accordance with 26.6.4.2.5.

Neither chapter 26 nor NFPA 72 is intended to regulate the hardware or procedures of communications companies that are otherwise regulated by the FCC or Public Utility Commissions.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge

Organization: Ericsson

Affiliation: ATIS

Street Address:

City:

State:

Zip:

Submission Date: Tue May 23 09:38:19 EDT 2023

Committee: SIG-SSS

Committee: Deleted but see related SP

Committee Statement

Committee Statement

Submitted On: Tue May 23 09:38:19 EDT 2023

Committee: SIG-SSS**Committee Action:** Rejected but see related SR**Action:****Resolution:** [SR-5112-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Annex material was added for clarification of what is included in the list that are regulated in the DACT section 26.6.1.1.



Public Comment No. 215-NFPA 72-2023 [Section No. 26.6.1.1]

26.6.1.1

Section 26.6 shall apply to the following:

- (1) Transmitter located at the protected premises
- (2) Transmission channel between the protected premises and the supervising station or subsidiary station except for any portion of the channel that is carried by or over a circuit provided by an FCC approved carriers. These circuit boundaries are defined as any portion of the circuit between the FCC defined network demarcation or standard network interface points at either end of a transmission channel.
- (3) If used, any subsidiary station and its communications channel and:
- (4) Signal receiving, processing, display, and recording equipment at the supervising station

Statement of Problem and Substantiation for Public Comment

NFPA 72 has no jurisdiction to regulate the operation of MFVNs that are located on the network side of the FCC demarcation point.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz

Organization: AT&T Corporation

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 14:21:24 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5112-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Annex material was added for clarification of what is included in the list that are regulated in the DACT section 26.6.1.1.

1. Annex material was added for clarification of what is included in the list that are regulated in the DACT section 26.6.1.1.



Public Comment No. 49-NFPA 72-2023 [New Section after 26.6.2.3]

26.6.2.3.9 . *

Any changes to the communication pathway, technologies or hardware at the protected premises shall meet the following:

- (1) AHJ notified
- (2) Reacceptance and documentation requirements of Chapter 7
- (3) Secondary power shall be inspected yearly to ensure it is maintained in compliance to 26.6.3.13.

A.26.6.2.3.9

As many authorities are now requiring change in monitoring permits to verify compliance with the new technology configurations, hardware and programming, it has become important for protected premise and contracted vendors to not only properly identify the communication technologies and hardware to be implemented, but also to make sure the application of this technology and pathways are implemented in conformance with the code. It is the responsibility of the building owner or its designees to ensure that any changes to the communication pathway, technologies, or hardware at the protected premises are compliant.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_Performance_Based_Design_26.6.2.3.9.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5100

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: Chapter 26.6 Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Apr 30 16:10:45 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee: Rejected but see related SP

Committee Statement

Committee Action: Rejected but see related SR

Resolution:

Resolution: [SR-5151-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. This revision clarifies that the AHJ should be notified of changes in communications equipment and assure that the signals are transmitted properly via any new communications channels.
2. Back up power must be verified for the newly added communications equipment.



Public Comment No. 50-NFPA 72-2023 [New Section after 26.6.2.4]

26.6.2.4.4 *

Communication pathways shall be labeled, as required by the AHJ, where the fire alarm equipment interfaces to the other communication equipment.

A 26.6.2.4.4.

The identification of fire alarm system communication pathways by the building owner or its designees are critical to the integrity and sustainability of these systems. Therefore, the marking of this pathway and its integrated shared equipment is equally important for the integrity of the fire alarm system to make sure that no unapproved changes are made to these pathways. Due to the wide variety of circumstances and conditions that may need to be labeled, the means of labeling is left to the approval of the AHJ. Suggested language for the marking or signage of these pathways and share equipment might include language similar to: “This is part of a communication systems pathway, no changes to this equipment or configurations shall be made without approvals from the local AHJ,” or more simply, “ Fire Communications Pathway, Notify AHJ BEFORE modification .”

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_Performance_Based_Design_26.6.2.4.4.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: SIG-SSS Task Group 26.6
Street Address:
City:
State:
Zip:
Submittal Date: Sun Apr 30 16:21:02 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Reason: SR-5116-NFPA 72-2023
Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified

Committee Action: Rejected but see related on SR-5116-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. To ensure identification of the pathway between the communications carrier and the fire alarm control panel.



Public Comment No. 218-NFPA 72-2023 [New Section after 26.6.2.4.3]

TITLE OF NEW CONTENT

26.6.2.4.4 *

Communication pathways shall be labeled where the fire alarm equipment interfaces to the other communication equipment as required by the AHJ.

A 26.6.2.4.4. The identification of fire alarm system communication pathways by the building owner or its designees are critical to the integrity and sustainability of these systems. Therefore, the marking of this pathway and its integrated shared equipment is equally important for the integrity of the fire alarm system to make sure that no unapproved changes are made to these pathways. Due to the wide variety of circumstances and conditions that may need to be labeled, the means of labeling is left to the approval of the AHJ. Suggested language for the marking or signage of these pathways and share equipment might include language similar to: "This is part of a communication systems pathway, no changes to this equipment or configurations shall be made without approvals from the local AHJ," or more simply, "**Fire Communications Pathway, Notify AHJ BEFORE modification** ." Placement of such markings must always be on the "Customer" side of the FCC Standard Network Interface (SNI), or FCC defined demarcation connection point. In no instance may such marking be applied to or affixed to any equipment, terminal, or hardware provided by or maintained by the FCC approved Network Carrier (Incumbent Local Exchange Carriers [ILEC], Local Exchange Carriers [LEC] Competitive Local Exchange Carriers [CLEC] and other Federal Communications Commission [FCC] approved carriers offering interconnection to facilities and Unbundled Network Elements to provide such telecommunications services.) Such equipment is considered property of the respective Carrier. Such Network Equipment is separated from customer premises equipment by the FCC SNI or Demarc.

Statement of Problem and Substantiation for Public Comment

Expands on information proposed by the performance based task group but has additional annex guidance as NFPA 72 has no jurisdiction to regulate the operation of MFVNs that are located on the network side of the FCC demarcation point.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz
Organization: At&t Corporation
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 15:14:14 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Committee Rejected but see related SR

Action:

Resolution: [SR-5116-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. To ensure identification of the pathway between the communications carrier and the fire alarm control panel.



Public Comment No. 173-NFPA 72-2023 [New Section after 26.6.2.5]

26.6.2.4.4 Equipment Physical Protection

26.6.2.4.4.1 Communication equipment, power supplies, and circuits at the protected premises, located on the customer side of the FCC demarcation or standard network interface, used for transmission of fire alarm signals shall be secured from tampering and protected from hazardous conditions, including weather conditions that can adversely affect the equipment operations, or be listed to for such conditions.

26.6.2.4.4.2 Communication equipment, power supplies, and circuits at the protected premises, located on the carrier side of the FCC demarcation or standard network interface, used for transmission of fire alarm signals shall be secured and installed in accordance with FCC approved telecommunications wiring standards applicable to the specific installation.

Statement of Problem and Substantiation for Public Comment

Similar text was discussed by the performance standards task group for inclusion in section 26.6.3, but these requirements are really applicable to all technologies and on both the customer and carrier side of the demarcation point, when one is present. Having the requirements included here would help to improve alarm transmission reliability of for all technologies.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge
Organization: Ericsson
Affiliation: ATIS
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 25 17:07:40 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but held
Resolution: The committee requires additional time to consider the requirements for equipment protection found in other codes and standards and provide appropriate wording for the next revision cycle.



Public Comment No. 212-NFPA 72-2023 [New Section after 26.6.2.5]

TITLE OF NEW CONTENT

26.6.2.4.2.1 Equipment utilized for transmission of Fire Alarm Signals shall be listed for the purpose.

Statement of Problem and Substantiation for Public Comment

Many emulation devices are being installed that are not listed for fire use and may not have sufficient power as outlined in Chapter 10 of this standard. If the device is going to be used for Fire Alarm Panel communication then it should be listed for the purpose.

Related Item

- PI-303

Submitter Information Verification

Submitter Full Name: Tom Parrish

Organization: Telgian

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 13:01:41 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5118-NFPA 72-2023](#)

Statement: [SR-5118-NFPA 72-2023](#)

During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. The requirements for listing were added to improve fire alarm reliability
2. Delineates between the premises and the service provider equipment.



Public Comment No. 174-NFPA 72-2023 [New Section after 26.6.3.2]

26.6.3.2.1 Acknowledgements to the protected premises for alarm, supervisory, or trouble signals shall only be initiated by the supervising station.

26.6.3.3 Equipment installed at the premises shall conform to the following:

(1)

(a) Premises Equipment

(2) Equipment initiating signal transmission as the control unit or as a separate communicator shall be considered part of the fire alarm system and be listed as such independently of the communication technology used.

(3) Equipment installed as customer premises alarm signaling equipment to transmit fire alarm signals shall be listed as communications and information technology equipment. –

(b) Equipment provided by MFVN providers shall be listed as communications and information technology equipment.

Statement of Problem and Substantiation for Public Comment

Investigation with FCC approved carriers regarding faults with fire alarm transmission implicate the lack of device listing as a major cause of poor system performance. Adding requirements for listing for both customer equipment and MFVN provided equipment, on top of the existing requirements for testing and supervision, will improve the reliability of fire alarm transmission.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge

Organization: Ericsson

Affiliation: ATIS

Street Address:

City:

State:

Zip:

Submittal Date: Thu May 25 17:20:40 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5118-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods for transmitting fire alarm system signals to supervising stations. A subcommittee was formed to address this need. The subcommittee has been working on this issue since the first meeting. The subcommittee is intended to address changes that reflect both existing and performance-based

use for transmitting fire alarm system signals to supervising stations. Analysis of supervising stations while at the same time providing consideration for many gas and fire alarm technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. The requirements for listing were added to improve fire alarm reliability
2. Delineates between the premises and the service provider equipment.



Public Comment No. 222-NFPA 72-2023 [Section No. 26.6.3.2]

26.6.3.2 Communications Integrity.

Provision shall be made to monitor the integrity of the transmission technology and its communications path by the following requirements:

(1) Acknowledgements to the protected premises for alarm, supervisory, or trouble signals shall only be initiated by the supervising station .

(2) The customer provided communication equipment installed at the protected premises shall conform to one of the following requirements:

(a) Premises Equipment

i. Equipment installed as Customer premises alarm signaling equipment to transmit signals shall be listed for the purpose that meets the applicable requirements of 26.6.3.

ii. Equipment initiating signal transmission at control unit or as a separated communicator shall be considered part of the fire alarm system and be listed per 26.6.3.2(a) independently of the communication technology used

(b) Providers of Communication Services Equipment

i. Equipment provided by communication service providers, including MFVN providers shall be listed as communications and information technology equipment and meet the applicable requirements of 26.6.3. for any equipment installed on the customer side of the FCC demarc or standard network interface.

ii. Equipment from service providers complying with 26.6.4.2.1.3 and installed on the customer side of the FCC demarc or standard network interface, used to retransmit signals shall be listed per 26.6.3.2(b) independently of the communication technology used. Any equipment connected on the Network side of the FCC demarc or standard network interface shall carry the appropriate UL listing for Telecommunications Network Equipment.

Statement of Problem and Substantiation for Public Comment

Expands on work of performance based task group which emphasizes the importance of listing but adds clarification that c NFPA 72 has no jurisdiction to regulate the operation of MFVNs that are located on the network side of the FCC demarcation point.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz

Organization: AT&T Corporation

Street Address:

City:

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Submittal Date: Wed May 31 15:37:28 EDT 2023

Committee: SIG-SSS

Committee Rejected but see related SR

Committee Statement

SR 5116 NFPA 72-2023

Committee Statement

Rejected but see related SR

Resolution: [SR-5118-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. The requirements for listing were added to improve fire alarm reliability
2. Delineates between the premises and the service provider equipment.



Public Comment No. 51-NFPA 72-2023 [Section No. 26.6.3.2]

26.6.3.2

Communications Integrity

Provision shall be made to monitor the integrity of the transmission technology and its communications path by the following requirements:

26.6.3.2.1

Acknowledgements to the protected premises for alarm, supervisory, or trouble signals shall only be initiated by the supervising station.

26.6.3.2.2

The communication equipment installed at the protected premises shall conform to the following requirements:

(1) Premises Equipment

(a) Equipment installed to transmit signals shall be listed for the purpose and meets the applicable requirements of 26.6.3.

(b) Equipment initiating signal transmission at the fire alarm control unit or as a separate communicator shall be considered part of the fire alarm system and be listed independently of the communication technology used.

(2) Providers of Communication Services Equipment

(a) Equipment provided by communication service providers, including MFVN providers shall be listed as communications and information technology equipment and meet the applicable requirements of 26.6.3.

(b) Equipment from service providers complying with 26.6.4.2.1.3 used to retransmit signals shall be listed independently of the communication technology used.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_Performance_Based_Design_26.6.3.2.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Affiliation: Full Name: SIG-SSS Chapter 26.6 Task Group
 Street Address: Christopher Peters
 Organization: UL Solutions

Affiliate Full Name: SIG-SSS Chapter 26.6 Task Group
Organization: Christopher Greiner
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Submittal Date: Sun Apr 30 16:33:21 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5118-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. The requirements for listing were added to improve fire alarm reliability
2. Delineates between the premises and the service provider equipment.



Public Comment No. 56-NFPA 72-2023 [New Section after 26.6.3.3]

26.6.3.3 Single Communications Path.

26.6.3.3.1

A Single Communications Path shall be permitted unless prohibited by the enforcing authority, governing laws, codes, or standards.

26.6.3.3.2

Where a single communication path is used, the following requirements shall be met:

- (1) The path shall be supervised for integrity to ensure end to end communications within not more than 60 minutes.
- (2) A failure of the path within not more than 60 minutes shall be annunciated in accordance with Section **10.15** .

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.6.3.3.1.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: SIG-SSS Chapter 26.6 Task Group
Street Address:
City:
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Submittal Date: Sun Apr 30 17:54:12 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5121-NFPA 72-2023](#)

Statement: [SR-5121-NFPA 72-2023](#)

During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions

Statement. During the first revision meeting of the SIG-333 Technical Committee there was identified stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. This section is revised in accordance with the Manual of Style and does not include any technical changes.



Public Comment No. 175-NFPA 72-2023 [Section No. 26.6.3.4]

26.6.3.4 Multiple Communications Paths.

If multiple transmission paths are used, the following requirements shall be met:

- (1) ~~Each~~ End to end communications of each path shall be supervised within not more than 6 hours.
- (2) The failure of any path of a multipath system shall be annunciated at the supervising station within not more than 6 hours.
- (3) Multiple communications paths shall be arranged so that ~~a~~ any single point of failure of the listed equipment on the customer side of the FCC demarcation or standard network interface shall not cause more than a single path to fail.
- (4) The failure to complete a signal transmission shall be annunciated at the protected premises in accordance with Section 10.15.

Statement of Problem and Substantiation for Public Comment

Changes made to eliminate single points of failure in the transmission path, but limiting the application of this requirement to the customer side of the FCC demarcation point as the code is not intended to regulate the elements of the PSTN operated by FCC approved carriers.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge
Organization: Ericsson
Affiliation: ATIS
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 25 17:50:06 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5134-NFPA 72-2023
Statement: This revision clarifies that multiple pathways must be arranged so that a failure on one pathway does not cause a failure of any other pathway. NFPA 72 only regulates on premises pathways and equipment beyond the premises is outside the scope of NFPA 72.



Public Comment No. 224-NFPA 72-2023 [Section No. 26.6.3.4]

26.6.3.4 Multiple Communications Paths.

If multiple transmission paths are used, the following requirements shall be met:

- (1) Each path shall be supervised within not more than 6 hours.
- (2) The failure of any path of a multipath system shall be annunciated at the supervising station within not more than 6 hours.
- (3) Multiple communications paths shall be arranged so that a single point of failure shall not cause more than a single path to fail. This provision does not apply to Telecommunication Network Equipment installed on the Network side of the FCC demarc or standard network inter act that may be provided by FCC approved Carriers. Such equipment is considered part of the transmission, switching and carrier function of said provider networks and fully regulated by FCC carrier regulation.
- (4) The failure to complete a signal transmission shall be annunciated at the protected premises in accordance with Section 10.15.

Statement of Problem and Substantiation for Public Comment

NFPA 72 does not address the architecture of the MFVN with respect to single points of failure or overall reliability.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz
Organization: AT&T Corporation
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 15:51:50 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5134-NFPA 72-2023
Statement: This revision clarifies that multiple pathways must be arranged so that a failure on one pathway does not cause a failure of any other pathway. NFPA 72 only regulates on premises pathways and equipment beyond the premises is outside the scope of NFPA 72.



Public Comment No. 67-NFPA 72-2023 [Section No. 26.6.3.4]

26.6.3.

~~4 Multiple~~

4 Multiple Communications Paths.

Where ~~if~~ multiple transmission paths are used, the following requirements shall be met:

- (1) ~~Each path shall be supervised for integrity to ensure end to end communications within not more than 6 hours.~~
- (2) ~~The failure of any path of a multipath system shall be annunciated at the supervising station within not more than 6 hours.~~
- (3) Multiple communications paths shall be arranged so that a single point of failure downstream of the listed protected premises equipment permitted by 26.6.3.2 shall not cause more than a single path to fail.
- (4) ~~The failure to complete a signal transmission of any path within not more than 6 hours shall be annunciated at the protected premises in accordance with Section 10.15.~~

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.6.3.4.docx		

Statement of Problem and Substantiation for Public Comment

The intent of this committee input is to create a task group to evaluate the existing arrangement of Section 26.6 (Communications Methods) and harmonize all communications methods into the requirements for performance-based technologies to the extent this is possible. This would permit and regulate the use of new and emerging communication technologies while eliminating prescriptive requirements for outdated technologies, which are currently being phased out due to many factors such as regulatory, technology, and reliability changes. If during this assessment, the task group determines that an existing or legacy communication method cannot be moved into the performance-based technology requirements, a separate section will be maintained to regulate this communication technology. The task group will continue to review Public Input 526 for appropriate requirements and text for inclusion in Section 26.7.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
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Street Address:
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Zip:

Committee Statement Mon May 01 21:42:04 EDT 2023

Committee: SIG-SSS
Committee: Deleted but see related SP

Committee Statement Mon May 01 21:42:04 EDT 2023

Committee: SIG-SSS
Committee Action: Rejected but see related SR
Resolution: [SR-5134-NFPA 72-2023](#)

Statement: This revision clarifies that multiple pathways must be arranged so that a failure on one pathway does not cause a failure of any other pathway. NFPA 72 only regulates on premises pathways and equipment beyond the premises is outside the scope of NFPA 72.



Public Comment No. 226-NFPA 72-2023 [Section No. 26.6.3.7.1]

26.6.3.7.1

The maximum number of independent fire alarm systems connected to a single system unit shall be limited to 512. [This does not apply to FCC approved carrier network](#)

Statement of Problem and Substantiation for Public Comment

Adds clarification that NFPA 72 has no jurisdiction to regulation the operation of MFVNs that are located on the network side of the FCC demarcation point.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz

Organization: AT&T Corporation

Street Address:

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Submittal Date: Wed May 31 16:03:04 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected

Resolution: The limit of 512 does not apply to the carrier network, but does apply to the supervising station.



Public Comment No. 177-NFPA 72-2023 [Section No. 26.6.3.11]

26.6.3.11 Signal Error Detection and Correction.

26.6.3.11.1

Communication of alarm, supervisory, and trouble signals shall be in accordance with this section to prevent degradation of the signal in transit, which in turn would result in either of the following:

- (1) Failure of the signal to be displayed and recorded at the supervising station
- (2) Incorrect corrupted signal displayed and recorded at the supervising station

26.6.3.11.2

Reliability of the signal shall be achieved by any of the following:

- (1) Signal repetition — multiple transmissions repeating the same signal
- (2) Parity check — a mathematical check sum algorithm of a digital message that verifies correlation between transmitted and received message
- (3) An equivalent means to 26.6.3.11.1(1) or 26.6.3.11.1(2) that provides a certainty of 99.99 percent that the received message is identical to the transmitted message

26.6.3.11.3 * Communication equipment, located on the customer side if the FCC demarcation of standard network interface, used for transmission of fire alarm signals shall meet the latency and jitter requirements applicable to the communication protocol used for signal transmission ensuring communication integrity and signal reliability.

A.26.6.3.11.3 Latency and jitter are important network metrics to ensure communication integrity and signal reliability. Latency is the measurement of time for a packet of data to transmit from point A to point B. Jitter is the measurement of the fluctuation of the latency time when two devices are talking to each other. They are important because communication equipment transmitting fire alarm signals over Internet Protocol is sensitive to latency and jitter. Manufacturer installation instructions for the equipment should indicate the signal latency and jitter parameters required to ensure communication integrity and signal reliability. This requirement does not apply to the MFVN performance as these services are regulated by the FCC and others. Signals carried by network carriers must adhere to FCC standards and other regulatory standards.

26.6.3.11.4* Any communication failure due to latency and jitter out of parameter conditions shall be detected by the communication equipment located on the customer side if the FCC demarcation of standard network interface and result in a communication failure trouble signal being annunciated at the protected premises.

A.26.6.3.11.4 This requirement does not apply to the MFVN performance as these services are regulated by the FCC and others. Signals carried by network carriers must adhere to FCC standards and other regulatory standards.

Statement of Problem and Substantiation for Public Comment

Latency and jitter are valuable measurements of network hardware performance and measurement of these parameters for the customer side premises equipment could provide an increase in alarm transmission reliability. These performance measurements must be limited to the network on the customer side of the FCC demarcation point as NFPA 72 is not intended to regulate the POTS, wireless or IP elements of the PSTN.

Related Item

- CI-5176

Submitter Full Name: Richard Kluge

Submitter Information Verification

Organization: ENCSSH

Submitter Full Name: Richard Kluge
Submitter Information Verification**Organization:** Encsson**Affiliation:** ATIS**Street Address:****City:****State:****Zip:****Submittal Date:** Thu May 25 20:55:11 EDT 2023**Committee:** SIG-SSS**Committee Statement****Committee Action:** Rejected but see related SR**Resolution:** [SR-5124-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. The revision addresses the concerns for latency and jitter in communications equipment.
2. Provides guidance to testing laboratories to develop appropriate equipment parameters.



Public Comment No. 228-NFPA 72-2023 [New Section after 26.6.3.11.2]

26.6.3.11.3 *

Communication equipment used for transmission of fire alarm signals shall meet the Latency and Jitter requirements applicable to the communication protocol used for signal transmission ensuring communication integrity and signal reliability. This does not apply to FCC approved Carrier equipment.

A.26.6.3.11.3

Latency and Jitter are important network metrics to ensure communication integrity and signal reliability. Latency is the measurement of time for a packet of data to transmit from point A to point B. Jitter is the measurement of the fluctuation of the latency time when two devices are talking to each other. They are important because communication equipment transmitting fire alarm signals over Internet Protocol is sensitive to latency and Jitter. Manufacturer installation instructions or specifications for the equipment should indicate that signal Latency and Jitter parameters will conform to FCC Telecommunication standards for communication integrity and signal reliability.

26.6.3.11.4

Any communication failure due to latency and jitter out of parameter conditions shall be detected by the communication equipment and result in a communication failure trouble signal being annunciated at the protected premises. This does not apply to FCC approved Carrier .

ANNEX: these services are regulated by the FCC requirements for transmission. Signals carried by Network carriers must adhere to FCC standards.

Statement of Problem and Substantiation for Public Comment

Adds clarification that NFPA 72 has no jurisdiction to regulation the operation of MFVNs that are located on the network side of the FCC demarcation point.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz
Organization: AT&T Corporation
Street Address:
City:
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Submittal Date: Wed May 31 16:08:31 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5124-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of

Statement: methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. The revision addresses the concerns for latency and jitter in communications equipment.
2. Provides guidance to testing laboratories to develop appropriate equipment parameters.



Public Comment No. 58-NFPA 72-2023 [New Section after 26.6.3.11.2]

26.6.3.11.3 *

Communication equipment used for transmission of fire alarm signals shall meet the Latency and Jitter requirements applicable to the communication protocol used for signal transmission ensuring communication integrity and signal reliability.

A.26.6.3.11.3

Latency and Jitter are important network metrics to ensure communication integrity and signal reliability. Latency is the measurement of time for a packet of data to transmit from point A to point B. Jitter is the measurement of the fluctuation of the latency time when two devices are talking to each other. They are important because communication equipment transmitting fire alarm signals over Internet Protocol is sensitive to latency and Jitter. Manufacturer installation instructions for the equipment must indicate the signal Latency and Jitter parameters required to ensure communication integrity and signal reliability.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.6.3.11.3.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: SIG-SSS Chapter 26.6 Task Group
Street Address:
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Zip:
Submittal Date: Sun Apr 30 18:12:16 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5124-NFPA 72-2023
Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified a need to begin to address signal transmission and a review of methods of task and trip handling processing and transmission of many signals to existing stations while at the same time providing continued recognition of legacy methods still in use.

an immediate need to begin to address the technical advancements and a variety of methods of task grouping and signaling systems for fire alarm systems. The revision provides guidance to testing laboratories to develop appropriate equipment parameters while at the same time providing continued recognition of legacy methods still in technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. The revision addresses the concerns for latency and jitter in communications equipment.
2. Provides guidance to testing laboratories to develop appropriate equipment parameters.



Public Comment No. 59-NFPA 72-2023 [New Section after 26.6.3.11.2]

26.6.3.11.4

Any communication failure due to latency and jitter out of parameter conditions shall be detected by the communication equipment and result in a communication failure trouble signal being annunciated at the protected premises.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.3.11.4.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: SIG-SSS Chapter 26.6 Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Apr 30 18:16:33 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5124-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following revisions are the specific basis for the change and jitter in communications equipment.

following points are the specific basis for the change to the revision to address the concern for latency and jitter in communications equipment.

2. Provides guidance to testing laboratories to develop appropriate equipment parameters.



Public Comment No. 230-NFPA 72-2023 [Section No. 26.6.3.12]

26.6.3.12* Sharing Communications Equipment On-Premises.

If the fire alarm transmitter is sharing on-premises communications equipment, the shared equipment shall be listed as communications or information technology equipment.

26.6.3.12.1

If the fire alarm transmitter is sharing on-premises communications equipment, the shared equipment shall be listed as communications, information technology equipment or Telecommunication Network Equipment.

26.6.3.12.2

MFVN providers with communication equipment collocated at the protected premises shall meet the requirements of 26.6.4.2.1.3 for equipment connected on the Customer side of the FCC demarc or standard network interface. Equipment connected on the Network side of said demarc shall conform to the appropriate UL listing for Telecommunications Network Equipment.

Statement of Problem and Substantiation for Public Comment

Adds clarification on what are acceptable listing standards for network equipment, and emphasizes that NFPA 72 has no jurisdiction to regulate the operation of MFVNs that are located on the network side of the FCC demarcation point.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz

Organization: AT&T Corporation

Street Address:

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Zip:

Submittal Date: Wed May 31 16:16:35 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5152-NFPA 72-2023](#)

Statement: Secondary power is not being uniformly applied throughout the industry. Even in performance based design secondary power requirements should not be less than the minimum prescriptive requirements within the code.



Public Comment No. 60-NFPA 72-2023 [Section No. 26.6.3.12]

26.6.3.12* Sharing Communications Equipment On-Premises.

If the

26.6.3.12.1

Where fire alarm transmitter is sharing on-premises communications equipment, the shared equipment shall be listed as communications or information technology equipment.

26.6.3.12.2

MFVN providers with communication equipment collocated at the protected premises shall meet the requirements of 26.6.4.2.1.3.

26.6.3.12.3

Communication equipment used for transmission of fire alarm signals that receives primary power from the protected premises shall meet the secondary power requirements of 26.6.3.13.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.6.3.13.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: SIG-SSS Chapter 26.6 Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Apr 30 20:15:18 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Statement: Secondary power is not being uniformly applied throughout the industry. Even in
Resolution: SR5152 and NFPA 72-2023 on secondary power requirements should not be less than the minimum prescriptive requirements within the code

Action: Secondary power is not being uniformly applied throughout the industry. Even in
Statement: SR152-NFPA 70-2021
Resolution: SR152-NFPA 70-2021 on secondary power requirements should not be less than the minimum prescriptive requirements within the code.



Public Comment No. 234-NFPA 72-2023 [New Section after 26.6.3.13]

26.6.3.14 Equipment Physical Protection

Communication equipment, power supplies, and circuits at the protected premises used for transmission of fire alarm signals shall be secured from tampering and protected from hazardous conditions, including weather conditions that can adversely affect the equipment operations, or be listed to for such conditions. All equipment supplied by FCC approved carriers located on the Network side of the FCC SNI or Demarc shall be installed in accordance with FCC approved Telecommunications wiring standards meeting Industry standards for safety, security and environmental protection as required by the specific installation situation. Decisions on specific configurations shall be at the sole discretion of the MFVN Network provider as a condition of providing Network Access and Transport.

Statement of Problem and Substantiation for Public Comment

The added text builds on the work of the performance-based task group and provides guidance on the physical installation rules applicable to MFVN equipment and cabling on the network side of the FCC demarcation.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz
Organization: AT&T Corporation
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 16:27:55 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but held
Resolution: The committee requires additional time to consider the requirements for equipment protection found in other codes and standards and provide appropriate wording for the next revision cycle.



Public Comment No. 180-NFPA 72-2023 [Section No. 26.6.3.13.1]

26.6.3.13.1* Premises Equipment.

The secondary power capacity for all transmitters and shared equipment necessary for the transmission of alarm, supervisory, trouble, and other signals located at the protected premises and installed on the customer side of the FCC demarcation or standard network interface shall be a minimum of 24 hours or as permitted by 10.6.7.3.1(2), 26.6.3.13.1.1, or 26.6.3.13.1.2.

26.6.3.13.1.1*

Secondary power capacity for shared equipment shall be permitted to have a capacity of 8 hours where acceptable to the authority having jurisdiction and where a risk analysis is performed to ensure acceptable availability is provided.

26.6.3.13.1.2*

Secondary power capacity for shared and premises equipment used in additional communications paths shall not be required where the first communications path meets the performance requirements of 26.6.3.3.

26.6.3.13.1.3 The secondary power capacity for MFVN communications equipment located at the protected premises and installed on the network side of the FCC demarcation or standard network interface and receiving power from the protected premises shall be a minimum of 24 hours.

26.6.3.13.1.4 The secondary power capacity for other MFVN communications equipment located at the protected premises and installed on the network side of the FCC demarcation or standard network interface shall be a minimum of 8 hours.

Statement of Problem and Substantiation for Public Comment

I think this proposal is consistent with the performance-based task group intention and also consistent with FCC rules regarding backup power. Certain MFVN providers have options of 24 hours or 8 hours of battery backup. Eight hours for equipment on the network side of the demarcation point is common as noted elsewhere in the code. Twenty-four hours for equipment on the customer side of the demarcation point is consistent with other parts of the code as well and is a commonly available option that the subscriber can select for fire alarm systems.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 184-NFPA 72-2023 [New Section after 26.6.4.2.1.2]</u>	
<u>Related Item</u>	
• CI-5176	

Submitter Information Verification

Submitter Full Name: Richard Kluge
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Street Address:
City:
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Submitted Date: ~~10-05~~ 25 21:53:51 EDT 2023

Submitted Date: ~~The Day~~ 25 21:53:51 EDT 2023

Committee Statement

Committee Action: Rejected but see related SR

Action:

Resolution: [SR-5130-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Simplified the secondary power requirements.
2. Added language to ensure secondary power was provided for all premises powered equipment.



Public Comment No. 231-NFPA 72-2023 [Section No. 26.6.3.13.1]

26.6.3.13.1* Premises Equipment.

The secondary power capacity for all transmitters and shared equipment necessary for the transmission of alarm, supervisory, trouble, and other signals located at the protected premises shall be a minimum of 24 hours or as permitted by 10.6.7.3.1(2), 26.6.3.13.1.1, or 26.6.3.13.1.2. All equipment supplied by FCC approved carrier connected on the Network side of the FCC SNI or Demarc shall be required to supply up to 8 hours of standby battery power.

A. 26.6.3.13.1 Shared equipment owned by or under the control of the subscriber should provide 24 hours of secondary standby power. All equipment supplied by FCC approved carrier connected on the Network side of the FCC SNI or Demarc should supply up to 8 hours of standby battery power.

26.6.3.13.1.1 *

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Secondary power capacity for shared equipment shall be permitted to have a capacity of 8 hours where acceptable to the authority having jurisdiction and where a risk analysis is performed to ensure acceptable availability is provided. All equipment supplied by FCC approved carrier connected on the Network side of the FCC SNI or Demarc shall be required to supply up to 8 hours of standby battery power.

26.6.3.13.1.

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1 *

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Secondary power capacity for shared

~~and premises equipment used in additional communications paths shall not be required where the first communications path meets the performance requirements of~~

equipment shall be permitted to have a capacity of 8 hours where acceptable to the authority having jurisdiction and where a risk analysis is performed to ensure acceptable availability is provided. All equipment supplied by FCC approved carriers connected on the Network side of the FCC SNI or Demarc shall be required to supply up to 8 hours of standby battery power.

A. 26.6.3.

3:

13.1.1 Shared equipment owned by or under the control of an approved managed facilities-based voice network provider should supply 8 hours of secondary power.

Statement of Problem and Substantiation for Public Comment

MFVN equipment located on the network side of the FCC demarcation point is provided with 8 hours of secondary power. This has been noted in the NFPA 72 for several cycles and is consistent with FCC regulations. See A.3.3.170.

Related Item

• CI-5176

Submitter Full Name: Jeffrey Betz

Submitter Information Verification

01/01/20

Submitter Full Name: Jeffrey Betz**Subject Information Verification****Street Address:****City:****State:****Zip:****Submittal Date:** Wed May 31 16:19:23 EDT 2023**Committee:** SIG-SSS**Committee Statement****Committee Action:** Rejected but see related SR**Resolution:** [SR-5130-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Simplified the secondary power requirements.
2. Added language to ensure secondary power was provided for all premises powered equipment.



Public Comment No. 61-NFPA 72-2023 [Section No. 26.6.3.13.1.1]

26.6.3.13.1.1*

Secondary power capacity for shared equipment ~~shall~~ and MFVN equipment shall be permitted to have a capacity of 8 hours where acceptable to the authority having jurisdiction and where a risk analysis is performed to ensure acceptable availability is provided.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.6.3.13.1.1.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
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Street Address:
City:
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Submission Date: Sun Apr 30 20:22:03 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5130-NFPA 72-2023](#)

Statement: [SR-5130-NFPA 72-2023](#)

During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Simplified the secondary power requirements.
2. Added language to ensure secondary power was provided for all premises powered equipment.

Following points are the specific basis for the change.

2. Added language to ensure secondary power was provided for all premises powered equipment.
1. Simplified the secondary power requirements.



Public Comment No. 62-NFPA 72-2023 [New Section after 26.6.3.14]

26.6.3.14 Equipment Physical Protection

Communication equipment, power supplies, and circuits at the protected premises used for transmission of fire alarm signals shall be secured from tampering and protected from hazardous conditions, including weather conditions that can adversely affect the equipment operations, or be listed to for such conditions.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.6.3.14.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
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Street Address:
City:
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Submittal Date: Sun Apr 30 20:34:27 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but held
Resolution: The committee requires additional time to consider the requirements for equipment protection found in other codes and standards and provide appropriate wording for the next revision cycle.



Public Comment No. 63-NFPA 72-2023 [Section No. 26.6.3.14]

26.6.3.14 15 Unique Flaws Not Covered by This Code.

If a communications technology has a unique flaw that could result in the failure to communicate a signal, the implementation of that technology for alarm signaling shall compensate for that flaw so as to eliminate the risk of missing an alarm signal.

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
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Street Address:
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Submittal Date: Sun Apr 30 20:38:58 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but held
Resolution: The committee requires additional time to consider the requirements for equipment protection found in other codes and standards and provide appropriate wording for the next revision cycle.



Public Comment No. 181-NFPA 72-2023 [Sections 26.6.4.1.1, 26.6.4.1.2]

Sections 26.6.4.1.1, 26.6.4.1.2

26.6.4.1.1–

The

The requirements of 26.6.4.2

~~shall not apply~~

apply when a DACT is used as a signaling interface from a fire alarm control unit to

~~another listed communications means.~~

an MFVN.

26.6.4.1.2

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~~The listed~~ When a DACT is used as a signaling interface from a fire alarm control unit to any other communications means, the communications means shall meet the requirements of either 26.6.3 or 26.6.5 .

Statement of Problem and Substantiation for Public Comment

It should be clearly stated that this section applies when the DACT connects to an MFVN. Otherwise, the performance based rules or radio system rules apply. There is no longer a need to state here that the alternative means are listed as that is indicated elsewhere, and the MFVN equipment may also be listed. So using the term "another listed means" is unnecessary and could add confusion. The essential requirement is to limit this section to DACTs connected to MFVNs and this should be stated.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge

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Submittal Date: Fri May 26 08:00:02 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5125-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based

an immediate need to begin to address the technical advancements and variety of use for transmitting fire alarm system signals to supervising stations. As a result of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. This revision refers the use either to one-way radio or performance based requirements when a DACT is used as a signaling interface device.



Public Comment No. 182-NFPA 72-2023 [Section No. 26.6.4.2.1.1]

26.6.4.2.1.1–

~~The connections to a managed facilities-based voice network shall~~

The connections and equipment residing on the customer side of the FCC demarcation or standard network interface shall be under the control of the subscriber for whom service is being provided by the supervising station alarm system.

26.6.4.2.1.2 The connections and equipment residing on the network side of the FCC demarcation or standard network interface shall be under the control of the FCC approved carrier.

Statement of Problem and Substantiation for Public Comment

Connections and equipment on the customer side of the demarcation are the subscriber's responsibility. Connections and equipment on the network side of the demarcation are the carrier's responsibility. We don't need to connections are to an MFVN as this section applies only to connections to an MFVN as stated earlier.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge
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Submittal Date: Fri May 26 08:19:14 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5126-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. This revisions provides clarity by removing unnecessary text.

1.This revisions provides clarity by removing unnecessary text.



Public Comment No. 235-NFPA 72-2023 [Section No. 26.6.4.2.1.1]

26.6.4.2.1.1

The ~~connections~~ connections on the Customer side of the FCC demarc to a managed facilities-based voice network shall be under the control of the subscriber for whom service is being provided by the supervising station alarm system. Connections on the Network side of the FCC demarc will be under the control and managed by the MFVN provider.

Statement of Problem and Substantiation for Public Comment

Connections on the Network side of the FCC demarc are under the control and managed by the MFVN provider and not regulated by NFPA 72.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz

Organization: AT&T Corporation

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Submittal Date: Wed May 31 16:31:00 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5126-NFPA 72-2023](#)

Resolution: [SR-5126-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1.This revisions provides clarity by removing unnecessary text.



Public Comment No. 184-NFPA 72-2023 [New Section after 26.6.4.2.1.2]

TITLE OF NEW CONTENT

26.6.4.2.1.4 Secondary Power

26.6.4.2.1.4.1 The secondary power capacity for all transmitters and shared equipment necessary for the transmission of alarm, supervisory, trouble, and other signals located at the protected premises and installed on the customer side of the FCC demarcation or standard network interface shall be a minimum of 24 hours or as permitted by 10.6.7.3.1(2).

26.6.4.2.1.4.1.1 , or 26.6.4.2.1.4.1.1.2.

26.6.4.2.1.4.1.1 * Secondary power capacity for shared equipment shall be permitted to have a capacity of 8 hours where acceptable to the authority having jurisdiction and where a risk analysis is performed to ensure acceptable availability is provided.

26.6.4.2.1.4.1.2 * Secondary power capacity for shared and premises equipment used in additional communications paths shall not be required where the first communications path meets the performance requirements of 26.6.3.3.

26.6.4.2.1.4.1.3 The secondary power capacity for MFVN communications equipment located at the protected premises and installed on the network side of the FCC demarcation or standard network interface and receiving power from the protected premises shall be a minimum of 24 hours.

26.6.4.2.1.4.1.4 The secondary power capacity for other MFVN communications equipment located at the protected premises and installed on the network side of the FCC demarcation or standard network interface shall be a minimum of 8 hours.

Statement of Problem and Substantiation for Public Comment

Secondary power requirements should be added to the DACT section consistent with those proposed in the performance-based section. I think this proposal is consistent with the performance-based task group intention and also consistent with FCC rules regarding backup power. Certain MFVN providers have options of 24 hours or 8 hours of battery backup. Eight hours for equipment on the network side of the demarcation point is common as noted elsewhere in the code. Twenty-four hours for equipment on the customer side of the demarcation point is consistent with other parts of the code as well and is a commonly available option that the subscriber can select for fire alarm systems. An alternative is to take these requirements and those proposed in PC-180 and move both to the general section 26.6.2 as powering requirements should be common across all transport technologies.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 180-NFPA 72-2023 [Section No. 26.6.3.13.1]	Same powering requirements are needed for both communication technologies.
<u>Related Item</u>	
• CI-5176	

Submitter Information Verification

Submitter Full Name: Richard Kluge
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Submittal Date: Fri May 26 08:58:22 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5148-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Clarify the authorizing authority for common carriers.
2. Specifies if the communication equipment receives power from the protected premises that it must be provided with secondary power.
3. Correlates with the performance based requirements.



Public Comment No. 237-NFPA 72-2023 [New Section after 26.6.4.2.1.2]

26.6.4.2.1.3

An MFVN provider (voice or digital) shall be authorized by the State Public Utilities Commission (PUC) as a common carrier or Local Exchange Carrier (LEC) as defined by the Federal Communications Commission (FCC) to provide telecommunication services in the State or jurisdiction where the service will be rendered ; including but not limited to Incumbent Local Exchange Carriers [ILEC], Local Exchange Carriers [LEC] Competitive Local Exchange Carriers [CLEC] and other Federal Communications Commission [FCC] approved carriers offering interconnection to facilities and Unbundled Network Elements in order to provide such telecommunications services connected on the Network side of the FCC SNI or Demarc . Such equipment shall be installed in accordance with FCC approved Telecommunications Network wiring standards meeting Industry standards for safety, security and environmental protection as required by the specific installation situation. Decisions on specific configurations shall be at the sole discretion of the MFVN Network provider as a condition of providing Network Access and Transport .

Statement of Problem and Substantiation for Public Comment

Adds clarification as to the types of carriers that can operate MFVN networks.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz
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City:
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Zip:
Submittal Date: Wed May 31 16:35:09 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5148-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following items are being submitted for the committee's consideration:

response by emergency public safety agencies. In the case of this second revision the following items are being submitted for comment:

1. Clarify the authorizing authority for the change.
2. Specifies if the communication equipment receives power from the protected premises that it must be provided with secondary power.
3. Correlates with the performance based requirements.



Public Comment No. 239-NFPA 72-2023 [New Section after 26.6.4.2.1.2]

Communications equipment used for transmission of fire alarm signals that receives primary power from the protected premises shall meet the requirements 26.6.3.13 . . All equipment supplied by FCC approved located on the Network side of the FCC SNI or Demarc shall only be required to supply a minimum of up to 8 hours of standby battery power. Additional capacity may be provided as determined by the MFVN . Carrier provider.

Statement of Problem and Substantiation for Public Comment

MFVN equipment located on the network side of the FCC demarcation point is provided with 8 hours of secondary power. This has been noted in the NFPA 72 for several cycles and is consistent with FCC regulations. See A.3.3.170.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz
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Street Address:
City:
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Zip:
Submittal Date: Wed May 31 16:39:29 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5148-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Clarify the authorizing authority for common carriers.
2. Specifies if the communication equipment receives power from the protected premises that it must be provided with secondary power.
3. Correlates with the performance based requirements.



Public Comment No. 64-NFPA 72-2023 [New Section after 26.6.4.2.1.2]

26.6.4.2.1.3

An MFVN provider (voice or digital) shall be authorized by the State Public Utilities Commission (PUC) as a common carrier or Local Exchange Carrier (LEC) as defined by the Federal Communications Commission (FCC) to provide telecommunication services in the State or jurisdiction where the service will be rendered.

26.6.4.2.1.4

Acknowledgements to the protected premises for alarm, supervisory, or trouble signals shall only be initiated by the supervising station.

26.6.4.2.1.5

Communication equipment used for transmission of fire alarm signals that receives primary power from the protected premises shall meet the requirements 26.6.3.13.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.6.4.2.1.3-_.5.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
Organization: UL Solutions
Affiliation: SIG-SSS Chapter 26.6 Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Apr 30 20:43:41 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Statement Resolution: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising

**Statement:
Resolution:**

During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Clarify the authorizing authority for common carriers.
2. Specifies if the communication equipment receives power from the protected premises that it must be provided with secondary power.
3. Correlates with the performance based requirements.



Public Comment No. 185-NFPA 72-2023 [Section No. 26.6.4.2.4.1]

26.6.4.2.4.1

A system employing a DACT shall employ a single telephone line (number) and one of the following transmission means:

- (1) One-way private radio alarm system
- (2) Two-way RF multiplex system
- (3) Transmission means complying with 26.6.3
- (4) A second telephone line (number), where all of the following are met:
 - (a) ~~Access to one of the technologies in 26.6.4.2.4.1 (1), 26.6.4.2.4.1 (2), or 26.6.4.2.4.1 (3) is not available at the protected premises.~~
 - (b) ~~The authority having jurisdiction approves the arrangement.~~
 - (c) ~~The DACT is programmed to call a second DACR line (number) when the signal transmission sequence to the first called line (number) is unsuccessful.~~
 - (d) The DACT is capable of selecting the operable means of transmission in the event of failure of the other means.
 - (e) Each telephone line is tested in accordance with 26.6.4.2.4.2 or at alternating 6-hour intervals.

Statement of Problem and Substantiation for Public Comment

A DACT utilizing listed equipment, connected to a PCU regulated and FCC approved carrier's MFVN, utilizing two lines, installed per NFPA 70, with 24 hours of standby power for customer side equipment and 8 hours of monitored standby power on the network side, tested end to end every 6 hours should be sufficient without further AHJ approval beyond what is required for all other aspects of a fire alarm installation.

The need to complicate the DACT installation by inclusion of a secondary means such as radio or other alternative systems "when available" is not enforceable. The code per section 1.2.3 establishes minimum required levels of performance. At an unspecified price, an optional secondary means of transmissions can always be considered "available". Given the improved technical requirements made in chapter 26 regarding listing, labeling, powering and notification and testing, this requirement can be eliminated.

Related Item

- CI-5176

Submitter Information Verification

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Submitted Date: 10/6/2023 09:35:34 EDT 2023

Submitted Date: ~~5/16/23~~ ~~5/16/23~~ 09:35:34 EDT 2023

Committee Statement

Committee: Rejected but see related SR

Action:

Resolution: [SR-5138-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Two way radios were removed because they are no longer used.
2. The language was clarified that DACTS must connect to a legacy POTS telephone line.



Public Comment No. 68-NFPA 72-2023 [Section No. 26.6.4.2.4.1]

26.6.4.2.4 Transmission Channels

26.6.4.2.4.1

A system employing a DACT shall be connected to transmission means arranged according to 26.6.4.2.1.1 or 26.6.4.2.1.2

26.6.4.2.4.1.1

A DACT is permitted to employ a primary and a secondary telephone line (two numbers) from a managed facilities-based voice network meeting the circuit integrity requirements of 26.6.3.2.2 (2) ~~(b)~~ and capable of supplying at least two communications pathways according to 26.6.3.4 or a single pathway according to 26.6.3.3 when the latter arrangement is approved by the Authority Having Jurisdiction.

26.6.4.2.4.1.2

A DACT is permitted to employ a primary legacy POTS telephone line (number) and one of the following transmission means:

(1) One-way private radio alarm system

- Two-way RF-multiplex system

(1) Transmission means complying

with

(1) with 26.6.3

(2) A second legacy POTS telephone line (number), where all of the following are met:

(a) Access to one of the technologies

in

in 26.6.4.2.4.1.2 (1)

,26

or 26.6.4.2.4.1

(2), or

6.4.

2

.4.1

(

3

2) is not available at the protected premises.

(b) The authority having jurisdiction approves the arrangement.

(c) The DACT is programmed to call a second DACR line (number) when the signal transmission sequence to the first called line (number) is unsuccessful.

(d) The DACT is capable of selecting the operable means of transmission in

(e) Each telephone line is tested in accordance

with

with 26.6.4.2.4.2

with (e) Each telephone line is tested in accordance
with 26.6.4.2.4.2
or
or at alternating 6-hour intervals.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_72_26.4.2.4_Rev_1.docx		

Statement of Problem and Substantiation for Public Comment

The intent of this committee input is to create a task group to evaluate the existing arrangement of Section 26.6 (Communications Methods) and harmonize all communications methods into the requirements for performance-based technologies to the extent this is possible. This would permit and regulate the use of new and emerging communication technologies while eliminating prescriptive requirements for outdated technologies, which are currently being phased out due to many factors such as regulatory, technology, and reliability changes. If during this assessment, the task group determines that an existing or Legacy communication method cannot be moved into the performance-based technology requirements, a separate section will be maintained to regulate this communication technology. The task group will continue to review Public Input 526 for appropriate requirements and text for inclusion in Section 26.7.

Related Item

- CI 5000

Submitter Information Verification

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Submittal Date: Mon May 01 21:54:55 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5138-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Two way radios were removed because they are no longer used by POTS telephone line.

1. Two way radios were removed because they are no longer used.
2. The language was changed that DACPS must connect to a legacy POTS telephone line.



Public Comment No. 66-NFPA 72-2023 [Section No. 26.6.5.1]

26.6.5.1 – Two-Way Radio Frequency (RF) Multiplex Systems:

26.6.5.1.1 – Maximum Operating Time:

The maximum end-to-end operating time parameters allowed for a two-way RF multiplex system shall be as follows:

- (1) For a time lapse from initiation, both of the following shall apply:
 - (2) The maximum allowable time lapse from the initiation of a single alarm signal until it is recorded at the supervising station shall not exceed 90 seconds.
 - (3) ~~When any number of subsequent alarm signals occur at any rate, they shall be recorded at a rate no slower than one every additional 10 seconds.~~
- (4) For a time lapse from the occurrence, both of the following shall apply:
 - (5) ~~The maximum allowable time lapse from the occurrence of an adverse condition in any transmission channel until recording of the adverse condition is started shall not exceed 200 seconds for Type 4 and Type 5 systems.~~
 - (6) ~~The requirements of 26.6.5.1.4 shall apply.~~
- (7) ~~In addition to the maximum operating time allowed for alarm signals, the requirements of one of the following shall be met:~~
 - (8) ~~A system unit that has more than 500 initiating device circuits shall be able to record not less than 50 simultaneous status changes within 90 seconds.~~
 - (9) ~~A system unit that has fewer than 500 initiating device circuits shall be able to record not less than 10 percent of the total number of simultaneous status changes within 90 seconds.~~

26.6.5.1.2 – Supervisory and Control Functions:

26.6.5.1.2.1 –

~~Facilities shall be provided at the supervising station for the following supervisory and control functions of the supervising or subsidiary station and the repeater station radio transmitting and receiving equipment:~~

- (1) ~~RF transmitter in use (radiating)~~
- (2) ~~Failure of ac power supplying the radio equipment~~
- (3) ~~RF receiver malfunction~~
- (4) ~~Indication of automatic switchover~~
- (5) ~~Independent deactivation of either RF transmitter controlled from the supervising station~~

26.6.5.1.2.2 –

~~Where the radio equipment is remotely located from the system unit, supervisory and control functions of the supervising or subsidiary station and the repeater station radio transmitting and~~

26.6.5.1.2.2 –

Where the radio equipment is remotely located from the system unit, supervisory and control functions of the supervising or subsidiary station and the repeater station radio transmitting and receiving equipment shall be accomplished via a supervised circuit.

26.6.5.1.3 – Transmission Channel.**26.6.5.1.3.1 –**

The RF multiplex transmission channel shall terminate in an RF transmitter/receiver at the protected premises and in a system unit at the supervising or subsidiary station.

26.6.5.1.3.2 –

Operation of the transmission channel shall conform to the requirements of this Code whether channels are private facilities, such as microwave, or leased facilities furnished by a communications utility company.

26.6.5.1.3.3 –

If private signal transmission facilities are used, the equipment necessary to transmit signals shall also comply with requirements for duplicate equipment or replacement of critical components, as described in 26.6.6.3 :

26.6.5.1.4 * – Categories.

Two-way RF multiplex systems shall be divided into Type 4 or Type 5 classifications based on their ability to perform under adverse conditions.

26.6.5.1.4.1 –

A Type 4 system shall have two or more control sites configured as follows:

- (1) Each site shall have an RF receiver interconnected to the supervising or subsidiary station by a separate channel.
- (2) The RF transmitter/receiver located at the protected premises shall be within transmission range of at least two RF receiving sites.
- (3) The system shall contain two RF transmitters that are one of the following:
 - (4) Located at one site with the capability of interrogating all of the RF transmitters/receivers on the premises
 - (5) Dispersed with all of the RF transmitters/receivers on the premises having the capability to be interrogated by two different RF transmitters
- (6) Each RF transmitter shall operate as follows:
 - (7) Maintain a status that allows immediate use at all times.
 - (8) Provide facilities in the supervising or subsidiary station to operate any off-line RF transmitter at least once every 8 hours.
- (9) The Type 4 system shall operate as follows:
 - (10) Failure of one of the RF receivers shall not interfere with the operation of the system from the other RF receiver.
 - (11) Failure of any receiver shall be annunciated at the supervising station.
- (12) A physically separate channel shall be required between each RF transmitter or RF receiver site, or both, and the system unit.

26.6.5.1.4.2 –

A Type 5 system shall have a single control site configured as follows:

26.6.5.1.4.2 –

A Type 5 system shall have a single control site configured as follows:

- (1) A minimum of one RF receiving site
- (2) A minimum of one RF transmitting site

26.6.5.1.5 – Loading Capacities:

26.6.5.1.5.1 –

The loading capacities of two-way RF multiplex systems shall be based on the overall reliability of the signal receiving, processing, display, and recording equipment at the supervising or subsidiary station and the capability to transmit signals during adverse conditions of the transmission channels.

26.6.5.1.5.2 –

Allowable loading capacities shall comply with Table 26.6.5.1.5.2 :

Table 26.6.5.1.5.2 Loading Capacities for Two-Way RF Multiplex Systems	
Trunks System Type	Type 4 Type 5
Maximum number of alarm service initiating device circuits per primary trunk facility	5,120 1,280
Maximum number of leg facilities for alarm service per primary trunk facility*	512 128
Maximum number of all types of initiating device circuits per primary trunk facility in any combination	10,240 2,560
Maximum number of leg facilities for types of alarm service per primary trunk facility in any combination*	1,024 256
System Units at the Supervising Station - Maximum number of all types of initiating device circuits per system unit*	10,240 10,240
Maximum number of protected buildings and premises per system unit	512 512
Maximum number of alarm service initiating device circuits per system	5,120 5,120
Systems Emitting from Subsidiary Station †	— —

*Includes every initiating device circuit (e.g., waterflow, alarm, supervisory, guard, burglary, hold-up).

† Same as system units at the supervising station.

26.6.5.1.5.3 –

The capacity of a system unit shall be permitted to be unlimited if the signal-receiving, processing, display, and recording equipment are duplicated at the supervising station and a switchover is able to be accomplished in not more than 30 seconds, with no loss of signals during this period.

26.6.5.1.6 – Adverse Conditions:

26.6.5.1.6.1 –

The occurrence of an adverse condition on the transmission channel between a protected premises and the supervising station that prevents the transmission of any status change signal shall be automatically indicated and recorded at the supervising station.

26.6.5.1.6.2 –

The indication and recording of the adverse condition shall identify the affected portions of the system so that the supervising station operator will be able to determine the location of the adverse condition by trunk or leg facility, or both.

26.6.5.1.6.3 –

For two-way RF multiplex systems that are part of a central station alarm system, restoration of service to the affected portions of the system shall be automatically recorded.

26.6.5.1.6.4 –

When service is restored to a two-way RF multiplex system, the first status change of any initiating device circuit, any initiating device directly connected to a signaling line circuit, or any combination thereof that occurred at any of the affected premises during the service interruption also shall be recorded.

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Additional Proposed Changes	NFPA 12 Filtration, 2-Way_Radio.docx	

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Additional Proposed Changes NFPA 72 Elimination Of Two-Way_Radio.docx		

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the radio based task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and should be removed from the standard. This public comment is tied to Committee Input 5100.

Related Item

- CI 5000

Submitter Information Verification

Submitter Full Name: Christopher Creamer
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Submittal Date: Sun Apr 30 20:56:30 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Accepted
Resolution: [SR-5127-NFPA 72-2023](#)
Statement: This section has been eliminated since the technology is no longer listed for fire alarm service.



Public Comment No. 168-NFPA 72-2023 [Section No. 26.7]

26.

~~7~~ ~~Subsidiary Stations or~~

2.11 Intermediary Service

~~Provider:~~

Providers

26.

~~7~~

2.

~~4~~ ~~General:~~

26.7.1.1 –

~~The requirements of this section shall apply to gateway communications systems between the protected premises and the public safety answering points (PSAP).~~

26.7.1.2 –

~~Gateway communication systems shall consist of fire alarm control units, transmitters, and other signal initiating devices or technologies that communicate on wireless network(s) from the protected premises through the gateway to a PSAP.~~

26.7.1.3 * –

~~The systems covered under Section 26.7 shall be for the transmission of signals between the protected premises and a PSAP.~~

26.7.1.4 –

~~This section shall establish minimum required levels of performance, reliability, and quality for gateways and signal transmission from the gateway to a PSAP.~~

26.7.2 – Gateway Communication Systems.

26.7.2.1 –

~~Gateway communications systems shall be designed, installed, operated, and maintained in accordance with 26.7.2 to provide reliable transmission and receipt of alarms in a manner acceptable to the authority having jurisdiction.~~

26.7.2.2 –

~~A gateway communications system shall be permitted to be used for the transmission of other signals or calls of a public emergency nature, provided that such transmission does not interfere with the transmission and receipt of fire alarms.~~

26.7.2.3 –

~~All devices shall be designed to function satisfactorily under the climatic and environmental conditions to which they could be exposed.~~

26.7.2.3.1 –

~~All devices shall be identified as suitable for the location and conditions for which they are installed.~~

26.7.2.4 –

~~All circuits, paths, and equipment necessary for the receipt of signals from a protected premises shall be monitored for integrity.~~

~~All systems and signal transmissions shall be under the control of a designated supervising station.~~

~~26.7.2.5.1~~

~~All systems and signal transmissions shall be under the control of a designated supervising station.~~

~~26.7.2.5.1 –~~

~~Designation shall be through a contract between the owner and the supervising station.~~

~~26.7.2.5.2 –~~

~~The contract between the owner and the supervising station shall be the only one in force.~~

~~26.7.2.6 –~~

~~All gateway equipment shall be listed for its purpose.~~

~~26.7.2.7 –~~

~~All gateway equipment shall be installed in locations accessible to the authority having jurisdiction for the purpose of inspection.~~

~~26.7.2.8 –~~

~~Gateway communications systems shall, in their entirety, be subject to a complete operational acceptance test upon completion of system installation.~~

~~26.7.2.8.1 –~~

~~The operational test(s) shall comply with the following:~~

- ~~(1) Be made in accordance with the requirements of the authority having jurisdiction~~
- ~~(2) In no case be less than those stipulated in Chapter 14~~

~~26.7.2.8.2 –~~

~~Operational acceptance tests shall be performed on any alarm-reporting devices, as covered in Section 26.7, that are installed or modified subsequent to the test required by 26.7.2.8 :~~

~~26.7.2.9 –~~

~~Personnel shall be qualified in accordance with the requirements of 10.5.7 :~~

~~26.7.3 – Communications Methods:~~

~~26.7.3.1 – Application:~~

~~26.7.3.1.1 –~~

~~A gateway communications system shall include wireless network(s) for command and control communications between the protected premises, alarm processing equipment, supervising station, and PSAP.~~

~~26.7.3.1.2 –~~

~~A gateway communications system shall be permitted to be used with emergency communications systems covered under Chapter 24 :~~

~~26.7.3.2 – Wireless Network(s):~~

~~26.7.3.2.1 –~~

~~The terms *wireless network* and *cellular transmission* shall be considered the same and interchangeable throughout this section.~~

~~26.7.3.2.2 –~~

~~All wireless networks shall meet the requirements of 26.7.3.2.3 through 26.7.3.2.6 :~~

~~26.7.3.2.3 –~~

~~In addition to the requirements of this Code, all wireless equipment shall be designed and operated in compliance with all applicable rules and regulations of the Federal Communications Commission (FCC) or, where required, the National Telecommunications and Information Administration (NTIA):~~

~~26.7.3.2.4 –~~

~~Wireless networks shall not be permitted:~~

~~Fire alarm signals, other emergency alarm signals, and monitoring for integrity signals shall be~~

~~26.7.3.2.5 – Wireless networks shall not be permitted.~~

Fire alarm signals, other emergency alarm signals, and monitoring for integrity signals shall be permitted on the same wireless network, dedicated for that purpose.

~~26.7.3.2.6 –~~

Two independent means shall be provided to retransmit an alarm signal from the gateway to the designated PSAP.

~~26.7.4 – Alarm Processing Equipment.~~

The alarm processing equipment at the gateway required to receive and control signals from the protected premises shall be installed and maintained as defined in NFPA 1225.

~~26.7.5 – Visual Recording Devices.~~

~~26.7.5.1 –~~

Alarms shall be automatically received and recorded at the gateway.

~~26.7.5.2 –~~

A device for producing a permanent graphic recording of all alarm, supervisory, trouble, and test signals received or retransmitted, or both, shall be provided at each gateway for each system.

~~26.7.5.3 –~~

Reserve recording devices shall be provided in accordance with 26.7.5.3.1 and 26.7.5.3.2.

~~26.7.5.3.1 –~~

Where each gateway is served by a dedicated recording device, the number of reserve recording devices required on-site shall be equal to at least 5 percent of the systems that are in service and in no case less than one device.

~~26.7.5.3.2 –~~

Where two or more gateways are served by a common recording device, a reserve recording device shall be provided on-site for each gateway connected to a common recorder.

~~26.7.5.4 –~~

Permanent visual records shall comply with 26.7.5.4.1 and 26.7.5.4.2.

~~26.7.5.4.1 –~~

A permanent visual record and an audible signal shall be required to indicate the receipt of an alarm.

~~26.7.5.4.2 –~~

The permanent record shall indicate the exact location from which the alarm is being transmitted.

~~26.7.5.5 –~~

Facilities shall be provided with a device that automatically records the date and time of receipt of each alarm.

~~26.7.6 – System Integrity.~~

~~26.7.6.1 –~~

Circuits upon which transmission and receipt of alarms depend shall be constantly monitored for integrity to provide prompt warning of conditions adversely affecting reliability.

~~26.7.6.2 –~~

The power supplied to all required circuits and devices of the system shall be constantly monitored for integrity.

~~26.7.7 – Trouble Signals.~~

~~26.7.7.1 –~~

Trouble signals shall be indicated where there is a trained and competent person on duty at all times within a gateway.

~~26.7.7.2 –~~

Trouble signals shall be distinct from alarm signals and be indicated by a visual and audible

26.7.7.2 –

Trouble signals shall be distinct from alarm signals and be indicated by a visual and audible signal.

26.7.7.3 –

A switch for silencing the audible trouble signal shall be permitted, provided that the visual signal remains operating until the silencing switch is restored to its normal position.

26.7.7.4 –

The audible signal shall be responsive to faults on any other circuits that occur prior to restoration of the silencing switch to its normal position.

26.7.8 – Power Supply:**26.7.8.1 –**

The requirements of 26.7.8 shall be met for primary and secondary power for the gateway.

26.7.8.2 –

Visual and audible means to indicate a 15 percent or greater reduction of normal power supply (rated voltage) shall be provided.

26.7.8.3 –

Where the electrical service/capacity of the equipment required under Section 4.7 of NFPA 1225 satisfies the needs of equipment in this section, such equipment shall not be required to be duplicated.

26.7.9 – Engine-Driven Generators:

The installation of engine-driven generator sets shall be in accordance with NFPA 37, NFPA 110, and NFPA 1225.

26.7.10 – Equipment Fire Protection:

Where applicable, electronic computer/data processing equipment shall be protected in accordance with NFPA 75.

26.7.11 – Gateway:**26.7.11.1 –**

All equipment shall be listed for its intended use and shall be installed in accordance with NFPA 70.

26.7.11.2 – Alarm Processing Equipment:**26.7.11.2.1 –**

The alarm processing equipment shall be located where it can be monitored for alarm and trouble conditions.

26.7.11.2.2 –

The alarm processing equipment shall be accessible in case of a pathway or communications failure with the communications center.

26.7.11.3 –

Wireless alarm repeating systems used to repeat signals between a protected premises and the gateway processing equipment location shall meet the requirements of 26.7.11.3.1 through 26.7.11.3.4.

26.7.11.3.1 –

There shall be a minimum of two complete and independent alarm repeater systems, including batteries and power supplies.

26.7.11.3.2 –

If the gateway is configured with one alarm repeater in standby mode, the system shall be

26.7.11.3.2 –

If the gateway is configured with one alarm repeater in standby mode, the system shall be capable of both of the following:

- (1) Detecting a communications failure
- (2) Automatically switching to the backup system without interruption or loss of any alarm or trouble transmission

26.7.11.3.3 –

Gateways shall not be used for any purpose other than alarm communications between the protected premises and the PSAP.

26.7.11.3.4 –

Where it is not possible to use the gateway alarm reporting infrastructure to provide communications between the protected premises and a PSAP, alarm processing equipment at the contracted supervising station shall be used in accordance with Section 26.3, Section 26.4, or Section 26.5.

26.7.11.4 –

Pathways between the protected premises and the gateway alarm processing equipment shall be monitored for integrity, be dedicated, and not be used for any other purpose.

26.7.11.5 –

When communications protected premises and the gateway alarm processing equipment fails, the requirements of 26.7.11.5.1 through 26.7.11.5.3 shall apply.

26.7.11.5.1 –

A pathway or communications trouble condition shall be detected and annunciated at the protected premises, the originating supervising station, and the gateway alarm processing equipment within 200 seconds and meet the requirements of 26.7.7.

26.7.11.5.2 –

Visual and audible trouble alarm indications pertaining to a pathway or communications failure between the protected premises and the gateway alarm processing equipment shall be distinct from all other trouble alarms.

26.7.11.5.3 –

The gateway alarm processing equipment shall be manned by trained personnel until communications can be re-established.

11.1 Where an Intermediary Service Provider is used, the requirements of 26.2.11.2 through 26.2.11.3 shall be met.

11.1 Where an Intermediary Service Provider is used, the requirements of 26.2.11.2 through 26.2.11.3 shall be met.

26.2.11.2 Intermediary Service Providers shall include the services listed in 26.2.11.2.1 through 26.2.11.2.3.

26.2.11.2.1* All communication paths from the protected premises, through the intermediary service provider, to the supervising station shall be supervised at an interval of not more than 60 minutes.

A.26.2.11.2.1 Intermediary Service Providers may utilize one or more communications paths between a fire alarm system installed at a protected premises and its own facility(s), and between its own facility and the supervising station. Permitted pathways may include 26.6.3 Performance-Based Technologies, 26.6.4 Digital Communicator Systems, or 26.6.5 Radio Systems. The failure of any pathway should immediately be annunciated at the responsible supervising station. The failure to complete a signal transmission should immediately be annunciated at the protected premises.

26.2.11.2.2* All alarm, trouble, and supervisory signals from fire alarm systems received by an intermediary service provider shall be retransmitted, without delay, electronically to the supervising station responsible for signal dispositioning.

A.26.2.11.2.2 Routine retransmission of signals to their destination supervising station should take a maximum of 5 seconds from receipt of a signal until the electronic retransmission to the supervising station.

26.2.11.2.3 Other elements of fire alarm service required by this code shall be provided by a company that has a listing covering these elements.

26.2.11.3 Intermediary Service Provider facilities that support the delivery of signals to a supervising station, from a protected premises fire alarm system installed in accordance with this code shall, by January 1, 2027, conform to the construction, fire protection, physical security, cybersecurity, emergency lighting, power, communications infrastructure, and service resiliency requirements for Intermediary Service Providers contained in the latest edition of UL 827, Central Station Alarm Services .

Statement of Problem and Substantiation for Public Comment

At the conclusion of the First Draft meeting a Task Group was created by the Chair of SIG-SSS to further review possible requirements to address the transmission of signals from the protected premises, thru a provider, and on to a supervising station. During the First Draft meeting, FR No. 5108 was created which added new language for Subsidiary Stations or Intermediary Service Provider in Section 26.7. The submitted language found in PC No. 168 is the work of the Task Group and seeks to eliminate all of FR No. 5108, which created a new Section 26.7. In its place, PC No 168 creates a new Section 26.2.11, and related Annex material, addressing Intermediary Service Providers. The following is the technical substantiation for the proposed Public Comment.

Rapid technological advances in recent years have enabled the availability of intermediary alarm transmission services aimed at enhancing the user experience of all stakeholders in contemporary fire alarm protection. Intermediary services delivered by third-party providers have a position in the communications cloud which places them between a protected premises and the responsible supervising station. Signals from a protected premise traverse a path through communications channel(s) to the third-party provider's network servers, which then forward signals through communications channel(s) to the responsible supervising station.

A market for third-party intermediary alarm transmission to a subsidiary station has evolved in which the intermediary service providers typically:

A market for third-party intermediary fire alarm transmission related services has evolved in which the intermediary service providers typically:

2. Delivers some, or all, elements of the fire alarm transmission services required by NFPA 72, such as supervision of the connection between itself and the protected premises, and reporting communication loss to the responsible supervising station when necessary.
3. Upon receipt of specific NFPA 72 defined signals from a fire alarm system, a) immediately retransmit the signal to the responsible supervising station and b) initiate delivery of services not required by this code, but of value to the system owner and other stakeholders, such as notification to a list of supplemental contacts specified by the system owner, predictive analytics that enable preventative maintenance, and the like.

Historically, intermediary service providers were considered part of the communications cloud by virtue of the receive-and-forward nature of code-defined signal handing. In that respect, they appeared to emulate the function of an internet routing point.

Recent events have demonstrated that the internet router analogy is flawed as loss of service from an intermediary service provider is not necessarily just routed around by standard internet protocols. Loss of an intermediary service provider can effectively create a denial-of-service situation that disrupts the responsible supervising station’s ability to deliver its life-safety services, potentially to a large number of protected premises.

This proposal is intended to recognize the key role of intermediary service providers in contemporary alarm protection service and to manage the risks associated with their participation by establish baseline requirements that protect the interests of stakeholders in that protection.

The proposal puts focus on compliance with UL827 to address issues related to intermediary service provider construction, fire protection, security, emergency lighting, as well as resilient power, communications, and overall service delivery resiliency. Industry suggests that an ANSI compliant continuous development Standards process (such as that used by Underwriters Laboratories Inc) is best positioned to respond to rapid technology changes that underlie NFPA 72 compliant service delivery.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 169-NFPA 72-2023 [New Section after 3.3.154]</u>	
<u>Related Item</u>	
• FR No. 5108	

Submitter Information Verification

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Submittal Date: Wed May 24 21:10:02 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Statement: Currently, intermediary service providers are being used to communicate fire protection signals from the protected premises to the supervising stations. Requirements were needed to ensure that when these signals pass through the intermediary service
Resolution: SR-5149-NFPA 72-2023

**Statement:
Resolution:**

SR-5149-NFPA 72-2023
Currently, intermediary service providers are being used to communicate fire protection signals from the protected premises to the supervising stations. Requirements were needed to ensure that when these signals pass through the intermediary service providers servers, they are processed in a reliable and supervised manner, and do not bypass the supervising station.



Public Comment No. 143-NFPA 72-2023 [Section No. 27.5.2.2.4]

27.5.2.2.4

Type B wired systems shall comply with the following:

- (1) One such recording device shall be installed in each emergency response facility.
- (2) At least one recording device shall be installed in the communications center.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._33.pdf	NFPA 72 Correlating Note No. 33	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 33 appeared in the First Draft Report on First Revision No. 5129.

Review the language of 27.5.2.2.4(2). The words "recording device" are missing between 'least' and 'one'. The revision inadvertently deleted "recording device" and as a result of the proposed change the language is unclear. Consider revising the proposed language of 27.5.2.2.4 (2) to read as follows: "At least one recording device shall be installed in the communications center."

Related Item

- FR - 5129

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 23 10:34:00 EDT 2023

Committee: SIG-PRS

Committee Statement

Committee Action: Accepted

Resolution: SR-5038-NFPA 72-2023

Statement: The first revision inadvertently deleted "recording device" and as a result of the proposed change the language is unclear. This revision corrects the language.



Public Comment No. 186-NFPA 72-2023 [Section No. 27.8.3]

27.8.3

Wired

~~and~~

or wireless alarm boxes shall

~~comply with the following:~~

Be permitted for shared use with an emergency communications system

~~Meet all~~

meeting the requirements of

~~Chapter~~

Chapter 27 .

Statement of Problem and Substantiation for Public Comment

This comment was submitted on behalf of the SIG-PRS Section 27.8 ECS Task Group. The ECS Task Group revised this language as part of our work in between first & second drafts. A change to the language was required in order to eliminate two shall statements. The proposed language provides cleaner wording to achieve the desired intent.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 187-NFPA 72-2023 [Section No. 27.8.6]</u>	
<u>Public Comment No. 188-NFPA 72-2023 [New Section after 27.8.6]</u>	

Related Item

- SIG-PRS Section 27.8 Task Group established during 1st draft.

Submitter Information Verification

Submitter Full Name: Deborah Shaner
Organization: Shaner Life Safety
Affiliation: SIG-PRS Section 27.8 Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 29 13:48:12 EDT 2023
Committee: SIG-PRS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5050-NFPA 72-2023

Statement: This revision to the language was required in order to eliminate two shall statements. The language provides cleaner wording to achieve the desired intent. 'and' was changed to 'or' to eliminate confusion as to whether both were required to be present.

The language provides cleaner wording to achieve the desired intent. 'and' was changed to 'or' to eliminate confusion as to whether both were required to be present.



Public Comment No. 188-NFPA 72-2023 [New Section after 27.8.6]

27.8.7

Pathway Survivability. Connections and interfaces to the Public Emergency Alarm Reporting System shall have a pathway survivability Level 2 or Level 3 to minimize impairment or disruption to normal operation.

27.8.8

Power Supplies. Power supplies for Public Emergency Alarm Reporting System interfaces shall meet the requirements of 10.6.

Statement of Problem and Substantiation for Public Comment

This comment is submitted on behalf of the SIG-PRS Section 27.8 Task Group created during the first revision. TG Substantiation: New language proposed to ensure survivability and power supplies used in PRS systems meet NFPA 72 requirements.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 186-NFPA 72-2023 [Section No. 27.8.3]</u>	SIG-PRS Section 27.8 Task Group work
<u>Public Comment No. 187-NFPA 72-2023 [Section No. 27.8.6]</u>	SIG-PRS Section 27.8 Task Group work

Related Item

- SIG-PRS Section 27.8 Task Group

Submitter Information Verification

Submitter Full Name: Deborah Shaner
Organization: Shaner Life Safety
Affiliation: SIG-PRS Section 27.8 Task Group work
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 29 14:00:25 EDT 2023
Committee: SIG-PRS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5041-NFPA 72-2023
Statement: This revision ensures survivability and power supplies used in public reporting systems meet NFPA 72 requirements for power supplies and pathway survivability.



Public Comment No. 187-NFPA 72-2023 [Section No. 27.8.6]

27.8.6

-

Communications

Connections and interfaces between the public emergency alarm reporting system and the emergency communications system shall

~~meet the following:~~The communications system shall

be monitored for integrity.

27.8.6.1 Faults shall be annunciated at the communications center

~~, as well as at the fire command center or the emergency command center or both, in the protected premises~~

.

27.8.6.2 Faults shall be annunciated within the protected premises at a location approved by the AHJ.

A.27.8.6: Faults are to be annunciated at the head end of both the PRS & ECS. The intent is to ensure a responsible party is notified of the fault so system can be repaired. Suggested locations include user interface locations, constantly attended location, fire command center, facility director's office/shop .

Statement of Problem and Substantiation for Public Comment

This comment is submitted on behalf of the SIG-PRS Section 27.8 Task Group created during the 1st draft. TG Substantiation: The initial language contained multiple shall statements and was confusing. The proposed new language cleans up the multiple statements. The annunciation was clarified to allow for discretion by the AHJ given the multiple configurations that may be present. New annex language provides suggestions for annunciation points without mandating potential locations that do not exist.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 186-NFPA 72-2023 [Section No. 27.8.3]</u>	SIG-PRS Section 27.8 Task Group work
<u>Public Comment No. 188-NFPA 72-2023 [New Section after 27.8.6]</u>	

Related Item

- SIG-PRS Section 27.8 Task Group created during 1st draft

Submitter Information Verification

Submitter Full Name: Deborah Shaner
Organization: Shaner Life Safety
Affiliation: SIG-PRS Section 27.8 Task Group
Street Address:
City:
State:
Zip:

Committee Statement Mon May 29 13:54:14 EDT 2023

Committee: SIG-PRS
Committee: Deleted but see related PR

Committee Statement Mon May 29 13:54:14 EDT 2023

Committee: SIG-PRS

Committee Action: Rejected but see related SR

Action:

Resolution: [SR-5049-NFPA 72-2023](#)

Statement: This revision was to correct a manual of style issue with two shall statements. The first draft language contained multiple shall statements and was confusing. The revised language cleans up the multiple statements. The annunciation was clarified to allow for discretion by the AHJ given the multiple configurations that may be present. New annex language provides suggestions for annunciation points without mandating potential locations that do not exist.



Public Comment No. 5-NFPA 72-2023 [New Section after 29.1.2]

Fuel gas detection and warning equipment shall be installed in accordance with NFPA 715, *Standard for the Installation of Fuel Gases Detection and Warning Equipment*.

Statement of Problem and Substantiation for Public Comment

Add new section 29.1.2 and renumber NFPA 715 is the new standard for fuel gas detection. This will point the reader to NFPA 715 if the gas to be detected is a fuel gas. If the Committee designates this as new material, please carry over to the next cycle for consideration.

Related Item

- FR 5011

Submitter Information Verification

Submitter Full Name: Stephen Olenick
Organization: Combustion Science & Engineering, Inc.
Street Address:
City:
State:
Zip:
Submittal Date: Mon Mar 13 10:45:35 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5129-NFPA 72-2023](#)
Statement: NFPA 715 is the new standard for fuel gas detection. This will point the reader to NFPA 715 if the gas to be detected is a fuel gas. If the Committee designates this as new material, please carry over to the next cycle for consideration.



Public Comment No. 199-NFPA 72-2023 [New Section after 29.1.5]

TITLE OF NEW CONTENT

Add new section 29.1.5; renumber 29.1 as required.

With the exception of Section 29.11.1.1, the requirements of this chapter shall not apply to the installation of single and multiple station alarms furnished in commercial residential buildings provided with an Approved Building Fire Alarm system maintained in accordance with this Standard.

Statement of Problem and Substantiation for Public Comment

The proposed change seeks to provide clarity as to prevailing installation requirements applicable to commercial residential buildings provided with NFPA 72 compliant fire alarm systems and single station (in limited circumstances multiple station) alarms. This protective strategy has proven effective over decades of experience in commercial residential buildings, particularly those also protected by code-complaint automatic sprinklers.

Smart device technologies are clearly providing relatively new protective options for application to single and two-family homes and townhouses. Code requirements, notably in Chapter 29, will likely evolve to address these developments.

This proposed change seeks to avoid confusion for the large number of existing, code-compliant commercial residential buildings effectively served by the combination of traditional fire alarm systems and single station alarms.

Related Item

- Public Input 450

Submitter Information Verification

Submitter Full Name: Byron Briese
Organization: FDFP Consulting LLC
Affiliation: American Hotel and Lodging Association
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 30 22:40:54 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected

Resolution: The building code requires single and multiple stations in residential occupancies and refers to Chapter 29 for the installation requirements. The scope of Chapter 29 applies to the installation of single and multiple station alarms regardless of occupancy type.



Public Comment No. 236-NFPA 72-2023 [Section No. 29.4]

29.4 Remote Annunciation.

Remote annunciation from single- and multiple-station alarms shall be permitted, provided signals at the remote annunciator properly identify the hazard.

29.4.1 "Remote annunciation provided from fire-warning, carbon monoxide-warning, and combustible gas-warning, listening equipment shall be permitted, provided the listening equipment is listed and properly identifies the hazard."

Statement of Problem and Substantiation for Public Comment

Currently there are no NFPA, UL, or industry standard requirements for smart speakers and smart home systems that provide "listening" equipment or services that alert remote monitoring centers when a fire-warning, carbon monoxide-warning, and combustible gas-warning alarm have been detected. NFPA 72 requires all devices, combinations of devices, and equipment to be installed in conformity with Chapter 29 to be approved or listed for the purposes for which they are intended. Since remote monitoring centers respond to remote annunciations from the listening equipment or services and potentially dispatch emergency services, manufacturers and service providers need to somehow demonstrate that signals coming from the equipment properly identify the hazard.

This public comment is being submitted on behalf of a SIG-HOU task group formed to address Public Input No. 321-NFPA 72-2022.

Related Item

- Public Input No. 321-NFPA 72-2022

Submitter Information Verification

Submitter Full Name: Greg Hansen

Organization: Vivint Inc.

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 16:32:08 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5117-NFPA 72-2023

Resolution: SR-5117-NFPA 72-2023

Statement: Currently there are no NFPA, UL, or industry standard requirements for smart speakers and smart home systems that provide "listening" equipment or services that alert remote monitoring centers when a fire-warning, carbon monoxide-warning, and combustible gas-

Statement: Currently there are no NFPA, UL, or industry standard requirements for smart speakers and smart home systems that provide "listening" equipment or services that alert remote monitoring centers when a fire-warning, carbon monoxide-warning, and combustible gas-warning alarm have been detected. NFPA 72 requires all devices, combinations of devices, and equipment to be installed in conformity with Chapter 29 to be approved or listed for the purposes for which they are intended. Since remote monitoring centers respond to remote annunciations from the listening equipment or services and potentially dispatch emergency services, manufacturers and service providers need to somehow demonstrate that signals coming from the equipment properly identify the hazard.



Public Comment No. 104-NFPA 72-2023 [Section No. 29.5.4]

29.5.4*

Carbon monoxide warning equipment to be installed in residential occupancies shall produce the T4 signal consistent with 18.4.3.2, and after the initial 4 minutes of alarm the 5-second "off" time shall be permitted to be changed to 60 seconds \pm 10 percent.

Statement of Problem and Substantiation for Public Comment

The requirement should reference 18.4.3.2.

Related Item

- FR 5237

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 11:02:07 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Accepted

Resolution: [SR-5100-NFPA 72-2023](#)

Statement: The revised language provides a necessary cross-reference to 18.4.3.2.



Public Comment No. 144-NFPA 72-2023 [Section No. 29.5.5.2]

29.5.5.2

The voice message shall comply with all of the following:

- (1) The voice message is first preceded once by a minimum of eight cycles of the T3 signal.
- (2) The voice message periodically interrupts the T3 signal for no longer than 10 seconds, followed by a minimum of two cycles of the T3 signal between each voice message.
- (3) The initial eight-cycle period ~~shall~~ is not ~~be~~ required to be repeated.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._26.pdf	NFPA 72 Correlating Note No. 26	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 26 appeared in the First Draft Report on First Revision No. 5238.

Review the language of 29.5.5.2 for consistent list items. 29.5.5.2(1) and (2) are not shall statements, (3) is a shall statement. A possible solution is replacing 'shall not be required' in (3) with 'is not required'. NFPA Manual of Style requires consistency in list items: all phrases, all sentences, all shall statements, etc.

Related Item

- FR - 5238

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 23 10:40:01 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Accepted

Resolution: SR-5108-NFPA 72-2023

Statement: The revision is made for Manual of Style compliance.



Public Comment No. 44-NFPA 72-2023 [Section No. 29.5.9]

29.5.9*

Since hearing ~~deficits~~ disabilities are not always apparent, the responsibility for advising the appropriate person(s) of the existence of this ~~deficit~~ disability shall be that of the party with the hearing ~~deficit~~ disability.

Statement of Problem and Substantiation for Public Comment

The NFPA Disability Access Review Advisory Committee (DARAC) supplies this Public Comment change terminology within this requirement. Deficit is not an appropriate term to be used in regard to people with disabilities.

Related Item

- FR 5208

Submitter Information Verification

Submitter Full Name: Jessica Hubert
Organization: Guardian Services Inc.
Affiliation: Representing the DARAC Advisory Group
Street Address:
City:
State:
Zip:
Submittal Date: Thu Apr 27 14:36:05 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Accepted
Resolution: [SR-5101-NFPA 72-2023](#)
Statement: The second revision revises the term "deficit" to the appropriate term "disability".



Public Comment No. 16-NFPA 72-2023 [Section No. 29.5.10]

29.5.10.1 * – Mild to Severe Hearing Loss:

Notification appliances provided for those with mild to severe hearing loss shall comply with the following: An audible notification appliance producing a low frequency alarm signal shall be installed in the following situations: Where

29.5.10

Notification appliances provided in sleeping rooms and guest rooms for those with hearing loss shall comply with 29.5.10.1 and 29.5.10.2, as applicable:

In rooms, where low frequency sounders and/or tactile notification appliances are required by governing laws, codes, or standards

for people with hearing loss

- Where provided voluntarily for those with hearing loss

* The low frequency alarm signal output shall comply with both of

, they shall be installed to comply with the following:

- (1) A waveform having a fundamental frequency of 520 Hz ± 10 percent
- (2) A minimum sound level at the pillow of 75 dBA, or 15 dB above the average ambient sound level, or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater

29.5.10.2 * – Moderately Severe to Profound Hearing Loss:

Visual

(a) The low frequency waveform shall have a fundamental frequency of 520 Hz +/- 10 percent.

(b) Tactile notification appliances in accordance with the requirements of Section 18.

5.5.

10

and tactile notification appliances in accordance with the requirements of Section 18

.

40 shall be required for those with moderately severe to profound hearing loss in the following situations:

- * Where required by governing laws, codes, or standards for people with hearing loss
- Where provided voluntarily for those with hearing loss

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
SIG-HOU_Low_Frequency_TG_Public_Comment_v2.docx	SIG-HOU Low frequency public comment.	

Statement of Problem and Substantiation for Public Comment

This is the first of 2 public comments relating to 29.5.10 and A29.5.10. This public comment seeks to provide clear and enforceable language for alerting all people sleeping especially people with hearing loss, school age children, the elderly and alcohol impaired.

Statement of Problem and Substantiation for Public Comment

This is the first of 2 public comments relating to 29.5.10 and A29.5.10. This public comment seeks to provide clear and enforceable language for alerting all people sleeping especially people with hearing loss, school age children, the elderly and alcohol impaired.

Related Item

- PI-206, PI-175, PI-216, PI-177 and PI-178.

Submitter Information Verification

Submitter Full Name: Eric Sacco
Organization: Siemens Building Technologies
Affiliation: I am submitting this public comment on behalf of the SIG-HOU task group formed for the First Draft Meeting.
Street Address:
City:
State:
Zip:
Submittal Date: Thu Mar 23 10:08:31 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5144-NFPA 72-2023](#)
Statement: This revision provides clear and enforceable language for alerting all people sleeping especially people with hearing loss, school age children, the elderly, and alcohol impaired. Visual appliances were removed from this section because they are covered in 29.5.8. The 75 dB level requirement at the pillow requirement was removed because it was based on requirements only specifying smoke alarms to be installed outside the sleeping areas. Current requirements for smoke alarms to be installed inside the sleeping areas provide the necessary sound level to notify the occupants. The requirements covering level of hearing loss created challenges for the enforcement community. Other revisions are made for compliance with the Manual of Style.

The annex revision adds language to provide clear guidance for alerting all people sleeping especially people with hearing loss, school age children, the elderly and alcohol impaired, also, to correlate and format the annex material accordingly. Annex material regarding audible tactile appliances formerly located in A.29.5.8 has been incorporated into this annex material. Annex material in this section covering visual notification appliances has been relocated as annex material for 29.5.8.



Public Comment No. 84-NFPA 72-2023 [Section No. 29.5.10]

~~29.5.10.1~~ * – Mild to Severe Hearing Loss:

~~Notification appliances provided for those with mild to severe hearing loss shall comply with the following: An audible notification appliance producing a low frequency alarm signal shall be installed in the following situations: Where~~

29.5.10

–

~~Notification appliances provided in sleeping rooms and guest rooms for those with hearing loss shall comply with 29.5.10.1 and 29.5.10.2 , as applicable.~~

*
–

In rooms or spaces where low frequency audible notification is required by governing laws, codes, or standards

for people with hearing loss

- Where provided voluntarily for those with hearing loss

* The low frequency alarm signal output shall comply with both of the following:

- A waveform having a fundamental frequency of 520 Hz ± 10 percent

, the audible notification shall have a waveform having a fundamental frequency of 520 Hz +/- 10 percent and comply with one of the following:_____

(a) A minimum sound level of 79 dBA shall be produced by any UL 217 listed smoke alarm with integral sounder.

(b) A minimum sound level at the pillow of 75 dBA

~~, or 15 dB above the average ambient sound level, or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater* Where required~~

shall be produced by any audible notification appliance.

29.5.

~~40.2~~ * – Moderately Severe to Profound Hearing Loss:

~~Visual notification appliances in accordance with the requirements of 18.5.5.10 and tactile notification appliances in accordance with the requirements of Section 18.10 shall be required for those with moderately severe to profound hearing loss in the following situations:~~

11*

In rooms or spaces where tactile notification appliances are required by governing laws, codes, or standards

for people with hearing loss

- Where provided voluntarily for those with hearing loss

, they shall be installed in accordance with the requirements of Section 18.10.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
<u>Statement of Problem and Substantiation for Public Comment</u> _Text.docx	Text of Changes by PC No. 84 shows clearly what is being changed, as TerraView makes it challenging to see what is actually being proposed. Related to PL-585 and other low frequency PLS which was rejected by the SIG-HQ11 technical	

Statement of Problem and Substantiation for Public Comment

_Text.docx

TEXT CHANGES BY PI NO. 54 SHOWS CLEARLY WHAT IS BEING CHANGED, AS TERRAVIEW MAKES IT CHALLENGING TO SEE WHAT IS ACTUALLY BEING PROPOSED.

Related to PI-585 and other low frequency PIs, which was rejected by the SIG-HOU technical committee but was referred for follow-up by a Low Frequency Task Group.

The requirements of 28.5.10.1 for "mild to severe hearing loss" and 29.5.10.2 for "moderately severe to profound hearing loss" are overlapping and confusing in application. Multiple Fire Protection Research Foundation studies have proven that a low frequency signal provides the best waking ability for people with and without hearing loss. It is impossible for a designer to know if a sleeping room will be occupied with someone with hearing loss, much less what degree of hearing loss is experienced. Thus, the low frequency requirements, when required by other governing laws, codes and standards, should be applied evenly to all sleeping rooms. This rewrite is in line with the IFC 2021 section 907.5.2.1.3. The SIG-HOU task group for low frequency agreed with this approach and this Public Comment provides a slight alternative to the language that the task group provided. It is believed that this language is more in line with the NFPA Manual of Style to not have two requirements in the same paragraph, by having audible and tactile requirements in separate paragraphs. The revised Annex A material for these sections is provided in another Public Comment.

As for the Sound Pressure Level (SPL) requirements in the text: The 2021 Edition of the IBC/IFC removed all references to minimum SPLs in Group R-1 and R-2 sleeping rooms (see 907.5.2.1.3) and instead required "520-Hz low-frequency signal complying with NFPA 72". Thus, there is no reference to a minimum or required SPL in sleeping rooms in IBC/IFC. So, it is incumbent upon NFPA 72 to include a minimum or required SPL in Chapter 29 sleeping rooms and guest rooms. In the UL 217 Smoke Alarms product standard, section 84.2, smoke alarms producing a low frequency signal shall provide a 79 dBA minimum at 10 ft, while smoke alarms that produce a typical 3 kHz piezo signal must product an 85 dBA minimum at 10 ft. The revised language in Chapter 29 will reflect the low frequency minimum SPL of 79 dBA if a smoke alarm is used for the audible notification and will reflect the minimum SPL of 75 dBA measured at the pillow if a separate notification appliance is used for the audible notification, which matches the requirements of Chapter 18 for system devices.

Related Public Comments for This Document

Related Comment

Relationship

Public Comment No. 85-NFPA 72-2023 [Sections A.29.5.10.1, A.29.5.10.1(2), A.29.5.10.2, A.29.5.1...]

Related Item

- PI No. 585 • SIG-HOU Low Frequency Task Group

Submitter Information Verification

Submitter Full Name: Larry Rietz

Organization: Jensen Hughes

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 16 12:06:10 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Rejected

Resolution: Visual appliances were removed from this section because they are covered in 29.5.8. The 75 dB level requirement at the pillow requirement was removed because it was based on requirements only specifying smoke alarms to be installed outside the sleeping areas. Current requirements for smoke alarms to be installed inside the sleeping areas provide the necessary sound level to notify the occupants. The requirements covering level of hearing loss created challenges for the enforcement community. The decibel level is already called out in UL 217/268. All alarms/detectors sold in the US must be certified to either UL217/268 as per 29.3.1.

is already called out in UL 217/268. All alarms/detectors sold in the US must be certified to either UL217/268 as per 29.3.1.



Public Comment No. 12-NFPA 72-2023 [Section No. 29.7.1.1]

29.7.1.1*

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

- (1) 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
- (2) On every occupiable level of a dwelling unit, including basements, excluding attics and crawl spaces
- (3) On the ceiling or on the wall with the top of the alarm or detector within 12 in. (300 mm) of the ceiling, when installed in the same room as the permanently installed fuel-burning appliances equipment
- (4) In accordance with the manufacturer's published instructions

Statement of Problem and Substantiation for Public Comment

The term "fuel-burning appliances" is not defined. "Fuel-burning equipment" was defined under FR-5006. This change revises the text to match the defined term.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 13-NFPA 72-2023 [Section No. 29.14.2.2]	
Public Comment No. 14-NFPA 72-2023 [Section No. A.29.7]	

Related Item

- fr-5006

Submitter Information Verification

Submitter Full Name: Cory Ogle
Organization: Code Consultants, Inc.
Affiliation: SIG-HOU Technical Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue Mar 21 12:29:00 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Accepted
Resolution: [SR-5119-NFPA 72-2023](#)
Statement: The revision restores the original requirement because it was recognized that the first revision could result in installation problems and was not fully supported by available technical literature. The term "fuel-burning appliances" is not defined. "Fuel-burning equipment" was defined under FR-5006 in the First Draft Report. This change revises the text to match the defined term.

technical literature, the term "fuel-burning appliances" is not defined. "Fuel-burning equipment" was defined under FR-5006 in the First Draft Report. This change revises the text to match the defined term.



Public Comment No. 105-NFPA 72-2023 [Section No. 29.8.1.2]

29.8.1.2

Where the area addressed in 29.8.1.1(2) is separated from the adjacent living areas by a door, a smoke alarm or smoke detector shall be installed in the following locations:

- (1) In the area between the door and the sleeping rooms, and additional alarms or detectors shall be installed
- (2) On the living area side of the door as specified by 29.8.1.1 and 29.8.1.3

Statement of Problem and Substantiation for Public Comment

During the first revision it appears that "or detectors" was inadvertently deleted from the requirement.

Related Item

- FR 5241

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 11:04:53 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5102-NFPA 72-2023

Statement: This second revision clarifies the requirement and provides compliance with the Manual of Style relative to the use of "shall be installed" in Item # 1.



Public Comment No. 190-NFPA 72-2023 [Section No. 29.9.3]

29.9.3 Household Fire and Carbon Monoxide Alarm Systems.

Power for household alarm systems shall comply with the following requirements:

- (1) Household fire and carbon monoxide alarm systems shall have two independent power sources consisting of a primary source that uses commercial light and power and a secondary source that consists of a rechargeable battery.
- (2) The secondary source shall be capable of operating the household alarm system for at least 24 hours in the normal condition, followed by 4 minutes of fire alarm or 12 hours of carbon monoxide alarm.
 - (a) The secondary power source of the household carbon monoxide system shall be capable of operating the system for at least 12 hours of alarm in accordance with 29.5.4.
 - (b) The secondary power source of a household carbon monoxide system shall not be required to operate the system for 12 hours of alarm if the power source of carbon monoxide detectors and carbon monoxide audible notification appliances incorporating a low-power radio (wireless) transmitter/transceiver is capable of providing at least 24 hours in the normal condition, followed by 12 hours of alarm.
- (3) The secondary power source shall be supervised ~~with a~~ so that a distinctive audible and visible trouble signal results upon removal or disconnection of a battery or a low-battery condition.
- (4) A rechargeable battery used as a secondary power source shall meet the following criteria:
 - (5) Be automatically recharged by an ac circuit of the commercial light and power source
 - (6) Be recharged within 48 hours
 - (7) Provide a distinctive audible trouble signal before the battery is incapable of operating the device(s) for alarm purposes
- (8) Low-power wireless systems shall comply with the performance criteria of Section 23.16, except as modified by 29.10.8.1.1.

Statement of Problem and Substantiation for Public Comment

The power source is not supervised with a distinctive audible and visible trouble signal. The intent is to provide distinctive audible and visible signals resulting from the supervision when a fault occurs. The revised text is provided for consideration by the technical committee.

Related Item

- 5070

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Committee: SIG-HOU

Submission Date: Tue May 30 11:48:38 EDT 2023

Committee: SIG-HOU
Submittal Date: Tue May 30 11:48:38 EDT 2023

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5103-NFPA 72-2023](#)
Statement: The second revision clarifies the condition under which a distinctive visible or audible trouble signal occurs.



Public Comment No. 145-NFPA 72-2023 [Section No. 29.9.4]

29.9.4 AC Primary Power Source.

The ac power source specified in 29.9.1 and 29.9.3 shall comply with the following conditions:

- (1) A visible "power on" indicator is provided.
- (2) All electrical systems installed by other than a qualified electrician are powered from a source not in excess of 30 volts that meets the requirements for power-limited fire alarm circuits as covered in Article 760 of *NFPA 70*.
- (3)* A restraining means is used at the plug-in of any cord-connected installation, unless the unit utilizes a secondary (standby) power source meeting the requirements of Section 29.9 and loss of the ac primary power source results in annunciation of an audible trouble signal meeting 29.10.6.5.
- (4) AC primary (main) power is supplied either from a dedicated branch circuit or the unswitched portion of a branch circuit also used for power and lighting.
- (5) Operation of a switch (other than a circuit breaker) does not cause loss of primary (main) power.
- (6) Alarms powered by branch circuits protected by arc-fault circuit-interrupters (AFCI) or ground-fault circuit-interrupters (GFCI) have a secondary power source.
- (7) Neither loss nor restoration of primary (main) power will cause an alarm signal that exceeds 2 seconds.
- (8) Where a secondary (standby) battery is provided, the primary (main) power supply is of sufficient capacity to operate the system under all conditions of loading with any secondary (standby) battery disconnected or fully discharged.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._28.pdf	NFPA 72 Correlating Note No. 28	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 28 appeared in the First Draft Report on First Revision No. 5234.

Review the language of 29.9.4(2). The deletion of "designed to be" appears to change the intent of the requirement and is not substantiated as a revision.

Related Item

- FR - 5234

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Submission Date: Tue May 23 14:24:04 EDT 2023

Committee: SIG-HOU

Submittal Date: Tue May 23 14:24:04 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected

Resolution: The committee considers the revision made in the first draft to be a clarification of intent, rather than a technical revision. "Designed to be" is ambiguous and unenforceable language.



Public Comment No. 102-NFPA 72-2023 [Section No. 29.9.5.1]

29.9.5.1

Where alarms include a battery that is used as a secondary power source, the following conditions shall be met:

- (1) The secondary power source is supervised.
- (2) ~~The Supervision of the~~ secondary power source causes a distinctive audible or visible trouble signal upon removal or disconnection of a battery or a low-battery condition.
- (3) Acceptable replacement batteries are clearly identified by the manufacturer's name and model number on the unit near the battery compartment.
- (4) A rechargeable battery used as a secondary power source meets the following criteria:
 - (5) Be automatically recharged by the primary power source
 - (6) Be recharged within 4 hours where power is provided from a circuit that can be switched on or off by means other than a circuit breaker, or within 48 hours where power is provided from a circuit that cannot be switched on or off by means other than a circuit breaker
 - (7) Provide a distinctive audible trouble signal before the battery is incapable of operating the device(s) for alarm purposes
 - (8) At the battery condition at which a trouble signal is obtained, be capable of producing a fire alarm signal for at least 4 minutes or the carbon monoxide signal for 12 continuous hours, followed by not less than 7 days of trouble signal operation
 - (9) Produce an audible trouble signal at least once every minute for 7 consecutive days

Statement of Problem and Substantiation for Public Comment

The secondary rechargeable battery source does not provide the trouble signal, supervision of the secondary source provides the trouble signal.

The only changes are proposed in 29.9.9.5.1(2)

Related Item

- FR 5075

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 10:46:42 EDT 2023

Committee: SIG-HOU

Committee Statement

Resolution: SR-5105-NFPA 72-2023

Committee Action: Accepted

Statement: The second revision clarifies the requirement.

Resolution: [SR-5105-NFPA 72-2023](#)
Committee Action: Accepted
Statement: The second revision clarifies the requirement.



Public Comment No. 157-NFPA 72-2023 [Section No. 29.10.4.2]

29.10.4.2*

Fixed-temperature alarms or detectors shall comply with both of the following:

- (1) Have a temperature rating at least 25°F (14°C) above the normal ambient temperature
- (2) Not be rated 50°F (28°C) higher than the maximum anticipated ambient temperature in the room or space where installed

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._8.pdf	NFPA 72 Correlating Note No. 8	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 8 appeared in the First Draft Report on First Revision No. 5121.

There is a correlation issue between 17.6.2.3.2 and 29.10.4.2. Revise section 29.10.4.2 to 20 degrees to coordinate the temperature requirement based on UL539.

Related Item

- FR - 5121

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 24 14:11:33 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5109-NFPA 72-2023](#)

Statement: The revision aligns the requirements of this section with those in Chapter 17 and addresses the Manual of Style issue related to temperature.



Public Comment No. 2-NFPA 72-2023 [Section No. 29.10.4.2]

29.10.4.2*

Fixed-temperature alarms or detectors shall comply with both of the following:

- (1) Have a temperature rating at least ~~25°F~~ 20°F (~~14°C~~ 11°C) above ~~the normal ambient temperature~~ the temperature expected at the ceiling
- (2) Not be rated 50°F (28°C) higher than the maximum anticipated ambient temperature in the room or space where installed

Statement of Problem and Substantiation for Public Comment

Changing the requirement for heat alarm set points to be 20 degrees F above the ambient temperature makes the requirement consistent with Chapter 17, clause 17.6.2.3.2.

Related Item

- PI 24

Submitter Information Verification

Submitter Full Name: Scott Lang
Organization: Honeywell International
Street Address:
City:
State:
Zip:
Submittal Date: Fri Mar 10 09:37:57 EST 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5109-NFPA 72-2023](#)
Statement: The revision aligns the requirements of this section with those in Chapter 17 and addresses the Manual of Style issue related to temperature.



Public Comment No. 238-NFPA 72-2023 [Section No. 29.10.9.1.2]

29.10.9.1.2

Where off-premises supervision is provided, the system shall transmit at least a general alarm signal.

29.10.9.1.2 "Automatic transmission of signals from listening equipment used for dispatching emergency services shall be processed by a control unit or household fire alarm system"

Statement of Problem and Substantiation for Public Comment

Currently there are no NFPA, UL, or industry standard requirements for smart speakers and smart home systems that provide "listening" equipment or services that alert remote monitoring centers when a fire-warning, carbon monoxide-warning, and combustible gas-warning alarm have been detected. NFPA 72 requires all devices, combinations of devices, and equipment to be installed in conformity with Chapter 29 to be approved or listed for the purposes for which they are intended. Since remote monitoring centers respond to remote annunciations from the listening equipment or services and potentially dispatch emergency services, manufacturers and service providers need to somehow demonstrate that signals are coming from approved, labeled, or listed equipment that properly identifies the hazard.

This public comment is being submitted on behalf of a SIG-HOU task group formed to address Public Input No. 321-NFPA 72-2022.

Related Item

- Public Input No. 321-NFPA 72-2022

Submitter Information Verification

Submitter Full Name: Greg Hansen

Organization: Vivint Inc.

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 16:37:52 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5135-NFPA 72-2023

Statement: The revision provides requirements that preclude listening devices from directly sending alarm signals to a supervising station.



Public Comment No. 158-NFPA 72-2023 [Section No. 29.10.9.10.4]

29.10.9.10.4

Where a communication or transmission means other than DACT is used, all equipment necessary to transmit an alarm signal shall comply with both of the following:

- (1) Be provided with a minimum of 24 hours of secondary power capacity
- (2) ~~Report~~ Transmit a specific trouble condition indicating signal upon loss of primary power

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._29.pdf	NFPA 72 Correlating Note No. 29	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 29 appeared in the First Draft Report on First Revision No. 5250.

Review for consistency in use of the terms "condition", "signal", and "response" as defined in chapter 3. The system should send a trouble signal when a trouble condition is detected. Review the language of 29.10.9.10.4. Consider revisions such as:

29.10.9.10.4

Where a communication or transmission means other than DACT is used, all equipment necessary to transmit an alarm signal shall comply with both of the following:

- (1) Be provided with a minimum of 24 hours of secondary power capacity
- (2) Transmit a specific trouble signal upon loss of primary power

Related Item

- FR - 5250

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC
Organization: NFPA CC on Signaling Systems for the Protection of Life and Property
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 24 14:16:18 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Accepted
Resolution: SR-5110-NFPA 72-2023
Statement: The revision provides consistency of terminology used in this requirement with terminology used throughout the document.

Statement. The revision provides consistency of terminology used in this requirement with terminology used throughout the document.



Public Comment No. 159-NFPA 72-2023 [Section No. 29.10.10]

29.10.10 Cybersecurity.

29.10.10.1*

All control units shall be designed for cybersecurity as determined by the manufacturer.

29.10.10.2

All devices that are connected wirelessly to a control unit and rely on the control unit for occupant notification activation shall not diminish the cybersecurity of the control unit.

29.10.10.3

All system or software updates required or initiated by the manufacturer shall not diminish the cybersecurity of the control unit.

29.10.10.4*

All alarms that use IP or cellular communication shall be designed for cybersecurity as determined by the manufacturer.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._30.pdf	NFPA 72 Correlating Note No. 30	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 30 appeared in the First Draft Report and is related to First Revision No. 5188.

Review and correlate the language of the new Chapter 11 on Cybersecurity which the Fundamentals committee added. Chapter 11 will now contain mandatory requirements that could apply to Chapter 29. The Household Committee should review these requirements for the Second Draft.

Related Item

- FR - 5188

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 24 14:20:27 EDT 2023

Committee: SIG-HOU

Committee Statement

Resubmitter: SIG-HOU
Action: SIG-HOU has reviewed their requirements on cybersecurity and those of SIG-FUN and does not deem any revisions at this time to be necessary.

Resubmitter: ~~58410~~ has reviewed their requirements on cybersecurity and those of SIG-FUN
Action: and does not deem any revisions at this time to be necessary.



Public Comment No. 160-NFPA 72-2023 [Section No. 29.11.1.4.2]

29.11.1.4.2

The supplier or installing contractor shall provide the system owner or other responsible parties with information noting both of the following requirements :

- (1) Unless otherwise recommended by the manufacturer's published instructions, smoke alarms and carbon monoxide alarms ~~are replaced~~ shall be replaced when they fail to respond to tests.
- (2) Smoke alarms and carbon monoxide alarms ~~do~~ shall not remain in service longer than 10 years from the date of manufacture unless otherwise provided by manufacturer's published instructions.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._27.pdf	NFPA 72 Correlating Note No. 27	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 27 appeared in the First Draft Report and is related to First Revision No. 5219.

Review the language of 29.11.1.4.2. The charging statement does not make sense with the list items. The revision to the MOS appears to have changed the requirement and made the requirement unenforceable and not possible to comply with. Consider revisions such as:

"29.11.1.4.2

The supplier or installing contractor shall provide the system owner or other responsible parties with information noting both of the following requirements:

- (1) Unless otherwise recommended by the manufacturer's published instructions, smoke alarms and carbon monoxide alarms shall be replaced when they fail to respond to tests.
- (2) Smoke alarms and carbon monoxide alarms shall not remain in service longer than 10 years from the date of manufacture unless otherwise provided by manufacturer's published instructions."

Related Item

- FR - 5219

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC
Organization: NFPA CC on Signaling Systems for the Protection of Life and Property
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 24 14:25:08 EDT 2023
Committee: SIG-HOU

Committee Statement: Rejected but see related SR
Action:

Committee Statement

Rejected but see related SR

Action:

Resolution: [SR-5113-NFPA 72-2023](#)

Statement: The second revision addresses Manual of Style structure requirements and clarifies the requirement.



Public Comment No. 191-NFPA 72-2023 [Section No. 29.11.3.4]

29.11.3.4 Specific Location Requirements.

The installation of smoke alarms and smoke detectors shall comply with the following requirements:

- (1) Smoke alarms and smoke detectors shall not be located where ambient conditions, including humidity and temperature, are outside the limits specified by the manufacturer's published instructions.
- (2) Smoke alarms and smoke detectors shall not be located within unfinished attics or garages or in other spaces where temperatures can fall below 40°F (4.4°C) or exceed 100°F (38°C).
- (3)* Where the mounting surface could become considerably warmer or cooler than the room, such as a poorly insulated ceiling below an unfinished attic or an exterior wall, smoke alarms and smoke detectors shall be mounted on an inside wall.
- (4)* Smoke alarms and smoke detectors shall not be installed between 10 ft (3.0 m) and 20 ft (6.1 m) along a horizontal flow path from a stationary or fixed cooking appliance unless the devices are listed for resistance to common nuisance sources from cooking in accordance with the 8th edition of UL 217, *Smoke Alarms*, the 7th edition of UL 268, *Smoke Detectors for Fire Alarm Systems*, or subsequent editions.
- (5) Smoke alarms and smoke detectors shall not be installed within an area of exclusion determined by a 10 ft (3.0 m) radial distance along a horizontal flow path from a stationary or fixed cooking appliance. When the 10 ft (3.0 m) area of exclusion would prohibit the placement of a smoke alarm or smoke detector required by other sections of this Code, and when the kitchen or cooking area and adjacent spaces have no clear interior partitions or headers, smoke alarms or smoke detectors shall be permitted for installation at a radial distance between 6 ft (1.8 m) and 10 ft (3.0 m) from any stationary or fixed cooking appliance unless the devices are listed for resistance to common nuisance sources from cooking nuisance alarms in accordance with the 8th edition of UL 217, the 7th edition of UL 268, or subsequent editions.
- (6)* Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from a door to a bathroom containing a shower or tub unless listed for installation in close proximity to such locations.
- (7) Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers.
- (8)* Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from the tip of the blade of a ceiling-suspended (paddle) fan unless the room configuration restricts meeting this requirement.
- (9) Where stairs lead to other occupiable levels, a smoke alarm or smoke detector shall be located so that smoke rising in the stairway cannot be prevented from reaching the smoke alarm or smoke detector by an intervening door or obstruction.
- (10) For stairways leading up from a basement, smoke alarms or smoke detectors shall be located on the basement ceiling near the entry to the stairs.
- (11*) For tray-shaped ceilings (coffered ceilings), smoke alarms and smoke detectors shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 in. (300 mm) vertically down from the highest point.
- (12) Smoke alarms and smoke detectors installed in rooms with joists or beams shall comply with the requirements of 17.7.4.2.4.

Additional Proposed Changes

TIA_72_22_4.pdf NFPA 72 TIA 22-4 Log No. 1643

File Name

Description

Approved

TIA_72_22_4.pdf NFPA 72 TIA 22-4 Log No. 1643

File Name

Description

Approved

Statement of Problem and Substantiation for Public Comment

NOTE: This public comment originates from Tentative Interim Amendment No. 22-4 (Log 1643) issued by the Standards Council on August 12, 2022 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation: Underwriters Laboratories has moved the UL217 and UL268 effective dates to June 30, 2024. This creates a conflict in the 2022 edition of NFPA 72 Chapter 29 installation requirements. The current installation date is January 1, 2023. This date must now be adjusted to reflect the change in the effective date of the listing standard to allow manufacturers to meet the new listing requirements and provide product to the marketplace.

Emergency Nature:

The proposed TIA intends to accomplish a recognition of an advance in the art of safeguarding property or life where an alternative method is not in current use or is unavailable to the public. The current situation presented by the COVID pandemic is causing significant delays in getting products through the UL listing process. If the date remains as currently drafted, it will conflict with the new UL compliance date. Due to this fact there will not be sufficient product in the marketplace to support the current date.

Related Item

• FR - 5220 • PI - 160

Submitter Information Verification

Submitter Full Name:

TC on SIG-HOU

Organization:

NFPA 72 TC on Single- and Multiple-Station Alarms and Household Signaling Systems

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 30 12:18:08 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Rejected

Resolution: The dates that were the subject of the Tentative Interim Amendment were removed from the requirement as a result of a First Draft action.



Public Comment No. 6-NFPA 72-2023 [Section No. 29.11.3.4]

29.11.3.4 Specific Location Requirements.

The installation of smoke alarms and smoke detectors shall comply with the following requirements:

- (1) Smoke alarms and smoke detectors shall not be located where ambient conditions, including humidity and temperature, are outside the limits specified by the manufacturer's published instructions.
- (2) Smoke alarms and smoke detectors shall not be located within unfinished attics or garages or in other spaces where temperatures can fall below 40°F (4.4°C) or exceed 100°F (38°C).
- (3)* Where the mounting surface could become considerably warmer or cooler than the room, such as a poorly insulated ceiling below an unfinished attic or an exterior wall, smoke alarms and smoke detectors shall be mounted on an inside wall.
- (4)* Smoke alarms and smoke detectors shall not be installed between 10 ft (3.0 m) and 20 ft (6.1 m) along a horizontal flow path from a stationary or fixed cooking appliance unless the devices are listed for resistance to common nuisance sources from cooking in accordance with the 8th edition of UL 217, *Smoke Alarms*, the 7th edition of UL 268, *Smoke Detectors for Fire Alarm Systems*, or subsequent editions.
- (5) Smoke alarms and smoke detectors shall not be installed within an area of exclusion determined by a 10 ft (3.0 m) radial distance along a horizontal flow path from a stationary or fixed cooking appliance. When the 10 ft (3.0 m) area of exclusion would prohibit the placement of a smoke alarm or smoke detector required by other sections of this Code, and when the kitchen or cooking area and adjacent spaces have no clear interior partitions or headers, smoke alarms or smoke detectors shall be permitted for installation at a radial distance between 6 ft (1.8 m) and 10 ft (3.0 m) from any stationary or fixed cooking appliance ~~unless provided~~ the devices are listed for resistance to common nuisance sources from cooking ~~nuisance alarms~~ in accordance with the 8th edition of UL 217, the 7th edition of UL 268, or subsequent editions.
- (6)* Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from a door to a bathroom containing a shower or tub unless listed for installation in close proximity to such locations.
- (7) Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers.
- (8)* Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from the tip of the blade of a ceiling-suspended (paddle) fan unless the room configuration restricts meeting this requirement.
- (9) Where stairs lead to other occupiable levels, a smoke alarm or smoke detector shall be located so that smoke rising in the stairway cannot be prevented from reaching the smoke alarm or smoke detector by an intervening door or obstruction.
- (10) For stairways leading up from a basement, smoke alarms or smoke detectors shall be located on the basement ceiling near the entry to the stairs.
- (11)* For tray-shaped ceilings (coffered ceilings), smoke alarms and smoke detectors shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 in. (300 mm) vertically down from the highest point.
- (12) Smoke alarms and smoke detectors installed in rooms with joists or beams shall comply with the requirements of 17.7.4.2.4.

Statement of Problem and Substantiation for Public Comment

The first change addresses a sentence that is not written correctly. As written, it is prohibiting the use of detection equipment listed for nuisance sources between 6 and 10 feet from a cooking appliance. The intent is to allow such devices.

The first change addresses a sentence that is not written correctly. As written, it is prohibiting the use of detection equipment listed for nuisance sources between 6 and 10 feet from a cooking appliance. The intent is to allow such devices.

The second change addresses what appears to be a typo.

Both of these issues are also present at least in the 2022 edition.

Related Item

- FR 5220

Submitter Information Verification

Submitter Full Name: Stephen Olenick

Organization: Combustion Science & Engineering, Inc.

Street Address:

City:

State:

Zip:

Submittal Date: Mon Mar 13 10:47:56 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5146-NFPA 72-2023](#)

Statement: [SR-5146-NFPA 72-2023](#)

The first change addresses a sentence that is not written correctly. As written, it is prohibiting the use of detection equipment listed for nuisance sources between 6 and 10 feet from a cooking appliance. The intent is to allow such devices. The second change addresses what appears to be a typo. Both of these issues are also present at least in the 2022 edition.

The annex material required significant revisions based on changes that have been made to the body in 29.11.3.4 which basically allows only detection equipment listed for nuisance resistance to cooking to be installed between 10 and 20 feet from a cooking appliance, with a small exception for these same types of nuisance-resistant detection equipment to be installed between 6 and 10 feet from a cooking appliance if 10 to 20 feet is not feasible. The rewrites change some of the figures, re-orders the section to provide a shorter introduction to the issue with nuisance alarms from legacy detection equipment followed by the discussion of nuisance-resistant equipment, and then discusses the areas of exclusion. The reference to 29.11.3.4(6) is removed. This section relates to bathrooms/showers. Annex material that is more applicable to (5) has been relocated from (4).



Public Comment No. 161-NFPA 72-2023 [Section No. 29.14.1.2]

29.14.1.2 Carbon Monoxide Alarms and Carbon Monoxide Detectors.

In addition to 29.14.1.1, carbon monoxide alarms or carbon monoxide detectors shall be marked with the following information:

- (1) Statement that indicates the unit is not suitable as a fire detector
- (2) Warning that carbon monoxide is odorless, colorless, and tasteless
- (3) Emergency actions to be taken
- (4) Recommended replacement date
- (5) ~~If~~ With the text required by the product standard, if the device is listed for use in an unconditioned area as defined in Chapter 3

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._31.pdf	NFPA 72 Correlating Note No. 31	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 31 appeared in the First Draft Report and is related to First Revision No. 5222.

Review the language of 29.14.1.2. The revision is unclear and does not indicate that the marking for an unconditioned area should be consistent with the product standard. Consider revisions such as:

"29.14.1.2 Carbon Monoxide Alarms and Carbon Monoxide Detectors.

In addition to 29.14.1.1, carbon monoxide alarms or carbon monoxide detectors shall be marked with the following information:

- (1) Statement that indicates the unit is not suitable as a fire detector
- (2) Warning that carbon monoxide is odorless, colorless, and tasteless
- (3) Emergency actions to be taken
- (4) Recommended replacement date
- (5) With the text required by the product standard, if the device is listed for use in an unconditioned area as defined in Chapter 3"

Related Item

- FR - 5222

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

City:

State:

Submittal Date: Wed May 24 14:31:18 EDT 2023

Zip:

Committee: SIG-HOU

State:
Submittal Date: Wed May 24 14:31:18 EDT 2023
Zip:
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected

Resolution: If something is required by the product standard, the labeling of the product will provide the necessary information. The reference to Chapter 3 is redundant.



Public Comment No. 103-NFPA 72-2023 [Sections 29.14.2.1, 29.14.2.2]

Sections 29.14.2.1, 29.14.2.2

29.14.2.1– Instructions Carbon Monoxide Alarms and Carbon Monoxide Detectors.

The following information shall be included in the instructions provided with carbon monoxide alarms and carbon monoxide detectors:

~~In addition to 29.14.2.1, the following information shall be included in the instructions provided with carbon monoxide alarms and carbon monoxide detectors:~~

- (1) Installation instructions
- (2) Operating instructions
- (3) Testing instructions
- (4) Maintenance instructions
- (5) Replacement and service instructions

~~29.14.2.2 – Carbon Monoxide Alarms and Carbon Monoxide Detectors.~~

- (1) Statement indicating that smoke might not be present during a carbon monoxide alarm condition
- (2) * Information on the actions to be taken in case of an alarm
- (3) Minimum and recommended distances from fuel-burning appliances

Statement of Problem and Substantiation for Public Comment

There is no need to have two lists. The above text consolidates the lists and the annex material needs to be referenced accordingly.

The only change was the deletion of 29.14.2.2 and moving those list items to 29.14.2.1.

Related Item

- FR 5224

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 10:52:44 EDT 2023

Committee: SIG-HOU

Committee Statement

Committee Action: Rejected

Resolution: The committee does not accept combining the lists as 29.14.2.1 applies to all alarms and detectors, while 29.14.2.2 applies only to carbon monoxide alarms and detectors.

Resolution: The committee does not accept combining the lists as 29.14.2.1 applies to all alarms and detectors, while 29.14.2.2 applies only to carbon monoxide alarms and detectors.



Public Comment No. 13-NFPA 72-2023 [Section No. 29.14.2.2]

29.14.2.2 Carbon Monoxide Alarms and Carbon Monoxide Detectors.

In addition to 29.14.2.1, the following information shall be included in the instructions provided with carbon monoxide alarms and carbon monoxide detectors:

- (1) Statement indicating that smoke might not be present during a carbon monoxide alarm condition
- (2)* Information on the actions to be taken in case of an alarm
- (3) Minimum and recommended distances from fuel-burning ~~appliances~~ equipment

Statement of Problem and Substantiation for Public Comment

The term "fuel-burning appliances" is not defined. "Fuel-burning equipment" was defined under FR-5006. This change revises the text to match the defined term.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<p><u>Public Comment No. 12-NFPA 72-2023 [Section No. 29.7.1.1]</u></p> <p><u>Related Item</u></p> <ul style="list-style-type: none"> • FR-5006 	<p>similar change to existing text</p>

Submitter Information Verification

Submitter Full Name: Cory Ogle
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Affiliation: SIG-HOU Technical Committee
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City:
State:
Zip:
Submittal Date: Tue Mar 21 12:33:03 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5122-NFPA 72-2023
Statement: Section 29.14.2.1 applies to all detectors and alarms. The revision of the term "appliances" to "equipment" in 29.14.2.2 is to correlate with the new definition of "fuel burning equipment" in Chapter 3.



Public Comment No. 217-NFPA 72-2023 [Section No. A.3.3.66.1.3]

A.3.3.66.1.3 Supervisory Condition. [🔗](#)

A supervisory condition occurs when one system supervises another system, process, or equipment for failure or impairment, and a functional failure or impairment to operation of the supervised system, process or equipment has occurred. A supervisory condition might be a regularly occurring and expected event such as a valve closed on a sprinkler system. A closed valve is an abnormal condition for the sprinkler system, but it does not constitute a trouble condition in the fire alarm or signaling system.

In some cases, a fault in one system, causing a trouble condition in that system, results in a supervisory condition in another system because the other system is supervising some function of the faulted system, and the supervised function has been impaired. In those cases, both supervisory and trouble conditions exist at the same time.

Some examples of supervisory conditions can include the following:

- (1) An event causing the activation of a supervisory initiating device used to monitor an environmental parameter, system element, component, or function, whose failure poses a risk to life, property, or mission (e.g., sprinkler valve closed, water tank low water level, low building temperature, emergency communications system impairment, and so forth).
- (2) The failure of a guard to remain within established constraints while on tour, usually indicated by the absence of a guard's tour supervisory signal within prescribed timing requirements, or the presence of a guard's tour supervisory signal outside of prescribed sequencing requirements, or the presence of a delinquency signal.
- (3) Public safety radio communications enhancement system antenna malfunction, signal booster failure, or battery depletion.
- (4) In some cases, the presence of smoke in an HVAC duct or in other places as defined by the authority having jurisdiction.
- (5) Automated testing devices on other life safety systems (such as sprinkler systems), and supervised by the fire alarm system, who fail to successfully complete a test.
- (6) Any off-normal condition found during a remote inspection or automated test of a supervised system other than the fire alarm system.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Supporting_Material_for_Trouble_vs_Sup_PC_s.docx	Supporting Material for Trouble vs Supervisory PC	

Statement of Problem and Substantiation for Public Comment

PI's 319 and 320 were both resolved at first draft. They were intended to spur the committee to consider revising the definitions of Trouble Condition, Supervisory Condition, or both to address the confusion that exists in the field regarding which signals should be reported. A list of conditions, many involving remote inspections and automated testing, have been developed and presented to various audiences at NFPA's C&E and AFAA's C&E. During both presentations, no consensus was able to be gained regarding which condition should be reported. Based on the Committee Statement from first draft, PC's have been developed intended to, at a minimum, provide some additional annex language to help clarify. The list of conditions has been submitted as part of this PC.

This PC proposes that all off-normal conditions found on an automated test/remote inspections of supervised systems (not the fire alarm system) be reported by the fire alarm system as a supervisory

Related Public Comments for This Document

Related Comment

Relationship

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 223-NFPA 72-2023 [Section No. A.3.3.66.1.4]	
Public Comment No. 223-NFPA 72-2023 [Section No. A.3.3.66.1.4]	

Related Item

• PI 319 • PI 320

Submitter Information Verification

Submitter Full Name: Jason Webb

Organization: Potter Electric Signal Company

Street Address:

City:

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Submittal Date: Wed May 31 15:09:15 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected

Resolution: The existing annex material provides adequate explanatory material. The two additional examples proposed may be covered under the first sentence which addresses one system supervising another system, process, or equipment for failure or impairment.



Public Comment No. 223-NFPA 72-2023 [Section No. A.3.3.66.1.4]

A.3.3.66.1.4 [Trouble Condition.](#)

A trouble condition is a fault in the fire alarm or signaling system. The system or some aspect of it is somehow broken. This is different from a supervisory condition that is an abnormal condition in a system that is supervised by the fire alarm or signaling system. Abnormal conditions, such as a closed valve in a sprinkler system, not caused by a fault are not considered trouble conditions.

In some cases, a fault in one system, causing a trouble condition in that system, results in a supervisory condition because another system is supervising some function of the faulted system, and the supervised function has been impaired by the fault (see A.3.3.66.1.3, *Supervisory Condition*). In those cases, both supervisory and trouble conditions exist at the same time.

Conditions involving failed or incomplete automated tests or remote inspections on other systems (such as sprinkler systems) should be reported as supervisory conditions (see 3.3.66.1.3, *Supervisory Condition*).

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Supporting_Material_for_Trouble_vs_Sup_PC_s.docx	Supporting Material for Trouble vs Supervisory PC's	

Statement of Problem and Substantiation for Public Comment

PI's 319 and 320 were both resolved at first draft. They were intended to spur the committee to consider revising the definitions of Trouble Condition, Supervisory Condition, or both to address the confusion that exists in the field regarding which signals should be reported. A list of conditions, many involving remote inspections and automated testing, have been developed and presented to various audiences at NFPA's C&E and AFAA's C&E. During both presentations, no consensus was able to be gained regarding which condition should be reported. Based on the Committee Statement from first draft, PC's have been developed intended to, at a minimum, provide some additional annex language to help clarify. The list of conditions has been submitted as part of this PC.

This PC is meant to clarify that incomplete or failed remote inspections/automated tests of other systems (not the fire alarm system) are not considered trouble conditions and points users to the supervisory condition definition.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 217-NFPA 72-2023 [Section No. A.3.3.66.1.3]	
Public Comment No. 217-NFPA 72-2023 [Section No. A.3.3.66.1.3]	

Related Item

- PI 319 • PI 320

Submitter Information Verification

Submitter Full Name: Jason Webb
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Street Address:
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City:
Zip:

Submittal Date: Wed May 31 15:38:29 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected

Resolution: The existing annex material provides adequate explanatory material. This annex material and A.3.3.66.1.4 sufficiently address supervisory and trouble conditions.



Public Comment No. 89-NFPA 72-2023 [Section No. A.3.3.78.1]

A.3.3.78.1 Acoustic Leak Detector. [🔗](#)

These devices are also known as ultrasonic gas detectors. [Acoustic leak detectors can be spot type or line type.](#)

Statement of Problem and Substantiation for Public Comment

Further clarification on types of acoustic leak detection. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Item

- FR 5347

Submitter Information Verification

Submitter Full Name: Samuel Miller

Organization: BP America Inc.

Affiliation: SIG IDS Task Group for Acoustic Gas Detection.

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Submittal Date: Wed May 17 07:27:17 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5030-NFPA 72-2023](#)

Statement: Defining the detection method based solely on choked flow limits other technologies. The included annex language further clarifies the different types of acoustic leak detection available.



Public Comment No. 130-NFPA 72-2023 [Section No. A.3.3.170]

A.3.3.170 Managed Facilities-Based Voice Network (MFVN). 

A.3.3.170 Managed Facilities-Based Voice Network (MFVN). 

Managed facilities-based voice network service is ~~functionally~~ functional equivalent to traditional PSTN-based services provided by authorized common carriers (public utility telephone companies) with respect to dialing, dial plan, call completion, carriage of signals and protocols.

Managed facilities-based voice network service is ~~functionally~~ functional equivalent to traditional PSTN-based services provided by authorized common carriers (public utility telephone companies) with respect to dialing, dial plan, call completion, carriage of signals and protocols, and loop voltage treatment and provides all of the following features:

- (1) A loop start telephone circuit service interface.
- (2) Pathway reliability that is assured by proactive management, operation, and maintenance by the MFVN provider.
- (3) 8 hours of standby power supply capacity for MFVN communications equipment either located at the protected premises or field deployed. Industry standards followed by the authorized common carriers (public utility telephone companies), and ~~the other communications service- Local Exchange Carriers service~~ providers that operate MFVNs, specifically engineer the selection of the size of the batteries, or other permanently located standby power source, in order to provide 8 hours of standby power with a reasonable degree of accuracy. Of course, over time, abnormal ambient conditions and battery aging can always have a potentially adverse effect on battery capacity. The MFVN field-deployed equipment typically monitors the condition of the standby battery and signals potential battery failure to permit the communications service provider to take appropriate action.
- (4) 24 hours of standby power supply capacity for MFVN communications equipment located at the communications service provider's central office.
- (5) Installation of network equipment at the protected premises with safeguards to prevent unauthorized access to the equipment and its connections.

When providing telephone service to a new customer, MFVN providers give notice to the telephone service subscriber of the need to have any connected alarm system tested by authorized fire alarm service personnel in accordance with 26.6.2.3.9 and applicable requirements of Chapter 14 to make certain that all signal transmission features have remained operational. These features include the proper functioning of line seizure and the successful transmission of signals to the supervising station. In this way, the MFVN providers assist their new customers in complying with a testing procedure similar to that outlined in 26.2.7 for changes to providers of supervising station service.

The evolution of the deployment of telephone service has moved beyond the sole use of metallic conductors connecting a telephone subscriber's premises with the nearest telephone service provider's control and routing point (wire center). In the last 25 years, telephone service providers have introduced a variety of technologies to transport multiple, simultaneous telephone calls over shared communication pathways. In order to facilitate the further development of the modernization of the telephone network, the authorized common carriers (public utility telephone companies) have transitioned their equipment into a managed facilities-based voice network (MFVN) capable of providing a variety of communications services in addition to the provision of traditional telephone service.

Similarly, the evolution of digital communications technology has permitted entities other than the authorized common carriers (public utility telephone companies) to deploy robust communications networks and offer a variety of communications services, including telephone service.

These alternate service providers fall into two broad categories. The first category includes those entities that have emulated the MFVN provided by the authorized common carriers. The second category includes those entities that offer telephone service using means that do not offer the rigorous quality assurance, operational stability, and consistent features provided by an MFVN.

The Code intends to only recognize the use of the telephone network transmission of alarm, supervisory, trouble, and other emergency signals by means of MFVNs.

For example, the Code intends to permit an MFVN to provide facilities-based telephone (voice) service that interfaces with the premises fire alarm or emergency signal control unit through a digital alarm communicator transmitter (DACT) using a loop start telephone circuit and signaling protocols fully compatible with and equivalent to those used in public switched telephone networks. The loop start telephone circuit and associated signaling can be provided through traditional copper wire telephone service (POTS — "plain old telephone service") or by means of equipment that emulates the loop start telephone circuit and associated signaling and then transmits the signals over a pathway using packet switched (IP) networks or other communications methods that are part of an MFVN.

Providers of MFVNs have disaster recovery plans to address both individual customer outages and widespread events such as tornados, ice storms, or other natural disasters, which include

specific network power restoration procedures equivalent to those of traditional landline telephone services. Providers of MFVNs have disaster recovery plans to address both individual customer outages and widespread events such as tornados, ice storms, or other natural disasters, which include

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 and to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100.

Related Item

- CI5000

Submitter Information Verification

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Submittal Date: Sat May 20 15:27:35 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5106-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Providing clarification that the MFVN is a regulated communications service/carrier.
2. The annex language was expanded for clarity of FCC licensed carriers.



Public Comment No. 213-NFPA 72-2023 [Section No. A.3.3.170]

A.3.3.170 Managed Facilities-Based Voice Network (MFVN). 

A.3.3.170 Managed Facilities-Based Voice Network (MFVN). 

Managed facilities-based voice network service is functionally equivalent to traditional PSTN-based services provided by authorized common carriers (public utility telephone companies, Incumbent Local Exchange Carriers [ILEC], Local Exchange Carriers [LEC] Competitive Local

Managed facilities-based voice network service is functionally equivalent to traditional PSTN-based services provided by authorized common carriers (public utility telephone companies, [Incumbent Local Exchange Carriers \[ILEC\]](#), [Local Exchange Carriers \[LEC\]](#) [Competitive Local Exchange Carriers \[CLEC\]](#) and other [Federal Communications Commission \[FCC\] approved carriers offering interconnection to facilities and Unbundled Network Elements in order to provide such telecommunications services](#),) with respect to dialing, dial plan, call completion, carriage of signals and protocols, and loop voltage treatment and provides all of the following features:

- (1) A loop start telephone circuit service interface.
- (2) Pathway reliability that is assured by proactive management, operation, and maintenance by the MFVN provider.
- (3) 8 hours of standby power supply capacity for MFVN communications equipment either located at the protected premises or field deployed. Industry standards followed by the [FCC](#) authorized common carriers (public utility telephone companies [Incumbent Local Exchange Carriers \[ILEC\]](#), [Local Exchange Carriers \[LEC\]](#) [Competitive Local Exchange Carriers \[CLEC\]](#) and other [Federal Communications Commission \[FCC\] approved carriers offering interconnection to facilities and Unbundled Network Elements in order to provide such telecommunications services](#)) , and the other communications service providers that operate MFVNs, specifically engineer the selection of the size of the batteries, or other permanently located standby power source, in order to provide 8 hours of standby power with a reasonable degree of accuracy. Of course, over time, abnormal ambient conditions and battery aging can always have a potentially adverse effect on battery capacity. The MFVN field-deployed equipment typically monitors the condition of the standby battery and signals potential battery failure to permit the communications service provider to take appropriate action.
- (4) 24 hours of standby power supply capacity for MFVN communications equipment located at the communications service provider's central office.
- (5) Installation of network equipment at the protected premises with safeguards to prevent unauthorized access to the equipment and its connections.

When providing telephone service to a new customer, MFVN providers ~~give notice to the~~ should advise the telephone service subscriber of the need to have any connected alarm system tested by authorized fire alarm service personnel in accordance with Chapter 14 to make certain that all signal transmission features have remained operational. These features include the proper functioning of line seizure and the successful transmission of signals to the supervising station. In this way, the MFVN providers may assist their new customers in complying with a testing procedure similar to that outlined in 26.2.7 for changes to providers of supervising station service.

The evolution of the deployment of telephone service has moved beyond the sole use of metallic conductors connecting a telephone subscriber's premises with the nearest telephone service provider's control and routing point (wire center). In the last 25 years, telephone service providers have introduced a variety of technologies to transport multiple, simultaneous telephone calls over shared communication pathways. In order to facilitate the further development of the modernization of the telephone network, the authorized common carriers (public utility telephone companies, [Incumbent Local Exchange Carriers \[ILEC\]](#), [Local Exchange Carriers \[LEC\]](#) [Competitive Local Exchange Carriers \[CLEC\]](#) and other [Federal Communications Commission \[FCC\] approved carriers offering interconnection to facilities and Unbundled Network Elements in order to provide such telecommunications services](#),) have transitioned their equipment into a managed facilities-based voice network (MFVN) capable of providing a variety of communications services in addition to the provision of traditional telephone service.

Similarly, the evolution of digital communications technology has permitted entities other than the authorized common carriers (public utility telephone companies) ~~to~~ , [Incumbent Local Exchange Carriers \[ILEC\]](#), [Local Exchange Carriers \[LEC\]](#) [Competitive Local Exchange Carriers \[CLEC\]](#) and other [Federal Communications Commission \[FCC\] approved carriers offering interconnection to facilities and Unbundled Network Elements in order to provide such telecommunications services](#),) to deploy robust communications networks and offer a variety of communications services, including telephone service.

These alternate service providers fall into two broad categories. The first category includes those entities that have emulated the MFVN provided by the ~~authorized common carriers~~ [FCC](#) authorized common carriers including but not limited to [Incumbent Local Exchange Carriers \[ILEC\]](#), [Local Exchange Carriers \[LEC\]](#) [Competitive Local Exchange Carriers \[CLEC\]](#) and other [Federal Communications Commission \[FCC\] approved carriers offering interconnection to facilities and Unbundled Network Elements in order to provide such telecommunications services](#). The second category includes those entities that offer telephone service using means that do not offer the rigorous quality assurance, operational stability, and

interconnection to facilities and Unbundled Network Elements in order to provide such telecommunications services [CLEC] The second category includes those entities that offer telephone service using means that do not offer the rigorous quality assurance, operational stability, and consistent features provided by an MFVN.

The Code intends to only recognize the use of the telephone network transmission of alarm, supervisory, trouble, and other emergency signals by means of MFVNs.

For example, the Code intends to permit an MFVN to provide facilities-based telephone (voice) service that interfaces with the premises fire alarm or emergency signal control unit through a digital alarm communicator transmitter (DACT) using a loop start telephone circuit and signaling protocols fully compatible with and equivalent to those used in public switched telephone networks. The loop start telephone circuit and associated signaling can be provided through traditional copper wire telephone service (POTS — “plain old telephone service”) or by means of equipment that emulates the loop start telephone circuit and associated signaling and then transmits the signals over a pathway using packet switched (IP) networks or other communications methods that are part of an MFVN.

Providers of MFVNs have disaster recovery plans to address both individual customer outages and widespread events such as tornados, ice storms, or other natural disasters, which include specific network power restoration procedures equivalent to those of traditional landline telephone services.

Statement of Problem and Substantiation for Public Comment

Adds clarification as to the types of carriers that can operate MFVN networks and obligations of MFVN operators.

Related Item

- CI-5176

Submitter Information Verification

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Organization: AT&T Corporation

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City:

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Submittal Date: Wed May 31 13:48:04 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5106-NFPA 72-2023

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the following points are the specific basis for the change.

1. Providing clarification that the MFVN is a regulated communications service/carrier.
2. The annex language was expanded for clarity of FCC licensed carriers.



Public Comment No. 81-NFPA 72-2023 [Section No. A.7.3.2]

A.7.3.2 [🔗](#)

Design (layout) documents should contain information related to the system that could include specifications, shop drawings, sequence of operation, battery calculations, notification appliance voltage drop calculations for audible and visual notification appliances and loudspeakers, and product technical data sheets.

Design (layout) documents could include such items as preliminary plans issued as guidance and direction, risk analysis, emergency response plan, or a combination of these.

Deviations from requirements of governing laws, codes, standards, or preliminary plan requirements specified by an engineer should be clearly identified and documented as such.

Documentation of equivalency, where applicable, should be provided in accordance with Section 1.5 and be included with the record drawings.

It is the intent that existing systems that are altered should have design (layout) documents prepared that are applicable only to the portion(s) of the system being altered.

Statement of Problem and Substantiation for Public Comment

During the review of PI No. 543, SIG-ECS looked at how 'voltage drop' was addressed throughout the code, specifically as it related to audible NACs, both horn and loudspeaker. One of the items that was found was A.7.3.2, where the text addressed visual NACs and loudspeaker NACs, but not specifically audible (horn/chime) NACs. PI No. 543 was rejected as items were addressed elsewhere in code (like A.7.3.2 and others) as long as those addressed all three kinds of NACs to be addressed with voltage drop calculations. In the rejection of PI 543, the Correlating Committee was asked to create a voltage drop task group, but it is not clear if this was ever acted upon.

This revised text corrects a simple oversight in that notification appliance voltage drop calculations are required for both audible (horn and chime) and visual (strobe) notification appliances. Previously, this statement only referenced voltage drop calculations for visual appliances and loudspeakers. This revised Annex language more closely aligns with the body of the code.

Related Item

- PI No. 543 • CI 5325

Submitter Information Verification

Submitter Full Name: Larry Rietz

Organization: Jensen Hughes

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City:

State:

Zip:

Submittal Date: Mon May 15 18:34:51 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected

Resolution: The calculation requirements are currently in Chapter 7 and the additional text proposed in the comment does not provide additional clarity.

proposed in the comment does not provide additional clarity.



Public Comment No. 74-NFPA 72-2023 [Section No. A.7.4.9]

A.7.4.9

For an example of an input/output matrix of operation, see A.14.6.1.1.

The narrative description or input/output matrix of operation should describe the entire sequence of operation, including all of the following, as applicable to each system:

- (1) All inputs individually or grouped by type, floor, and/or function
- (2) All outputs individually or grouped by type, floor, and/or function
- (3) All conditions reported to a central station, remote supervising station, proprietary supervising station or public emergency alarm reporting system, including whether reporting is via grouped condition type or point identification type
- (4) Identification of public mode and/or private mode notification by area per 23.8.6.1.1
- (5) Use of relocation and partial evacuation by floor or area per 24.4.8
- (6) Use of presignal features per 23.8.1.1
- (7) Use of positive alarm sequence per 23.8.1.2
- (8) Use of alarm verification features per 23.8.5.4.1
- (9) Use of detector cross-zoning per 23.8.5.4.3 and 23.8.5.4.4
- (10) Inputs and outputs for each elevator interface per Chapter 21
- (11) Detailed input and output matrix for OEO operation per 21.6.2
- (12) Inputs and outputs for each HVAC interface per Chapter 21
- (13) All inputs and outputs for activation of a fire fighter's smoke control station (FSCS) or integration with a smoke control system per 21.7.7
- (14) Inputs and outputs, including notification sequence, for carbon monoxide or other gas detection
- (15) Inputs and outputs for dry pipe and preaction sprinkler systems per 17.19.2.2.2 and 23.11
- (16) Inputs and outputs, including abort switches, for integrated releasing systems per 23.8.5.10 and 23.11
- (17) Identification and sequence for all selective signaling and manual activation buttons/switches on a control unit and/or annunciator, including bypass activations
- (18) Where prerecorded voice messages are used per 24.3.6, the content (i.e., text) of the messages and message sequence, including pre-tones and post-tones should be detailed
- (19) Inputs and outputs for all mass notification system (MNS) features, including MNS override of fire alarm signals allowed by 24.5.13 and text of MNS messages used per 24.3.6
- (20) Sequence of operation should include details on acknowledge, silence, and reset functions as applicable

Statement of Problem and Substantiation for Public Comment

PI 575 was rejected with this comment, "Proposed additions are either redundant with other code sections or specific items not common to all fire alarm systems." However, post-fire investigations continue to reveal that existing owner documentation and shop drawings are not providing detailed sequence of operations, especially for unique situations like positive alarm sequence, presignal, detector cross-zoning, and releasing systems. NFPA 72 has multiple provisions allowing uniquely programmed sequences, including selective signaling, partial evacuation sequences, and the like, but rarely are these detailed in the sequence of operation. By adding this explanatory information to Annex programmed as required by 7.5.5.2 and 14.6.1.1. This list of requirements is scalable based on the size

detector, cross-zoning, and releasing systems. NFPA 72 has multiple provisions allowing uniquely programmed sequences, including selective signaling, partial evacuation sequences, and the like but rarely are these detailed in the sequence of operation. By adding this explanatory information to Annex A, this list can be applied by a designer, almost like a checklist, to verify that all unique sequences are detailed in the SDD drawings, allowing the Owner to receive documentation of how their system is programmed as required by 7.5.5.2 and 14.6.1.1. This list of requirements is scalable based on the size of the project, as only those items that apply need to be included in the sequence of operation. Also, the list allows both a matrix or a written narrative to meet the objectives of the items in the list.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 75-NFPA 72-2023 [Section No. A.7.5.5.2]</u>	
<u>Public Comment No. 76-NFPA 72-2023 [Section No. A.14.6.1.1]</u>	

Related Item

- PI 575

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
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City:
State:
Zip:
Submittal Date: Mon May 15 17:04:23 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected
Resolution: The proposed list is excessive and redundant.



Public Comment No. 75-NFPA 72-2023 [Section No. A.7.5.5.2]

A.7.5.5.2

For an example of an input/output matrix of operation, see A.14.6.1.1. The documented (actually programmed) sequence of operation should include all applicable items found in the list in A.7.4.9.

Statement of Problem and Substantiation for Public Comment

It is critical that the Owner receives a copy of the sequence of operation that is actually programmed into the fire alarm system. As such, a detailed list is included in PC No. 74 for A.7.4.9 and should be referenced in this Annex material so reference is made back to this inclusive list.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 74-NFPA 72-2023 [Section No. A.7.4.9]	Dependent
<u>Related Item</u>	
• PI 575	

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 15 17:17:21 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected
Resolution: Based on the action taken on Public Comment # 74 and the fact that this recommendation was based on acceptance of Public Comment #74, the action on this comment must be to reject.



Public Comment No. 162-NFPA 72-2023 [Section No. A.10.5.3.4(2)]

A.10.5.3.4(2) [🔗](#)

Nationally recognized fire alarm certification programs might include those programs offered by the International Municipal Signal Association (IMSA), National Institute for Certification in Engineering Technologies (NICET), and the Electronic Security Association (ESA). NOTE: These organizations and the products or services offered by them have not been independently verified by the NFPA, nor have the products or services been endorsed or certified by the NFPA or any of its technical committees.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._5.pdf	NFPA 72 Correlating Note No. 5	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 5 appeared in the First Draft Report.

Review the language of A.10.5.3.4(2). The certification program associations have changed. IMSA no longer carries a certification, however, we recommend not removing IMSA due to past certifications. It appears that IPSI now provides the certification that IMSA did.

Related Item

- CN - 5

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

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Submittal Date: Wed May 24 15:37:05 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5091-NFPA 72-2023](#)

Statement: IMSA no longer offers fire alarm training programs; however, there are a significant number of IMSA Certified professionals. These programs are still developed through the IMSA Educational Foundation (IMSAEF) but are now offered through the International Public Safety Institute (IPSI).



Public Comment No. 19-NFPA 72-2023 [Section No. A.10.5.3.4(2)]

A.10.5.3.4(2) [🔗](#)

Nationally recognized fire alarm certification programs might include those programs formerly offered by the International Municipal Signal Association (IMSA); and those currently offered by the International Public Safety Institute (IPSI), National Institute for Certification in Engineering Technologies (NICET), and the Electronic Security Association (ESA). NOTE: These organizations and the products or services offered by them have not been independently verified by the NFPA, nor have the products or services been endorsed or certified by the NFPA or any of its technical committees.

Statement of Problem and Substantiation for Public Comment

IMSA no longer offers fire alarm training programs; however, there are a significant number of IMSA Certified professionals. These programs are still developed through the IMSA Educational Foundation (IMSAEF) but are now offered through the International Public Safety Institute (IPSI).

Related Item

- CN5

Submitter Information Verification

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Submittal Date: Mon Mar 27 06:34:06 EDT 2023

Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5091-NFPA 72-2023](#)

Statement: IMSA no longer offers fire alarm training programs; however, there are a significant number of IMSA Certified professionals. These programs are still developed through the IMSA Educational Foundation (IMSAEF) but are now offered through the International Public Safety Institute (IPSI).



Public Comment No. 116-NFPA 72-2023 [New Section after A.11.1.2]

A.11.2

The security practices for the design, development, production, and service of network connectable equipment includes the overall cybersecurity posture of the manufacturing company itself. For example, it does not matter how well a system is designed or deployed from a cybersecurity perspective, if the manufacturer does not adequately secure its own development, manufacturing, and patch/update distribution systems. Threat actors can compromise products by installing covert back doors during initial development, or the development and distribution of software updates.

Statement of Problem and Substantiation for Public Comment

All the requirements of Chapter 11 currently apply to the systems themselves, except 11.2 which applies to the manufactures. This annex material provides context as to why the connection between securing the manufactures operations is important to securing the systems themselves.

Related Item

- FR-5188

Submitter Information Verification

Submitter Full Name: Michael Pallett
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Street Address:
City:
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Submittal Date: Thu May 18 12:00:06 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5079-NFPA 72-2023](#)
Statement: The current section does not address federal laws and regulations. The technical committee revised the requirement to recognize all other applicable laws and standards pertaining to cybersecurity.

All the requirements of Chapter 11 currently apply to the systems themselves, except 11.2 which applies to the manufactures. The new annex material provides context as to why the connection between securing the manufactures operations is important to securing the systems themselves.



Public Comment No. 117-NFPA 72-2023 [New Section after A.11.3]

A.11.4

Deployment Plans, Change Control Plans, and the Management Organization that govern the use of network connectable equipment is fundamental to establishing and maintaining a secure operating environment.

Deployment Plans include documenting what equipment is being deployed, along with important technical details including software versions. This information needs to be gathered and maintained to establish update policies and procedures.

Change Control Plans of the overall network, need to be inclusive of network connected life safety equipment. Likewise, the plan should establish personnel requirements for on-site presence of qualified personnel as necessary for any change that may affect the emergency equipment. Changes to network equipment or design that involves connected life safety equipment may require reacceptance testing. In many cases normal IT practices could overlook this equipment, or its relevance to life safety, if it is not properly accounted for in the change control management structure.

Deployment and change control requirements could also apply to equipment that is not normally considered to be network connected. For example, a system that has no networking capability, with only an RS232 serial port can be connected to a network via an RS232-to-Ethernet adapter. This may be intended benignly, as a way of enabling remote monitoring or remote service. But this type of deployment, needs to be included in the documentation that identifies it with all other network connected life safety equipment. In this way we can ensure for example, that security updates are applied to adapters as well as systems, or ensuring that the accounts and personnel that have access are periodically reviewed.

The Management Organization responsible for connected life safety equipment, may include different stakeholders that might not normally be considered for traditional network equipment. In addition to a facilities IT department, representatives of the manufacturer, or design, installation, inspection, and maintenance firms for the network connected equipment may need to be included. For example, a manufacture notifies the system owner of a required software security update. However, the system owner may need to involve inspection and maintenance personnel from its third-party service company, as well as its own IT department, in order to install the update in a way that is compliant with this code.

Statement of Problem and Substantiation for Public Comment

This Annex material is related to PC-111, not the existing First Draft 11.4.

This annex material provides an explanation of why Deployment Plans, Change Control Plans, and the Management Organization is important to cybersecurity.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 111-NFPA 72-2023 [New Section after 11.4]	Supporting Annex material
<u>Related Item</u>	
• FR-5188	

Submitter Information Verification

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Submittal Date: Thu May 18 12:02:41 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but held
Resolution: The proposed annex material is not appropriately located, but it has value and needs to be reviewed in more depth for future inclusion in the standard.



Public Comment No. 118-NFPA 72-2023 [New Section after A.11.3]

A.11.4.3

The maintenance of user accounts is critical to cybersecurity. Many types of cybersecurity attacks attempt to compromise user and system accounts. Attacks that focus on accounts and credentials are responsible for the vast majority of cybersecurity breaches. It is not uncommon to find networkable devices that have limited account management. Some devices are configured with built-in accounts that have no individual users (requiring multiple users to share a password), no levels of access (effectively making any access privileged access), with no ability to apply permissions based on the users job functions, with no ability to disable specific accounts (necessary when users change jobs), and no centralized management of these accounts (accounts may be isolated to specific devices and must be managed one device at a time). It is not uncommon for devices to ship with common default account names and passwords (like admin, admin), that rely upon users to change them. In many cases these changes never occur, and the need to do so is not known to the system owners. In some cases, manufactures may implement backdoor access, for service convenience or recovery. If backdoors become known, they compromise security until a system update can be installed that resolves it. There may be no password complexity requirements, and if access attempt limitations and automatic lockouts are not present, passwords can be defeated by brute force using password dictionaries.

Statement of Problem and Substantiation for Public Comment

This annex material provides an explanation of why the maintenance of accounts and credentials is important. Any security must consider who has access, why they have access, and what is the appropriate level of access. By some estimates, upwards of 90% of cybersecurity breaches involve stolen access credentials. Another fundamental element of security is monitoring. Logging the access is a minimum monitoring mechanism. It is important to have records of access, to ensure that access is appropriate, and if not, to have the information necessary to disable the inappropriate access.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 111-NFPA 72-2023 [New Section after 11.4]	Supporting Annex material
<u>Related Item</u>	
• FR-5188	

Submitter Information Verification

Submitter Full Name: Michael Pallett
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Submittal Date: Thu May 18 12:05:54 EDT 2023
Committee: SIG-FUN

Committee Statement

Resolution: Rejected but held
Action: Rejected but held. The material does not align with the section that it was proposed to be connected to. The committee needs more time to review the proposed annex material to determine where it is most appropriately located

Resubmitted: Rejected but the material does not align with the section that it was proposed to be connected to. The committee needs more time to review the proposed annex material
Action: to determine where it is most appropriately located.



Public Comment No. 119-NFPA 72-2023 [New Section after A.11.3]

A. 11.4.3.1

Maintaining cybersecurity includes the due diligence that is performed to ensure the trustworthiness of installers, maintenance people, and users. Background checks are an obvious example, but so too is the management of credentials, separation of duties, least privilege, need-to-know, and account maintenance. An authorized employee, who is terminated and disgruntled, may cause significant damage to systems if their access privileges are not promptly revoked.

Statement of Problem and Substantiation for Public Comment

This annex material provides additional insights into the risks associated with user accounts, and the users themselves. It is a common place precaution to remove access from ex-employees from corporate networks at the moment of their departure. However, extra steps are often necessary to manage passwords and accounts of other resources that are external to any centralized user management structures (such as the passwords for customer equipment under a maintenance contract).

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 111-NFPA 72-2023 [New Section after 11.4] <u>Related Item</u> • FR-5188	Supporting Annex material

Submitter Information Verification

Submitter Full Name: Michael Pallett
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Submittal Date: Thu May 18 12:08:11 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5084-NFPA 72-2023](#)
Statement: A significant number of cybersecurity incidents occur via attacking credentials and this section provides means to document access to the system.



Public Comment No. 120-NFPA 72-2023 [New Section after A.11.3]

A.11.4.3.2

Logs and audit trails are critically important to establishing if a system has been attacked, and who the attacker may be, or the avenue of attack. For example, changes to a system configuration or software version may be legitimate or illegitimate. But unless it is known when and who made these changes, it can be very difficult to assess the intent. Also, if particular credentials are being utilized inappropriately, information contained in logs and audit trails are often necessary to properly respond. In this context, logs and audit trails themselves require appropriate protection. Individuals and account that have privileges that are being tracked, should not also have privileges to access and change the logs or audit trails.

Statement of Problem and Substantiation for Public Comment

This annex material provides additional insights into the importance of monitoring access. Effective cybersecurity relies on a defence in depth approach. It is not enough to install signs and barriers to ensure security. Monitoring access is necessary as well, to establish if a breach occurred and how it occurred and who was responsible. There are many parallels in physical security, but perhaps the most obvious is security cameras. Fences are a poor deterrent for someone who really wants to gain entry. Monitoring is necessary so the attempts can be detected and blocked.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 111-NFPA 72-2023 [New Section after 11.4]</u>	Supporting Annex Material
<u>Related Item</u>	
• FR-5188	

Submitter Information Verification

Submitter Full Name: Michael Pallett
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Submittal Date: Thu May 18 12:11:37 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5084-NFPA 72-2023
Statement: A significant number of cybersecurity incidents occur via attacking credentials and this section provides means to document access to the system.



Public Comment No. 121-NFPA 72-2023 [Section No. A.11.5]

A.11.5 — [🔗](#)

There might be data that a life safety system(s) maintains that could be considered confidential. It is necessary to protect information that could be used to aid in compromising a system(s) — for example, information such as online documentation that reveals system maintenance status, locations and IP addresses of devices, wiring information, network switch port numbers, riser information, cabling pathways, encryption keys, or user credentials. If compromised, all could be used to attack the life safety system or other connected systems. Different types of cybersecurity attacks attempt to compromise user and system accounts, especially privileged accounts. It is common industry practice to find networkable devices that have limited account management, use common account names and passwords (e.g., *admin* , *password*), and are configured with built-in accounts that have no individual users (requiring multiple users to share passwords), no levels of access (effectively making any access privileged access), no ability to apply permissions based on the user's job functions, no ability to disable specific accounts (necessary when users change jobs), and no centralized management of these accounts (accounts might be isolated to specific devices and must be managed one device at a time). These devices rely upon specific actions to change these parameters that could occur without being known to the system owners. This should be considered when selecting security levels for various elements of the system.

Statement of Problem and Substantiation for Public Comment

Section 11.5 addresses unused physical data ports, which is a completely different concern than the protection of data generally and the account management issues that are addressed in this annex material. While this material is relevant to cybersecurity in general, it is not directly relevant to unused physical data ports. These concepts should be represented in reference to a section that is charged with account management.

Related Item

- FR-5188

Submitter Information Verification

Submitter Full Name: Michael Pallett
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Submission Date: Thu May 18 12:13:56 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5154-NFPA 72-2023](#)

Statement: Section 11.5 addresses unused physical data ports, which is a completely different concern than the protection of data generally and the account management issues that are addressed in this annex material. While this material is relevant to cybersecurity in

Statement: Section 11.5 addresses unused physical data ports, which is a completely different concern than the protection of data generally and the account management issues that are addressed in this annex material. While this material is relevant to cybersecurity in general, it is not directly relevant to unused physical data ports. These concepts should be represented in reference to a section that is charged with account management.



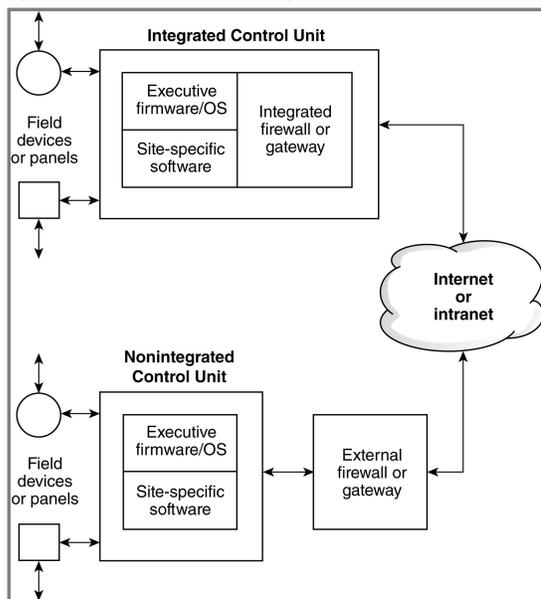
Public Comment No. 122-NFPA 72-2023 [Section No. A.11.6]

A.11.6

Figure A.11.6 depicts system typical firewall/gateway operation. Such functionality, when deployed, could take the form of physical hardware, firmware, or both. The firewall/gateway might be physically integrated into the control unit, as shown in the integrated control unit graphic, or a separate device/service that interacts with the control unit, as shown in the nonintegrated control unit.

Many networks have additional protections such as multiple firewalls, Intrusion Detection Systems (IDS), and Intrusion Prevention Systems (IPS). Other systems such as Security Information Event Management (SEIM) systems automatically collect and scan log information from various equipment to identify, warn, and take action when a cybersecurity event is detected. It is important to consider to what extent might these systems include or exclude the monitoring of network connected life safety equipment, and to what extent is it possible for these systems to affect the operation of this equipment.

Figure A.11.6 System Typical Firewall/Gateway Operation.



Statement of Problem and Substantiation for Public Comment

As network connected devices are exposed to modern network cybersecurity measures, there are methods of protection being commonly deployed that go beyond firewalls and gateways. This annex material identifies some of them and points out that consideration must be given to the effect these protections may have on the operation of network connected equipment. In some cases, they could augment cybersecurity by looking for unusual patterns of access. But the concern is that since these systems are highly configurable and are updated frequently, any potential impact on life safety connected equipment must be considered. This is an issue worth pointing out, since often the life safety systems operational needs fade into the background against the continuous routine operations conducted across the network.

Related Item

- FR-5188

Submitter Information Verification

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Organization: Pallett Corner Consulting

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Submittal Date: Thu May 18 12:15:28 EDT 2023
Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5093-NFPA 72-2023](#)
Statement: This section covers firewalls and gateways. The text that was not accepted provided unnecessary detail.



Public Comment No. 207-NFPA 72-2023 [New Section after A.14.3.2]

A.14.3.2 (17)(10)(b)

See Annex Section A.19.17.2.2.2

Statement of Problem and Substantiation for Public Comment

prior to low pressure actuated dry valves 10 psi off normal signal was the norm. Now that low pressure actuated valves are typically installed, 10 psi above or below normal pressure is too large of a range. Some manufacturers suggest a 2-4 psi range and others are 3-5 psi. The air normal pressure is based on the valve manufacturer and the incoming water supply, there is no "normal" air pressure for dry pipe valves and the hi/low air pressure signals must be set according to manufacturer and water pressure.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 205-NFPA 72-2023 [Section No. 14.4.3.2]	
<u>Related Item</u>	
• PI 179	

Submitter Information Verification

Submitter Full Name: Vincent Powers
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Submittal Date: Wed May 31 10:47:14 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5051-NFPA 72-2023
Statement: This revision adds clarification for the operation of new technology for low pressure dry pipe and preaction valves regarding the supervisory pressure setting.



Public Comment No. 76-NFPA 72-2023 [Section No. A.14.6.1.1]

A.14.6.1.1

Examples of acceptable methods used to define the required sequence of operations and to document the actual sequence of operations include a logic diagram [see Figure A.14.6.1.1(a)] and an input/output matrix [see Figure A.14.6.1.1(b)]. The required and actual sequence of operation should include all applicable items found in the list in A.7.4.9.

Figure A.14.6.1.1(a) Typical Logic Diagram.

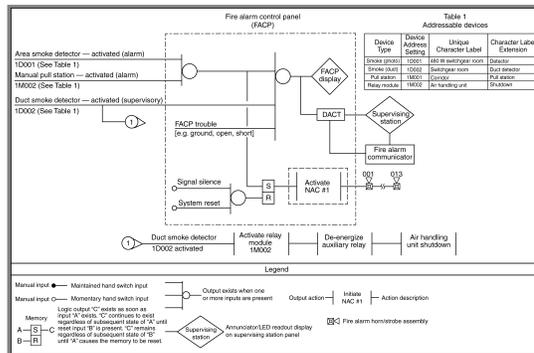


Figure A.14.6.1.1(b) Typical Input/Output Matrix.

The matrix table lists 30 system inputs on the left and 26 system outputs on the top. The inputs include manual alarm devices, smoke detectors, duct smoke detectors, FACP trouble, signal silence, and system reset. The outputs include control unit annunciation, notification, regular fire safety controls, and supplementary outputs. The matrix uses a grid of circles to indicate which inputs are connected to which outputs.

Statement of Problem and Substantiation for Public Comment

A.14.6.1.1 is referenced by both A.7.4.9 and A.7.5.5.2 for an example of the sequence of operation matrix. It is critical that the Owner receives a copy of the sequence of operation that is actually programmed into the fire alarm system. As such, a detailed list is included in PC No. 74 for A.7.4.9 and should be referenced in this Annex material so reference is made back to this inclusive list. The "Typical Input/Output Matrix" shown as an example is not all inclusive of everything that should be documented. This is why CI 5362 asked a task group to review the matrix. The inclusive list found in PC No. 74 for A.7.4.9 should be of assistance to the task group.

Related Public Comments for This Document

Related Comment
Public Comment No. 74-NFPA 72-2023 [Section No. A.7.4.9]

Relationship
Dependent

Related Item

- PI 577 • CI 5362

Submitter Information for Verification

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Submittal Date: Mon May 15 17:48:21 EDT 2023
Committee: SIG-TMS

Committee Statement

Committee Action: Accepted

Resolution: [SR-5048-NFPA 72-2023](#)

Statement: A.14.6.1.1 is referenced by both A.7.4.9 and A.7.5.5.2 for an example of the sequence of operation matrix. It is critical that the Owner receives a copy of the sequence of operation that is actually programmed into the fire alarm system. As such, this revision points to a detailed list in Chapter 7 and should be referenced in this Annex material so reference is made back to this inclusive list. The "Typical Input/Output Matrix" shown as an example is not all inclusive of everything that should be documented.



Public Comment No. 150-NFPA 72-2023 [Section No. A.17.7.1.9]

A.17.7.1.9

The velocities indicated in individual duct detector listings are based ~~on applicable standards such as UL 268A~~ on UL 268A, *Smoke Detectors for Duct Application*.

Statement of Problem and Substantiation for Public Comment

A correlating committee task group was formed to review references to product and installation codes and standards. Many of the references, add the words "applicable standards such as" or "or equivalent", to indicate other standards could be accepted. This leads to conflict, because this code clearly indicates the following:

10.3.1 Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it used.

There are many other references that reinforce 10.3.1 such as this one. The product and installation codes and standards that are reference in NFPA 72 by title have been reviewed by chapter committee members to verify they are providing verification of the performance, safety and reliability criteria identified in NFPA 72 and that there are no conflicts to the performance, safety and reliability criteria of this code.

Using terms like "applicable standards such as" or "or equivalent" that allow alternate product and installation codes and standards to be accepted without the review of the chapter committees is putting undue burdens on AHJs, the Engineering community and life safety systems owners to be experts in all of the possible alternate product and installation codes and standards.

This language is not to say there is only one choice, it is to say all alternates should be called out in the code for proper verification to the requirements of NFPA 72.

Related Item

- CN-18

Submitter Information Verification

Submitter Full Name: Jeffery Van Keuren
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Submittal Date: Tue May 23 16:36:59 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected

Resolution: The language discussed is found in the annex and is used as guidance. As such, the language should remain to inform the user that there are other standards to which products are listed and approved.



Public Comment No. 203-NFPA 72-2023 [Section No. A.17.7.4.2.3.1]

A.17.7.4.2.3.1 [🔗](#)

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)].

Table 17.6.3.5.1 (Heat Detector Spacing Reduction Based on Ceiling Height) should not be used to adjust the spacing of smoke detectors on high ceilings. The NFPA Fire Protection Research Foundation sponsored a research project to examine how smoke detector spacing may need to change based on ceiling height. In the project, Smoke Detector Spacing in High Ceiling Spaces, Part 2, the researchers used computational fluid dynamic software, FDS, to simulate smoke development at various ceiling heights, with and without a temperature gradient to promote smoke stratification. Those considering a performance based design should review the report.

Statement of Problem and Substantiation for Public Comment

This added annex material for this section is intended to refer the reader to the research on high ceiling smoke detection sponsored by the FPRF.

Related Item

- PI 186

Submitter Information Verification

Submitter Full Name: Scott Lang
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Submittal Date: Wed May 31 09:24:35 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5026-NFPA 72-2023](#)

Statement: The additional annex information provides guidance as to the use of smoke detectors at ceiling heights over 10-feet. 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 asked most frequently, is around how to space detectors on high ceilings. Using a height of 40 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 (39.4 feet) higher than that, and in some cases, smoke detectors are installed at a standard ceiling height of 10 feet. Data from the fire alarm research foundation project, Smoke Detector Spacing in High Ceiling

standards are being used to rescue for the smoke with a 10-foot ceiling. Data from the fire alarm research foundation project, Smoke Detector Spacing in High Ceiling

heights (30 feet) is important to keep in mind that current smoke detector thresholds standards are based on individual responses for occupants with a 10 second delay from the time of alarm sound to least than 0.25 OD/mie for five of space. In high ceiling Spaces, and research that was identified in Part 1 of the FPRF project was used as the basis for this revision.



Public Comment No. 163-NFPA 72-2023 [Section No. A.17.8.3.1.1]

A.17.8.3.1.1 

All optical detectors respond according to the following theoretical equation:

A.17.8.3.1.1

All optical detectors respond according to the following theoretical equation:

$$S = \frac{kP^{-e\zeta d}}{d^2} \quad [\text{A.17.8.3.1.1}]$$

where:

S = radiant power reaching the detector

k = proportionality constant for the detector

P = radiant power emitted by the fire

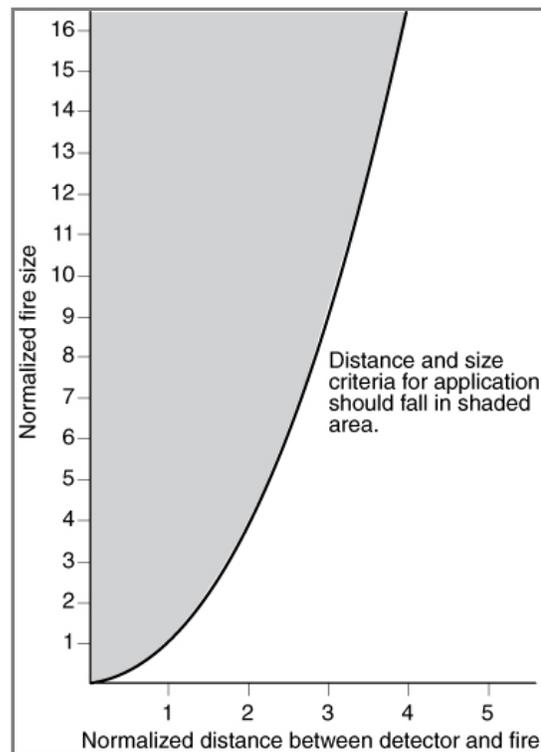
e = Napierian logarithm base (2.7183)

ζ = extinction coefficient of air

d = distance between the fire and the detector

The sensitivity (S) typically is measured in nanowatts. This equation yields a family of curves similar to the one shown in Figure A.17.8.3.1.1.

Figure A.17.8.3.1.1 Normalized Fire Size vs. Distance.



The curve defines the maximum distance at which the detector consistently detects a fire of defined size and fuel. Detectors should be employed only in the shaded area above the curve.

Under the best of conditions, with no atmospheric absorption, the radiant power reaching the detector is reduced by a factor of 4 if the distance between the detector and the fire is doubled. For the consumption of the atmospheric extinction, the exponential term zeta (ζ) is added to the equation. Zeta is a measure of the clarity of the air at the wavelength under consideration. Zeta is affected by humidity, dust, and any other contaminants in the air that are absorbent at the wavelength in question. Zeta generally has values between -0.001 and -0.1 for normal ambient air.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CC Note No. 14	NFPA 720, Constraint Note No. 14	

NOTE: The following CC Note No. 14 appeared in the First Draft Report

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 14 appeared in the First Draft Report.

Review formula A.17.8.3.1.1 for accuracy. The formula does not match formula B.5.1.6. The exponent in the annex A formula should match the exponent in annex B for the same formula on radiant power reaching the detector.

Related Item

- CN - 14

Submitter Information Verification

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Zip:

Submittal Date: Wed May 24 15:41:22 EDT 2023

Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5032-NFPA 72-2023](#)

Statement: The formula does not match formula B.5.1.6, which is correct. The exponent in the annex A formula should match the exponent in annex B for the same formula on radiant power reaching the detector.



Public Comment No. 94-NFPA 72-2023 [New Section after A.17.11.2.1]

A.17.11.3.1

Engineering evaluation should include size of leak in the same terms as the manufacturer's specification. This is typically in terms of mass flow rate, pounds/sec(kg/sec).

Statement of Problem and Substantiation for Public Comment

Added annex material to clarify how size of leak for detection is typically specified. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 93-NFPA 72-2023 [Section No. 17.11.3.1]	Annex material
Public Comment No. 93-NFPA 72-2023 [Section No. 17.11.3.1]	

Related Item

- FR 5360

Submitter Information Verification

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Submittal Date: Wed May 17 07:54:37 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5036-NFPA 72-2023](#)
Statement: This revision provides further clarification on considerations for an engineering evaluation. Associated annex language helps clarify how the size of the leak is typically specified and examples of coverage.



Public Comment No. 96-NFPA 72-2023 [New Section after A.17.11.2.1]

A.17.11.3.4

Background noise in some frequencies may be filtered by some acoustic leak detectors. Additionally some interference may exist beyond audible range. It is important background noise in ranges that impact the detection capability be accounted for in the spacing of the detectors.

Statement of Problem and Substantiation for Public Comment

Additional annex to provide context to the intent of the requirement. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 95-NFPA 72-2023 [Section No. 17.11.3.4]</u>	New annex material
<u>Public Comment No. 95-NFPA 72-2023 [Section No. 17.11.3.4]</u>	

Related Item

- FR 5360

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: BP America Inc.
Affiliation: SIG IDS Task Group for Acoustic Gas Detection
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 17 08:03:34 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5037-NFPA 72-2023
Statement: This section was revised to account for various technologies to detect leaks. Associated annex material added to provide context as to the intent of the section to account for possible interference.



Public Comment No. 90-NFPA 72-2023 [Section No. A.17.11.2.1]

A.17.11.2.1 [🔗](#)

~~Acoustic~~ Typical spot acoustic leak detectors rely on ultrasonic sound generated when ~~high-pressure gas~~ pressurized gas is released ~~from a choked flow orifice~~. When liquids are present in the flow, ultrasonic sound waves might not be generated from the release. Typical line type acoustic leak detectors rely on induced vibration generated by a material release and therefore may be able to detect single phase gas or liquid release as well as multi phase releases.

Statement of Problem and Substantiation for Public Comment

Revised to account for various technologies to detect leaks. This proposal is being submitted on behalf of the SIG IDS Task Group for Acoustic Gas Detection.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 91-NFPA 72-2023 [Section No. 17.11.2.1]	
Public Comment No. 92-NFPA 72-2023 [Section No. 17.11.2.2]	
Public Comment No. 91-NFPA 72-2023 [Section No. 17.11.2.1]	

Related Item

- FR 5360

Submitter Information Verification

Submitter Full Name: Samuel Miller
Organization: BP America Inc.
Affiliation: SIG IDS Task Group for Acoustic Gas Detection.
Street Address:
City:
State:
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Submittal Date: Wed May 17 07:34:31 EDT 2023
Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5034-NFPA 72-2023](#)
Statement: Section was revised to account for the various technologies to detect leaks. Primarily it is important that the detector be approved to ensure the claimed performance can be achieved. Currently there are limited industry certification standards. EN50724 is an example of a proposed industry certification standard which could be utilized as a basis for AHJ approval.



Public Comment No. 206-NFPA 72-2023 [Section No. A.17.19.2.2.2]

A.17.19.2.2.2

Some

Many current manufactured dry

pipe

and preaction

~~sprinkler systems use~~

pipe valves are low pressure activated, which require lower air pressures

~~in the range of 8 psi to 15 psi (0.5 bar to 1.0 bar), instead of the traditional 40 psi (2.7 bar). A plus or minus value of 10 psi (0.7 bar) is not appropriate for these systems and could result in dry pipe valve actuation prior to transmission of a low air pressure supervisory signal~~

than conventional valves. Manufacturers suggest that the air pressure signals on these valves activate between a two and five psi increase or decrease. In some cases, setting the low air signal at 5 psi may be too late of a notification and cause the valve to operate before maintenance personnel can address the situation. As an example; a dry pipe valve has a normal air pressure of 15 psi and the system operates at 8 psi, this will only leave a 2-psi safety factor if the low air is set to operate at a 5-psi loss. This system would be better served with a low air signal of operation of 2 to 4 psi below normal air pressure .

Statement of Problem and Substantiation for Public Comment

prior to low pressure actuated dry valves 10 psi off normal signal was the norm. Now that low pressure actuated valves are typically installed, 10 psi above or below normal pressure is too large of a range. Some manufacturers suggest a 2-4 psi range and others are 3-5 psi. The air normal pressure is based on the valve manufacturer and the incoming water supply, there is no "normal" air pressure for dry pipe valves and the hi/low air pressure signals must be set according to manufacturer and water pressure.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 204-NFPA 72-2023 [Section No. 17.19.2.2.2(B)]</u>	
<u>Related Item</u>	
• ci 5351	

Submitter Information Verification

Submitter Full Name: Vincent Powers
Organization: National Fire Sprinkler Associ
Affiliation: Engineering and Standards Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 31 10:43:01 EDT 2023

Committee Statement
Committee. SIG-IDS

Committee. Rejected but see related SP

Committee Statement

Committee: SIG-IDS

Committee Action: Rejected but see related SR

Resolution: [SR-5017-NFPA 72-2023](#)

Statement: The revision adds clarification to the section that the dry pipe or preaction valve manufacturer's instructions should be followed for the off normal signal threshold. The annex material relates more towards common installations the industry currently sees.



Public Comment No. 196-NFPA 72-2023 [Section No. A.18.4.1.8]

A.18.4.1.8

In some situations, such as personnel sensitive to loud noises, systems should be designed to limit the maximum sound pressure level in an acoustically distinguishable space (ADS).

Statement of Problem and Substantiation for Public Comment

See substantiation for requirement 18.4.1.8, 18.4.1.9, PC No. 195-NFPA 72-2023

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 195-NFPA 72-2023 [Sections 18.4.1.8, 18.4.1.9]	

Related Item

- FR 5324

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 30 17:51:18 EDT 2023

Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5065-NFPA 72-2023](#)

Statement: The revision provides the designer with guidance within NFPA 72 for options in areas with Autism Spectrum Disorder individuals, Neurodiverse individuals, and other occupants with sensitivity to sound, light, or other stimuli. RAMO addresses the characteristics of the occupants where ADS addresses the characteristics of the space. Chapter 18 references Chapter 14 for inspection, testing, and maintenance of notification systems. The section was relocated to 18.4.8 to align with other notification mode requirements.



Public Comment No. 197-NFPA 72-2023 [Section No. A.18.4.1.8.1]

A.18.4.1.8.1 [🔗](#)

The purpose of ~~RAMO information~~ this section is to provide guidance to designers, engineers, users, and AHJs relative to applications where the maximum amplitude of general area audible notification appliances should be controlled to avoid causing undue health issues for facility occupants. This is different than public or private mode audible notification — those two modes set the minimum sound pressure level for the use, but do not address the maximum amplitudes.

An example of a protected space in which systems should be designed to limit the maximum sound pressure level is one used by occupants who are sensitive to loud sounds (e.g., facilities for people with autism, facilities for children). The ~~facility's risk system designer~~ assessment should ~~address the use of RAMO~~ consider reducing the maximum volume and utilizing ramp-up of volume. Instances where the “instantly on and very loud” system notification appliances frighten or cause undo panic of occupants have occurred, which can impede the orderly evacuation of the protected space. For these types of environments, voice alarm systems that ~~use RAMO use~~ ramp-up for pre-recorded messages are preferred.

Statement of Problem and Substantiation for Public Comment

See substantiation for requirement 18.4.1.8, 18.4.1.9, PC No. 195-NFPA 72-2023

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 195-NFPA 72-2023 [Sections 18.4.1.8, 18.4.1.9]	
<u>Related Item</u>	
• FR 5324	

Submitter Information Verification

Submitter Full Name: Megan Hayes
Organization: NEMA
Street Address:
City:
State:
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Submittal Date: Tue May 30 17:57:46 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5065-NFPA 72-2023
Statement: The revision provides the designer with guidance within NFPA 72 for options in areas with Autism Spectrum Disorder individuals, Neurodiverse individuals, and other occupants with sensitivity to sound, light, or other stimuli. RAMO addresses the characteristics of the occupants where ADS addresses the characteristics of the space. Chapter 18 references Chapter 14 for inspection, testing, and maintenance of notification systems. The section was relocated to 18.4.8 to align with other notification mode requirements.

was relocated to 18.4.8 to align with other notification mode requirements.



Public Comment No. 198-NFPA 72-2023 [Section No. A.18.4.1.9.1]

A.18.4.1.9.1 — [🔗](#)

The purpose of this paragraph is to provide a method for AHJs to require that the amplitude of a system be adjusted so as not to exacerbate a situation. The risk assessment should address these applications, the changes should be documented, and all the applications should be reviewed regularly for changes that might require system modifications.

Statement of Problem and Substantiation for Public Comment

See substantiation for requirement 18.4.1.8, 18.4.1.9, PC No. 195-NFPA 72-2023

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 195-NFPA 72-2023 [Sections 18.4.1.8, 18.4.1.9]	
<u>Related Item</u>	
• FR 5324	

Submitter Information Verification

Submitter Full Name: Megan Hayes
Organization: NEMA
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 30 18:04:23 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5065-NFPA 72-2023](#)
Statement: The revision provides the designer with guidance within NFPA 72 for options in areas with Autism Spectrum Disorder individuals, Neurodiverse individuals, and other occupants with sensitivity to sound, light, or other stimuli. RAMO addresses the characteristics of the occupants where ADS addresses the characteristics of the space. Chapter 18 references Chapter 14 for inspection, testing, and maintenance of notification systems. The section was relocated to 18.4.8 to align with other notification mode requirements.



Public Comment No. 164-NFPA 72-2023 [Section No. A.18.10.2]

A.18.10.2 [🔗](#)

Notification appliances ~~are available for the deaf and hard of hearing. These appliances include including~~ , but ~~are~~ not limited to, supplemental tactile notification appliances ~~. Such tactile are available for the deaf and hard of hearing. Tactile~~ notification appliances can be capable of awakening people. ~~Tactile~~ ~~Such~~ appliances can ~~initiate in response to the activation of an audible smoke alarm, through~~ , ~~through~~ hard wiring into the fire alarm system or by wireless methods, ~~initiate in response to the activation of an audible smoke alarm~~ .

Some tests show that visual notification appliances might not be effective in awakening some sleeping individuals during an emergency. Some tactile ~~devices~~ notification appliances can be more effective in awakening individuals, regardless of hearing levels, from sleep. See the FPRF report, *Review of Alarm Technologies for Deaf and Hard of Hearing Populations*, for further details.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._21.pdf	NFPA 72 Correlating Note No. 21	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note 21 appeared in the First Draft Report on First Revision No. 5327.

During editorial review, the editors recommended changes to this section to make the language easier to understand:

"Notification appliances including, but not limited to, supplemental tactile notification appliances are available for the deaf and hard of hearing. Tactile notification appliances can be capable of awakening people. Such appliances can, through hard wiring into the fire alarm system or by wireless methods, initiate in response to the activation of an audible smoke alarm.

Some tests show that visual notification appliances might not be effective in awakening some sleeping individuals during an emergency. Some tactile notification appliances can be more effective in awakening individuals, regardless of hearing levels, from sleep. See the FPRF report, *Review of Alarm Technologies for Deaf and Hard of Hearing Populations*, for further details." Coordinate verbiage between SIG NAS and SIG HOU and consider revisions regarding the use of the term 'audible smoke alarm'.

Related Item

- FR - 5327

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC
Organization: NFPA CC on Signaling Systems for the Protection of Life and Property
Street Address:
City:
State:
Zip:

Committee Statement
Submittal Date: Wed May 24 15:45:01 EDT 2023
Committee: SIG-NAS

Committee: Rejected but see related SD

Committee Statement

Submission Date: Wed May 24 15:45:01 EDT 2023

Committee: SIG-NAS

Committee Action: Rejected but see related SR

Resolution: [SR-5060-NFPA 72-2023](#)

Statement: This revision contains editorial changes to the text to make it clearer and easier to understand. The topic of tactile notification appliances is also addressed in chapter 29. The annex material in A.29.5.10.2 provides more comprehensive details regarding some of the factors affecting the effectiveness of some tactile notification devices.



Public Comment No. 45-NFPA 72-2023 [Section No. A.18.10.2]

A.18.10.2 [🔗](#)

Notification appliances are available for the deaf and hard of hearing. These appliances include, but are not limited to, supplemental tactile notification appliances. Such tactile notification appliances can be capable of awakening people. Tactile appliances can initiate in response to the activation of an audible smoke alarm, through hard wiring into the fire alarm system or by wireless methods.

Some tests show that visual notification appliances might not be effective in awakening some sleeping individuals during an emergency. Some tactile devices can be more effective in awakening individuals, regardless of hearing levels, from sleep. See the FPRF report, *Review of Alarm Technologies for Deaf and Hard of Hearing Populations*, and [A.29.5.10.2](#) for further details.

Statement of Problem and Substantiation for Public Comment

The NFPA Disability Access Review Advisory Committee (DARAC) supplies this Public Comment to provide the reader with additional annex commentary that is pertinent to this section.

- The topic of tactile notification appliances is also addressed in chapter 29.
- The annex material in A.29.5.10.2 provides more comprehensive details regarding some of the factors affecting the effectiveness of some tactile notification devices.

Related Item

- FR 5327

Submitter Information Verification

Submitter Full Name: Jessica Hubert
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Affiliation: Representing the DARAC Advisory Group
Street Address:
City:
State:
Zip:
Submittal Date: Thu Apr 27 14:39:22 EDT 2023
Committee: SIG-NAS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5060-NFPA 72-2023](#)

Statement: This revision contains editorial changes to the text to make it clearer and easier to understand. The topic of tactile notification appliances is also addressed in chapter 29.

Resolution: [SR-5060-NFPA 72-2023](#)

Statement: This revision contains editorial changes to the text to make it clearer and easier to understand. The topic of tactile notification appliances is also addressed in chapter 29. The annex material in A.29.5.10.2 provides more comprehensive details regarding some of the factors affecting the effectiveness of some tactile notification devices.



Public Comment No. 70-NFPA 72-2023 [Section No. A.23.3.5.2]

A.23.3.5.2

Examples of dedicated function fire alarm systems

with dedicated function(s) fire alarm control units, which are included in this Code are: "sprinkler waterflow and supervisory system" (See 23.8.5.5.1) and "elevator recall control and supervisory control unit" (see 21.3.2).

Where required by other governing laws, codes, or standards or by the authority having jurisdiction, other types of dedicated function fire alarm systems

~~include, but are not limited to, one or more systems that monitor or control supervisory status of elevator recall, sprinkler waterflow, emergency responder communications enhancement systems, carbon monoxide (CO), or other gas detection.~~

with dedicated function(s) fire alarm control units may include but not limited to the following systems: Two-Way Radio Communications Enhancement System (See 24.9), Carbon Monoxide Detection System (See 3.3.37), Gas Detection (See 17.10), Kitchen Hood suppression system, HVAC smoke detection. A dedicated function(s) fire alarm control unit could serve as a single control unit for one or more dedicated function(s) and it should be labeled to include all functions it controls. When the dedicated function(s) fire alarm control unit is installed in a constantly attended location on-site, it should not be required to be monitored off-site by a supervising station.

Where the building is not provided with a constantly attended location, the dedicated function(s) fire alarm control unit should be installed in an approved location and should be monitored off-site by an approved supervising station.

Statement of Problem and Substantiation for Public Comment

The intent of this proposed change are: 1) Provide a consistent language between the annex and the terms used in the body of the code with specific references to code sections. 2) To expand the use of potential dedicated function fire alarm systems for other systems indicated in NFPA 72 such as Two-Way Radio Communications Enhancement System (Section 24.9), Carbon Monoxide Detection System (Section 3.3.37), Gas Detection system (Section 17.10), etc. 3) Other Codes and standards such as IFC have requirements for signaling systems monitoring such as IFC 2021: SECTION 510 EMERGENCY RESPONDER COMMUNICATION COVERAGE

510.4.2.5 System monitoring.

The in-building, two-way emergency responder communication coverage system shall be monitored by a listed fire alarm control unit, or where approved by the fire code official, shall sound an audible signal at a constantly attended on-site location.

NFPA 1225-2022 Section 18.14 System Monitoring.

18.14.1 Fire Alarm System.

18.14.1.1 The system shall include automatic supervisory signals for malfunctions of the in-building emergency responder communications enhancement system that are annunciated by the fire alarm system in accordance with NFPA 72.

4) To clarify that if the building has a constantly attended location - the dedicated function FA system should not be required to be monitored off-site by a supervising station

5) To clarify that the dedicated function FA control unit should be installed in an approved location within the building and should be monitored off-site by a supervising station where there is no constantly attended location within the building - which is consistent with the IFC intent

Submitter Information Verification

• FR 5023 • PI 523

Submitter Information Verification

• FR 5023 • PI 523

Submitter Full Name: Sagiv Weiss-Ishai

Organization: San Francisco Fire Department

Affiliation: SFFD

Street Address:

City:

State:

Zip:

Submittal Date: Tue May 09 10:50:25 EDT 2023

Committee: SIG-PRO

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5006-NFPA 72-2023](#)

Statement: The annex is revised to include more examples of dedicated function fire alarm systems.

It is not the intent of the FR-5294 material to determine whether something is an "accident" or not. As such, a review of the word "accident" within NFPA 72 is not needed. The intent of this question is to have an emergency response plan address network risks whether they are accidental or intentional acts, not the determination if something "is" an accident. The term "accidental" is more appropriate. This change is being made in conjunction with PC No. 78 (SIG-ECS) which removes the term "accidents" from the body of NFPA 72. This PC No. 80 change should be made regardless if PC No. 78 is approved or not, since the SIG-PRO committee will meet before the SIG-ECS committee.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 78-NFPA 72-2023 [Section No. 24.2.3]	Only other reference to "accident"

Related Item

- FR-5294 • Corelating Committee Note No. 34

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 15 18:26:08 EDT 2023
Committee: SIG-PRO

Committee Statement

Committee Action: Accepted
Resolution: [SR-5005-NFPA 72-2023](#)
Statement: The revision removes the word 'accidents' and replaces it with 'accidental' to reflect similar changes by the SIG ECS committee.



Public Comment No. 109-NFPA 72-2023 [Section No. A.24.4.8.3.2]

A.24.4.8.3.2



Only first responders or other trained authorized emergency personnel should be able to

A.24.4.8.3.2 

Only first responders or other trained authorized emergency personnel should be able to intentionally and manually silence or reset the automatic prerecorded message sequence unless otherwise arranged for automatic silencing in accordance with 18.4.2.3; this is to ensure the safe evacuation or relocation of all occupants, regardless of the time it takes. Automatic termination should not be permitted. The alert status of visual appliances should be maintained. However, since the duration of the alarm is indeterminate, audible alerts and messaging that are periodically suspended can contribute to an improved response by the occupants. Suspending the audible portion of the alarm can support a better community response to the instructions, especially where people with disabilities might be assisted by other occupants who are not trained as first responders.

Approved alternative fire alarm notification schemes, such as sequences that contain only a fixed number of repetitions of the prerecorded messages and associated alert tones, or as indicated in 24.4.8.3.2, should be permitted as long as the occupants are effectively notified and provided instructions in a timely and safe manner in accordance with the emergency response plan.

Research from the National Research Council of Canada, detailed in *Occupant Behaviour and Evacuation*, found that “[i]n public buildings, such as airport terminals or sport centres, occupant training is not practical; for these, much of the responsibility for safety will rest with staff. Consequently, staff training is paramount. Occupants are very likely to look for staff members to obtain information; they are regarded as knowledgeable, they are expected to know the situation, the best course of action and the closest exit. Whether heard on a loudspeaker or seen in uniform or wearing a name tag, staff are likely to be listened to.”

The National Council on Disability publication, *Effective Emergency Management: Making Improvements for Communities and People with Disabilities*, found that “[p]eople with disabilities should not be viewed as one more special interest group that drains resources from the common pool. Accommodating this large group often translates into being better equipped to serve all people. Anyone, at any moment, can incur a disability, particularly during emergencies. (Kailes and Enders 2006, p. 13)”

Furthermore, Shields, Boyce, and Silcock (1997) note that “staff trained in emergency evacuation should provide guidance to people who are evacuating public facilities. Familiar and trusted staff can alert a significant portion of the public in such instances and ensure an efficient evacuation.” On the basis of census results, Morrow (1999) argues that a “sizable segment” of any community’s population will need additional assistance during evacuation.

Fire-related emergency relocation instructions and nonevacuation messages are repeated a minimum of three times. For prerecorded messages, the actual number of times the message sequence plays is indeterminate and the interval between each sequence playing is not defined by code; the interval is intended to be defined in the emergency response plan. Paragraph 24.4.8.3.2 requires that the entire message sequence, including the tone, is again repeated after a pause. So if the tone and partial evacuation message is repeated three times as required by 24.4.8.3.1, then after pausing for an interval of at least 180 seconds (or alternative time periods that are established — see the following paragraph), the entire message sequence (including tone) is repeated again three times, followed by another pause, and so on.

Research shows that effective messages should be repeated at intervals, not consecutively (see *Annex G*). In determining the alternative interval times, consider the following:

- (1) Too much time between message sequences could be misunderstood by occupants that the emergency has been resolved.
- (2) Too much time between message sequences could communicate insufficiently the sense of urgency that is intended.
- (3) Too little time between message sequences could impair the ability of occupants to comply with instructions, particularly for occupants that need assistance.
- (4) Too little time between message sequences could make it difficult for occupants to mark a change in the message contents if partial evacuation or relocation instructions are changed and re-issued.
- (5) On the loss of primary power, secondary power is required to support continuous notification for only 15 minutes. This time could be extended based on the period of repetition of automatic messages. Too little time between message sequences could exhaust power

Statement of Problem and Substantiation for Public Comment The annex material is revised for consistency with the automatic silencing permitted by 18.4.2.3

Statement of Problem and Substantiation for Public Comment

These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.

The annex material is revised for consistency with the automatic silencing permitted by 18.4.2.3.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 108-NFPA 72-2023 [Section No. 24.4.8.3.2]	FR 5262
Public Comment No. 108-NFPA 72-2023 [Section No. 24.4.8.3.2]	

Related Item

- FR 5262

Submitter Information Verification

Submitter Full Name: Megan Hayes

Organization: NEMA

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 17 11:29:59 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5080-NFPA 72-2023](#)

Statement: These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.



Public Comment No. 165-NFPA 72-2023 [Section No. A.24.4.8.3.2]

A.24.4.8.3.2 

Only first responders or other trained authorized emergency personnel should be able to

A.24.4.8.3.2 

Only first responders or other trained authorized emergency personnel should be able to intentionally and manually silence or reset the automatic prerecorded message sequence; this is to ensure the safe evacuation or relocation of all occupants, regardless of the time it takes. Automatic termination should not be permitted. The alert status of visual appliances should be maintained. However, since the duration of the alarm is indeterminate, audible alerts and messaging that are periodically suspended can contribute to an improved response by the occupants. Suspending the audible portion of the alarm can support a better community response to the instructions, especially where people with disabilities might be assisted by other occupants who are not trained as first responders.

Approved alternative fire alarm notification schemes, such as sequences that contain only a fixed number of repetitions of the prerecorded messages and associated alert tones, or as indicated in 24.4.8.3.2, should be permitted as long as the occupants are effectively notified and provided instructions in a timely and safe manner in accordance with the emergency response plan.

Research from the National Research Council of Canada, detailed in *Occupant Behaviour and Evacuation*, found that “[i]n public buildings, such as airport terminals or sport centres, occupant training is not practical; for these, much of the responsibility for safety will rest with staff. Consequently, staff training is paramount. Occupants are very likely to look for staff members to obtain information; they are regarded as knowledgeable, they are expected to know the situation, the best course of action and the closest exit. Whether heard on a loudspeaker or seen in uniform or wearing a name tag, staff are likely to be listened to.”

The National Council on Disability publication, *Effective Emergency Management: Making Improvements for Communities and People with Disabilities*, found that “[p]eople with disabilities should not be viewed as one more special interest group that drains resources from the common pool. Accommodating this large group often translates into being better equipped to serve all people. Anyone, at any moment, can incur a disability, particularly during emergencies. (Kailes and Enders 2006, p. 13)”

Furthermore, Shields, Boyce, and Silcock (1997) note that “staff trained in emergency evacuation should provide guidance to people who are evacuating public facilities. Familiar and trusted staff can alert a significant portion of the public in such instances and ensure an efficient evacuation.” On the basis of census results, Morrow (1999) argues that a “sizable segment” of any community’s population will need additional assistance during evacuation.

Fire-related emergency relocation instructions and nonevacuation messages are repeated a minimum of three times. For prerecorded messages, the actual number of times the message sequence plays is indeterminate and the interval between each sequence playing is not defined by code; the interval is intended to be defined in the emergency response plan. Paragraph 24.4.8.3.2 requires that the entire message sequence, including the tone, is again repeated after a pause. So if the tone and partial evacuation message is repeated three times as required by 24.4.8.3.1, then after pausing for an interval of at least 180 seconds (or alternative time periods that are established — see the following paragraph), the entire message sequence (including tone) is repeated again three times, followed by another pause, and so on.

Research shows that effective messages should be repeated at intervals, not consecutively (see *Annex G*). In determining the alternative interval times, consider the following:

- (1) Too much time between message sequences could be misunderstood by occupants that the emergency has been resolved.
- (2) Too much time between message sequences could communicate insufficiently the sense of urgency that is intended.
- (3) Too little time between message sequences could impair the ability of occupants to comply with instructions, particularly for occupants that need assistance.
- (4) Too little time between message sequences could make it difficult for occupants to mark a change in the message contents if partial evacuation or relocation instructions are changed and re-issued.
- (5) On the loss of primary power, secondary power is required to support continuous notification for only 15 minutes. This time could be extended based on the period of repetition of automatic messages. Too little time between message sequences could prevent occupants from receiving emergency first responders arrive, compromising the responders’ ability to manually transmit additional live evacuation or relocation messages.

Additional Proposed Changes

File Name	Description	Approved
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Additional Proposed Changes

Proposed changes before emergency first responders arrive, compromising the responders' ability to manually transmit additional live evacuation or relocation messages.

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._38.pdf	NFPA 72 Correlating Note No. 38	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note 38 appeared in the First Draft Report on First Revision No. 5278.

Review the referenced document in A.24.4.8.3.2, Effective Emergency Management: Making Improvements for Communities and People with Disabilities, and confirm that the reference title and date in Annex J is correct. The reference title in Annex A.24.4.8.3.2 is different than listed in Annex J.

Related Item

- FR - 5278

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA CC on Signaling Systems for the Protection of Life and Property

Street Address:

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Submittal Date: Wed May 24 15:53:37 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5080-NFPA 72-2023](#)

Statement: These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.



Public Comment No. 36-NFPA 72-2023 [Section No. A.24.4.8.3.2]

A.24.4.8.3.2



A.24.4.8.3.2



~~Only first responders or other trained authorized emergency personnel should be able to intentionally and manually silence or reset the automatic prerecorded message sequence; this is to ensure the safe evacuation or relocation of all occupants, regardless of the time it takes.~~

~~Only first responders or other trained authorized emergency personnel should be able to intentionally and manually silence or reset the automatic prerecorded message sequence; this is to ensure the safe evacuation or relocation of all occupants, regardless of the time it takes. Automatic termination should not be permitted. The alert status of visual appliances should be maintained. However, since the~~ Since the duration of the alarm is indeterminate, audible alerts and messaging that are periodically suspended can contribute to an improved response by the occupants. ~~Suspending~~ Temporarily suspending the audible portion of the alarm can support a better community response to the instructions, especially where people with disabilities might be assisted by other occupants who are not trained as first responders.

Approved alternative fire alarm notification schemes, such as sequences that contain only a fixed number of repetitions of the prerecorded messages and associated alert tones, or as indicated in 24.4.8.3.2, should be permitted as long as the occupants are effectively notified and provided instructions in a timely and safe manner in accordance with the emergency response plan.

Research from the National Research Council of Canada, detailed in *Occupant Behaviour and Evacuation*, found that “[i]n public buildings, such as airport terminals or sport centres, occupant training is not practical; for these, much of the responsibility for safety will rest with staff. Consequently, staff training is paramount. Occupants are very likely to look for staff members to obtain information; they are regarded as knowledgeable, they are expected to know the situation, the best course of action and the closest exit. Whether heard on a loudspeaker or seen in uniform or wearing a name tag, staff are likely to be listened to.”

The National Council on Disability publication, *Effective Emergency Management: Making Improvements for Communities and People with Disabilities*, found that “[p]eople with disabilities should not be viewed as one more special interest group that drains resources from the common pool. Accommodating this large group often translates into being better equipped to serve all people. Anyone, at any moment, can incur a disability, particularly during emergencies. (Kailes and Enders 2006, p. 13)”

Furthermore, Shields, Boyce, and Silcock (1997) note that “staff trained in emergency evacuation should provide guidance to people who are evacuating public facilities. Familiar and trusted staff can alert a significant portion of the public in such instances and ensure an efficient evacuation.” On the basis of census results, Morrow (1999) argues that a “sizable segment” of any community’s population will need additional assistance during evacuation.

Fire-related emergency relocation instructions and nonevacuation messages are repeated a minimum of three times. For prerecorded messages, the actual number of times the message sequence plays is indeterminate and the interval between each sequence playing is not defined by code; the interval is intended to be defined in the emergency response plan. Paragraph 24.4.8.3.2 requires that the entire message sequence, including the tone, is again repeated after a pause. So if the tone and partial evacuation message is repeated three times as required by 24.4.8.3.1, then after pausing for an interval of ~~at least 180 seconds~~ time (or ~~alternative~~ time periods that are established according to the occupancy type and type of emergency — see the following paragraph), the entire message sequence (including tone) is repeated again three times, followed by another pause, and so on.

Research shows that effective messages should be repeated at intervals, not consecutively (see *Annex G*). In determining the alternative interval times, consider the following:

- (1) Too much time between message sequences could be misunderstood by occupants that the emergency has been resolved.
- (2) Too much time between message sequences could communicate insufficiently the sense of urgency that is intended.
- (3) Too little time between message sequences could impair the ability of occupants to comply with instructions, particularly for occupants that need assistance.
- (4) Too little time between message sequences could make it difficult for occupants to mark a change in the message contents if partial evacuation or relocation instructions are changed and re-issued.
- (5) On the loss of primary power, secondary power is required to support continuous notification for only 15 minutes. This time could be extended based on the period of repetition of automatic messages. Too little time between message sequences could exhaust power reserves before emergency first responders arrive, compromising the responders’ ability to manually transmit additional live evacuation or relocation messages.

Generally, only first responders or other trained authorized emergency personnel should be able to intentionally and manually silence or reset the automatic prerecorded message sequence; this is to ensure the safe evacuation or relocation of all occupants, regardless of the time it takes.

Generally, only first responders or other trained authorized emergency personnel should be able to intentionally and manually silence or reset the automatic prerecorded message sequence; this is to ensure the safe evacuation or relocation of all occupants, regardless of the time it takes. Automatic termination should not be permitted, except under specific circumstances.

Chapter 18 stipulates that systems are silence or reset manually by authorized personnel. But it also makes allowances for automatic silence, based on an emergency plan when approved by the AHJ. There may also be circumstances where messages are automatically changed (based on AHJ approval). For example, in a staged evacuation of a high-rise building, in order to avoid congestion in the stairways, some floors may initially shelter in place. But then the message may change automatically, on a timed floor-by-floor basis, to instruct occupants to evacuate. In this case the first message is silenced, and the second message takes over.

Also, Chapter 24 stipulates that an Emergency Command Center, which could be remote from a building, with AHJ approval, can automatically control the output devices, or change the message (which would also involve silencing a current message). A risk analysis is used to determine the circumstances when a message could be changed. One example could include changing an evacuation message to shelter in place if an active shooter attack is occurring outdoors. Another example is to issue an all-clear message across a campus of buildings after an incident.

Finally, Chapter 24 requires that systems should not resume playing a recorded message - automatically, after that message is interrupted by a live page. Live pages have priority over prerecorded messages. Automatic resumption of the prerecorded message is permitted when required by the emergency response plan. When the message is silenced, the alert status of visual appliances should be maintained.

Statement of Problem and Substantiation for Public Comment

A new section was created to focus on how the message sequence could be silenced (in accordance with MOS), so the annex material related to reset and silence was relocated to this new inserted section.

There is some confusion as to whether automatic silencing of prerecorded messages is permissible in the code. Some have maintained that only authorized personnel can silence a message manually, and automatic means are not permitted. This annex entry is intended to provide some context to this question, by exploring the areas of code that do permit automatic silencing of messages under certain provisions.

While the code generally requires manual silence or reset by authorized personnel, there are exceptions regarding silencing. For example, the code requires automatic silencing of recorded messages after a manual/live page. The code allows for circumstances where silencing operations could be conducted remotely (i.e., an emergency command center). The code allows for circumstances where an emergency command center could control output devices automatically, and based on a risk analysis, change the messages.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 123-NFPA 72-2023 [Section No. 24.4.8.3.2]	Supporting Annex Material
<u>Related Item</u>	
• FR-5278	

Submitter Information Verification

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Submission Date: Sat Apr 15 12:52:42 EDT 2023
Committee: SIG-ECS

Committee Statement

Committee: Rejected but see related SP

Committee Statement

Submitted Date: Sat Apr 15 12:52:42 EDT 2023

Committee: SIG-ECS

Committee Action: Rejected but see related SR

Resolution: [SR-5080-NFPA 72-2023](#)

Statement: These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.



Public Comment No. 43-NFPA 72-2023 [Section No. A.24.4.8.3.2]

A.24.4.8.3.2



Only first responders or other trained authorized emergency personnel should be able to

A.24.4.8.3.2 

Only first responders or other trained authorized emergency personnel should be able to intentionally and manually silence or reset the automatic prerecorded message sequence; this is to ensure the safe evacuation or relocation of all occupants, regardless of the time it takes. Automatic termination should not be permitted. The alert status of visual appliances should be maintained. However, since the duration of the alarm is indeterminate, audible alerts and messaging that are periodically suspended can contribute to an improved response by the occupants. Suspending the audible portion of the alarm can support a better community response to the instructions, especially where people with disabilities might be assisted by other occupants who are not trained as first responders.

Approved alternative fire alarm notification schemes, such as sequences that contain only a fixed number of repetitions of the prerecorded messages and associated alert tones, or as indicated in 24.4.8.3.2, should be permitted as long as the occupants are effectively notified and provided instructions in a timely and safe manner in accordance with the emergency response plan.

Research from the National Research Council of Canada, detailed in *Occupant Behaviour and Evacuation*, found that “[i]n public buildings, such as airport terminals or sport centres, occupant training is not practical; for these, much of the responsibility for safety will rest with staff. Consequently, staff training is paramount. Occupants are very likely to look for staff members to obtain information; they are regarded as knowledgeable, they are expected to know the situation, the best course of action and the closest exit. Whether heard on a loudspeaker or seen in uniform or wearing a name tag, staff are likely to be listened to.”

The National Council on Disability publication, *Effective Emergency Management: Making Improvements for Communities and People with Disabilities*, found that “[p]eople with disabilities should not be viewed as one more special interest group that drains resources from the common pool. Accommodating this large group often translates into being better equipped to serve all people. Anyone, at any moment, can incur a disability, particularly during emergencies. (Kailes and Enders 2006, p. 13)”

Furthermore, Shields, Boyce, and Silcock (1997) note that “staff trained in emergency evacuation should provide guidance to people who are evacuating public facilities. Familiar and trusted staff can alert a significant portion of the public in such instances and ensure an efficient evacuation.” On the basis of census results, Morrow (1999) argues that a “sizable segment” of any community’s population will need additional assistance during evacuation.

Fire-related emergency relocation instructions and nonevacuation messages are repeated a minimum of three times. For prerecorded messages, the actual number of times the message sequence plays is indeterminate and the interval between each sequence playing is not defined by code; the interval is intended to be defined in the emergency response plan. Paragraph 24.4.8.3.2 requires that the entire message sequence, including the tone, is again repeated after a pause. So if the tone and partial evacuation message is repeated three times as required by 24.4.8.3.1, then after pausing for an interval of ~~at least 180 seconds (or alternative of time~~ (time periods that are established ~~— according to the occupancy type and type of emergency response—~~ see the following paragraph), the entire message sequence (including tone) is repeated again three times, followed by another pause, and so on.

Research shows that effective messages should be repeated at intervals, not consecutively (see *Annex G*). In determining the alternative interval times, consider the following:

- (1) Too much time between message sequences could be misunderstood by occupants that the emergency has been resolved.
- (2) Too much time between message sequences could communicate insufficiently the sense of urgency that is intended.
- (3) Too little time between message sequences could impair the ability of occupants to comply with instructions, particularly for occupants that need assistance.
- (4) Too little time between message sequences could make it difficult for occupants to mark a change in the message contents if partial evacuation or relocation instructions are changed and re-issued.
- (5) On the loss of primary power, secondary power is required to support continuous notification for only 15 minutes. This time could be extended based on the period of repetition of automatic messages. Too little time between message sequences could exhaust power

Statement of Problem and Substantiation for Public Comment
 The NFPA Disability Access Review Advisory Committee (DARAC) supplies this Public Comment to

Statement of Problem and Substantiation for Public Comment

These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.

The NFPA Disability Access Review Advisory Committee (DARAC) supplies this Public Comment to correlate with our Public Comment provided for 24.4.8.3.2.

Related Item

- FR 5278

Submitter Information Verification

Submitter Full Name: Jessica Hubert

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Affiliation: Representing the DARAC Advisory Group

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Submittal Date: Thu Apr 27 14:26:23 EDT 2023

Committee: SIG-ECS

Committee Statement

Committee Action: Rejected but see related SR

Resolution:

[SR-5080-NFPA 72-2023](#)

Statement: These revisions clarify the length of a pause and the importance of using the emergency response plan to determine system operation. The reference to the emergency response plan covers the consideration of the facility and the occupants, a separate report should not be required.



Public Comment No. 166-NFPA 72-2023 [Section No. A.26.5.3]

A.26.5.3 [🔗](#)

As a minimum, the room or rooms containing the remote supervising station equipment should have a 1-hour fire rating, and the entire structure should be protected by an alarm system complying with Chapter 23.

As a useful guide for determining the nature of the design and integrity necessary to achieve proper protection, the remote supervising station building or that portion of a building occupied by a remote supervising station should compare the construction, fire protection, restricted access, emergency lighting, and power facilities to the requirements stated in the latest edition of UL 827, *Central-Station Alarm Services*.

If the remote supervising station is located within an emergency response agency (ERA), the ERA should consider meeting the requirements of Chapter 4 of NFPA 1225.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._24.pdf	NFPA 72 Correlating Note No. 24	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 24 appeared in the First Draft Report.

Review the language of the third paragraph for the correct reference chapter number in NFPA 1225. NFPA 1221 was consolidated into NFPA 1225.

Related Item

- CN - 24

Submitter Information Verification

Submitter Full Name: CC on SIG-AAC

Organization: NFPA Cc on Signaling Systems for the Protection of Life and Property

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Submittal Date: Wed May 24 15:57:08 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5139-NFPA 72-2023](#)

Statement: Removed chapter reference in favor of pointing the user to NFPA 1225.



Public Comment No. 132-NFPA 72-2023 [Section No. A.26.6.1]

A.26.6.1 

A.26.6.1 

Refer to Table A.26.6.1 for communications methods.

Table A.26.6.1 Communications Methods for Supervising Stations

Refer to Table A.26.6.1 for communications methods.

Table A.26.6.1 Communications Methods for Supervising Stations

<u>Criteria</u>	<u>Performance-Based Technologies</u> <u>26.6.3</u>	<u>Digital Alarm Communicator Systems</u> <u>26.6.4</u>	<u>Two-Way Radio Frequency (RF) Multiplex Systems</u> <u>26.6.5.1</u>		<u>One-Way Private Radio Alarm Systems</u> <u>26.6.5.2</u>
Federal Communications Commission (FCC) approval when applicable	Yes	Yes		Yes	Yes
Conform to NFPA 70	Yes	Yes		Yes	Yes
Monitoring for integrity of the transmission and communications channel	Monitor for integrity	Both the premises unit and the system unit monitor for integrity in a manner approved for the means of transmission employed. A single signal received on each incoming DACR line once every 6 hours.	Systems are periodically polled for end-to-end communications integrity.		Test signal from every transmitter once every 24 hours
Annunciate, at the supervising station, the degradation and restoration of the transmission or communications channel	Within 60 minutes for a single communication path and within 6 hours for multiple communication paths	Within 4 minutes using alternate phone line to report the trouble	Not exceed 90 seconds from the time of the actual failure		Only monitor the quality of signal received and indicate if the signal falls below minimum signal quality specified in Code
Redundant communication path where a portion of the transmission or communications channel cannot be monitored for integrity			Employ a combination of two separate transmission channels alternately tested at intervals not exceeding 6 hours	Redundant path not required — supervising station always indicates a communications failure	
Interval testing of the backup path(s)			When two phone lines are used, test alternately every 6 hours. Testing for other back-up technologies, see 26.6.4.2.4.2.	Backup path not required	
	<u>Performance-Based</u>	<u>Digital Alarm Communicator</u>	<u>Two-Way Radio Frequency</u>		<u>One-Way Private</u>

<u>Criteria</u>	<u>Performance-Based Technologies</u> 26.6.3	<u>Digital Alarm Communicator Systems</u> 26.6.4	26.6.4.2.4.2. <u>Two-Way Radio Frequency (RF) Multiplex Systems</u> 26.6.5.1	<u>One-Way Private Radio Alarm Systems</u> 26.6.5.2
Annunciation of communication failure or ability to communicate at the protected premises	Systems where the transmitter at the local premises unit detects a communication failure, the premises unit will annunciate the failure within 200 seconds of the failure	Indication of failure at premises due to line failure or failure to communicate after from 5 to 10 dialing attempts	Not required — always annunciated at the supervising station that initiates corrective action	Monitor the interconnection of the premises unit elements of transmitting equipment, and indicate a failure at the premises or transmit a trouble signal to the supervising station.
Time to restore signal-receiving, processing, display, and recording equipment	Where duplicate equipment not provided, spare hardware required so a repair can be effected within 30 minutes.	Spare digital alarm communicator receivers required for switchover to backup receiver in 30 seconds. One backup system unit for every five system units.		Where duplicate equipment not provided, spare hardware required so a repair can be effected within 30 minutes
Loading capacities for system units and transmission and communications channels	512 independent alarm systems on a system unit with no backup. Unlimited if you can switch to a backup in 30 seconds.	See Table 26.6.4.3.2.4 for the maximum number of transmitters on a hunt group in a system unit		512 buildings and premises on a system unit with no backup. Unlimited if you can switch to a backup in 30 seconds.
End-to-end communication time for an alarm	90 seconds from initiation of alarm until displayed to the operator and recorded on a medium from which the information can be retrieved	Off-hook to on-hook not to exceed 90 seconds per attempt. 10 attempts maximum. 900 seconds maximum for all attempts.	90 seconds from initiation until it is recorded	90% probability to receive an alarm in 90 seconds, 99% probability in 180 seconds, 99.999% probability in 450 seconds
Record and display rate of subsequent alarms at supervising station	Not slower than one every 10 additional seconds	Not addressed	<u>Two-Way Radio Frequency</u>	When any number of subsequent alarms come in, record at a rate not slower than one every 10 seconds <u>One-Way Private</u>

Station Criteria	Performance-Based Technologies 26.6.3	Digital Alarm Communicator Systems 26.6.4	Two-Way Radio Frequency (RF) Multiplex Systems 26.6.5.1	One-way, additional 10 seconds	than one every 40 seconds. One-Way Private Radio Alarm Systems 26.6.5.2
Signal error detection and correction	Signal repetition, parity check, or some equivalent means of error detection and correction must be used.	Signal repetition, digital parity check, or some equivalent means of signal verification must be used.		<u>Not addressed</u>	<u>Not addressed</u>
Path sequence priority	No need for prioritization of paths. The requirement is that both paths are equivalent.	The first transmission attempt uses the primary channel.		<u>Not addressed</u>	<u>Not addressed</u>
Carrier diversity			Where long distance service (including WATS) is used, the second telephone number must be provided by a different long distance service provider where there are multiple providers.		<u>Not addressed</u>
Throughput probability			Demonstrate 90% probability of a system unit immediately answering a call or follow the loading in Table 26.6.4.3.2.4. One-way radio backup demonstrates 90% probability of transmission.	<u>Not addressed</u>	
Unique premises identifier	If a transmitter shares a transmission or communication channel with other transmitters, it must have a unique transmitter identifier.	Yes		<u>Yes</u>	<u>Yes</u>
Unique flaws	From time to time, unique	If call forwarding is used to		<u>None addressed</u>	<u>None addressed</u>
	flaws might be present in a communication	communicate to the supervising station, verify	Two-Way Radio		One-Way Private

<u>Criteria</u>	<u>Performance-Based Technologies</u> 26.6.3	<u>Digital Alarm Communicator Systems</u> 26.6.4	<u>Two-Way Radio Frequency (RF) Multiplex Systems</u> 26.6.5.1	<u>One-Way Private Radio Alarm Systems</u> 26.6.5.2
	system. Requirements must be written for unique flaws.	the integrity of this feature every 4 hours.		
Signal priority	If the communication method is shared with any other communication method, prioritizing alarm signals should be considered.	Chapter 10 on fundamentals requires that alarm signals take priority over supervisory signals unless there is sufficient repetition of the alarm signal to prevent the loss of an alarm signal.		Chapter 10 on fundamentals requires that alarm signals take priority over supervisory signals unless there is sufficient repetition of the alarm signal to prevent the loss of an alarm signal.
Sharing communications equipment on premises	If the transmitter is sharing on-premises communications equipment, the shared equipment must be listed for the purpose (otherwise the transmitter must be installed ahead of the unlisted equipment).	Disconnect outgoing or incoming telephone call and prevent its use for outgoing telephone calls until signal transmission has been completed.		<u>Not addressed</u> <u>Not addressed</u>

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted on behalf of the performance-based design task group assigned by SIG-SSS during the first draft meetings to review and consider modifications of Chapter 26 to remove communications technologies no longer in use and prescriptive performance-based methodologies for new and future communications technologies. This public comment is tied to Committee Input 5100. (removing 2 way Radio from Table)

Related Item

- CI5000

Submitter Information Verification

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Submittal Date: Sat May 20 18:46:48 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Accepted

Resolution: [SR-5128-NFPA 72-2023](#)

Statement: Two way radio technology has been eliminated from the table since the technology is no longer listed for fire alarm service.



Public Comment No. 220-NFPA 72-2023 [Section No. A.26.6.3]

A.26.6.3 

A.26.6.3 

Certain legacy technologies (active multiplex, McCulloh, directly connected non-coded and private microwave) have been removed from the text of the document. Existing systems utilizing these technologies are acceptable, because all these technologies also comply with the general

Certain legacy technologies (active multiplex, McCulloh, directly connected non-coded and private microwave) have been removed from the text of the document. Existing systems utilizing these technologies are acceptable, because all these technologies also comply with the general provisions of 26.6.3.

The object of 26.6.3 is not to give details of specific technologies but rather give basic operating parameters of the transmission supervision rates of technologies. The following list represents examples of current technologies that can be configured to meet the requirements and the intent of 26.6.3:

- (1) Transmitters using IP (Internet Protocol)
- (2) IP transmission over the public open Internet or over private IP facilities maintained by an organization for its own use
- (3) Transmitters using various (non-dialup) digital cellular technology

Wired IP Transmission. There are two types of wired IP transmission devices. One type connects the IP network directly to the fire alarm control unit (integrated IP or native IP). The second uses an intermediary module that can include the following:

- (1) IP dialer capture module
- (2) IP data capture module (such as RS-232, keypad bus, RS-485)
- (3) Relay contact monitoring module

Devices referred to as "IP dialer capture modules" (an IP communicator used with a DACT) are transmission devices that connect to the DACT output of the fire alarm control unit and convert the output data stream to IP (Internet protocol). As such, they are considered to use IP technology in their connection to the IP network. Therefore, they should be treated in this Code under the requirements of 26.6.3, performance-based technologies, and not under the requirements of 26.6.4, digital alarm communicator systems. A distinction must be noted in that certain FCC approved Carriers may provide interface hardware that is similar in function but not considered part of the alarm system equipment including DACT functions. Such Carrier provided interface equipment is considered as a part of the Telecommunications Network Equipment. This equipment may be considered a functional gateway to the Carrier network. It is always FCC approved. It is not considered customer premises equipment or alarm signaling equipment. Such network equipment is always provided by the Carrier and wired accordingly on the Network side of the FCC SNI or Demarc. Such equipment will always carry the appropriate Performance Based listing meeting the appropriate standard.

Digital Cellular. To accommodate an increase in the demand for mobile wireless communications as well as introducing new services over that same network, wireless voice communications no longer utilizes dedicated connections to pass voice band frequencies. In place of the voice band, the voice conversation is converted into a stream of bits and packaged within data packets that conform to messaging protocols. The packets are addressed to a destination point, delivered into the network, received by the destination point, and converted back into intelligible voice-grade messages. The message exchange through this wireless data network is done through well-known defined protocols such as "Global System for Mobile" communications (GSM) for voice communications as well as Code Division Multiple Access (CDMA) for both voice and data and General Packet Radio Service (GPRS) for mobile data services. These protocols have been developed to operate in an optimal way for the intended application. For example, GSM is used to efficiently establish voice-grade connections that deliver an appropriate level of intelligible voice quality, but might not be good enough to pass tones that represent data. Data transmission is better served by GPRS and CDMA where a connection into the wireless network is always available without having to "dial," and large amounts of data can be efficiently transmitted. However, the data passed using GPRS or CDMA are not that of coded tones such as DTMF (Contact ID), but are computer-type messages similar to IP.

When using digital cellular, a DACT might or might not be used.

For example, the digital cellular device might be used to back up the DACT or, if properly supervised, be used as a stand-alone device. If used, the DACT is connected to a digital cellular radio device that connects to the cellular network by means of an antenna. The digital cellular radio device is constantly connecting to the wireless network and is always ready to attempt to transmit to a destination address without having to "dial" a number. The radio device recognizes the destination address by the DACT or by its own signaling. The DACT or the radio device sends the packets into the wireless network for delivery to a pre-assigned destination address.

the device accepts the DAtamap signaling, converts it to a packet of data signaling and sends the packets into the wireless network for delivery to a pre-assigned destination address.

Statement of Problem and Substantiation for Public Comment

NFPA 72 has no jurisdiction to regulate the operation of MFVNs that are located on the network side of the FCC demarcation point.

Related Item

- CI-5176

Submitter Information Verification

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Submittal Date: Wed May 31 15:24:43 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5141-NFPA 72-2023](#)

Statement: The additional annex language provides more background and descriptive information on how telecommunications networks are regulated.



Public Comment No. 221-NFPA 72-2023 [Section No. A.26.6.3]

A.26.6.3 

A.26.6.3 

Certain legacy technologies (active multiplex, McCulloh, directly connected non-coded and private microwave) have been removed from the text of the document. Existing systems utilizing these technologies are acceptable, because all these technologies also comply with the general

Certain legacy technologies (active multiplex, McCulloh, directly connected non-coded and private microwave) have been removed from the text of the document. Existing systems utilizing these technologies are acceptable, because all these technologies also comply with the general provisions of 26.6.3.

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- (1) Transmitters using IP (Internet Protocol)
- (2) IP transmission over the public open Internet or over private IP facilities maintained by an organization for its own use
- (3) Transmitters using various (non-dialup) digital cellular technology

Wired IP Transmission. There are two types of wired IP transmission devices. One type connects the IP network directly to the fire alarm control unit (integrated IP or native IP). The second uses an intermediary module that can include the following:

- (1) IP dialer capture module
- (2) IP data capture module (such as RS-232, keypad bus, RS-485)
- (3) Relay contact monitoring module

Devices referred to as “IP dialer capture modules” (an IP communicator used with a DACT) are transmission devices that connect to the DACT output of the fire alarm control unit and convert the output data stream to IP (Internet protocol). As such, they are considered to use IP technology in their connection to the IP network. Therefore, they should be treated in this Code under the requirements of 26.6.3, performance-based technologies, and not under the requirements of 26.6.4, digital alarm communicator systems.

Digital Cellular. To accommodate an increase in the demand for mobile wireless communications as well as introducing new services over that same network, wireless voice communications no longer utilizes dedicated connections to pass voice band frequencies. In place of the voice band, the voice conversation is converted into a stream of bits and packaged within data packets that conform to messaging protocols. The packets are addressed to a destination point, delivered into the network, received by the destination point, and converted back into intelligible voice-grade messages. The message exchange through this wireless data network is done through well-known defined protocols such as “Global System for Mobile” communications (GSM) for voice communications as well as Code Division Multiple Access (CDMA) for both voice and data and General Packet Radio Service (GPRS) for mobile data services. These protocols have been developed to operate in an optimal way for the intended application. For example, GSM is used to efficiently establish voice-grade connections that deliver an appropriate level of intelligible voice quality, but might not be good enough to pass tones that represent data. Data transmission is better served by GPRS and CDMA where a connection into the wireless network is always available without having to “dial,” and large amounts of data can be efficiently transmitted. However, the data passed using GPRS or CDMA are not that of coded tones such as DTMF (Contact ID), but are computer-type messages similar to IP.

When using digital cellular, a DACT might or might not be used.

For example, the digital cellular device might be used to back up the DACT or, if properly supervised, be used as a stand-alone device. If used, the DACT is connected to a digital cellular radio device that connects to the cellular network by means of an antenna. The digital cellular radio device is constantly connecting to the wireless network and is always ready to attempt to transmit to a destination address without having to “dial” a number. The radio device recognizes that the alarm panel is attempting to place a call by the DACT’s “off-hook” signaling. The radio device accepts the DACT tone signaling, converts it into a packeted data stream, and sends the packets into the wireless network for delivery to a pre-assigned destination address.

It should be noted that FCC approved Carriers may provide similar services. These services are often optimized to consider both IP and Cellular connectivity as needed. The Telecommunication Network Equipment provided by such carriers often will present a single gateway to multiple communication technologies or pathways. In these cases, a DACT device will continue to function as legacy equipment capable of transmitting traditional tones including legacy. These Carrier circuits are intended to permit legacy alarm DACT communication protocols to continue to function and communicate over the Carrier Network using different Carrier determined mediums including combinations of IP, WAN, and Cellular connectivity (as

These Carrier circuits are intended to permit legacy alarm DACT communication protocols to continue to function and communicate over the Carrier Network using different Carrierrier. determined mediums including combinations of IP, WAN, and Cellular connectivity (as determined by the Carrier).

Statement of Problem and Substantiation for Public Comment

Adds clarification that carriers may provide similar equipment, although NFPA 72 has no jurisdiction to regulate the operation of MFVNs that are located on the network side of the FCC demarcation point.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz

Organization: AT&T Corporation

Street Address:

City:

State:

Zip:

Submittal Date: Wed May 31 15:31:24 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5141-NFPA 72-2023](#)

Statement: The additional annex language provides more background and descriptive information on how telecommunications networks are regulated.



Public Comment No. 176-NFPA 72-2023 [Section No. A.26.6.3.5]

A.26.6.3.5

When considering a fire alarm system utilizing a single communication path to the supervising station, consideration should be given to the risk exposure that results from the loss of that path for any period of time and for any reason. Some of these outages can be regular and predicable and others transitory.

One example of a single technology used to produce two paths is the use of a digital cellular premises unit communicating with two or more cell towers. In this case, the supervising station and the protected premises must be made aware if communications degrades to below two towers. Another example is the use of two different cellular carriers to produce the two paths. Similarly, in this case the supervising station and the protected premises must be made aware if communications degrades to one carrier.

Statement of Problem and Substantiation for Public Comment

Corrected a typo: notification is needed for the supervising station and the protected premises.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge
Organization: Ericsson
Affiliation: ATIS
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 25 18:06:42 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5140-NFPA 72-2023](#)
Statement: 'Premises' was missing from the text and added for clarification.



Public Comment No. 225-NFPA 72-2023 [Section No. A.26.6.3.5]

A.26.6.3.5

When considering a fire alarm system utilizing a single communication path to the supervising station, consideration should be given to the risk exposure that results from the loss of that path for any period of time and for any reason. Some of these outages can be regular and predicable and others transitory.

One example of a single technology used to produce two paths is the use of a digital cellular premises unit communicating with two or more cell towers. In this case, the supervising station and the protected premises must be made aware if communications degrades to below two towers. Another example is the use of two different cellular carriers to produce the two paths. Similarly, in this case the supervising station and the protected must be made aware if communications degrades to one carrier.

[This example can be mitigated by the MFVN provider offering supervision of the connectivity function by alerting change of state or loss of Network Registration from the Telecommunications Network Equipment gateway.](#)

Statement of Problem and Substantiation for Public Comment

Adds information on how the carrier can play a role in monitoring the connectivity of the communications pathway within the MFVN.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz

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Zip:

Submittal Date: Wed May 31 15:59:29 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5106-NFPA 72-2023](#)

Statement: During the first revision meeting of the SIG-SSS Technical Committee there was identified an immediate need to begin to address the technical advancements and variety of methods of transmitting and processing important fire alarm system signals to supervising stations while at the same time providing continued recognition of legacy methods still in use for transmitting fire alarm system signals to supervising stations. As a result of numerous Task Group meetings this second revision is one of many second revisions intended to address changes that reflect both existing and performance-based technologies considered reasonably reliable and acceptable for the important task of transmitting fire alarm signals to supervising stations, and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the

1. Providing clarification that the MFVN is a regulated communications service/carrier.

following fire alarm signals to supervising stations and ultimately for notification and response by emergency public safety agencies. In the case of this second revision the

1. Providing clarification that the MFVN is a regulated communications service/carrier.
2. The annex language was expanded for clarity of FCC licensed carriers.



Public Comment No. 178-NFPA 72-2023 [Section No. A.26.6.3.12]

A.26.6.3.12 [🔗](#)

Most communications equipment is not specifically listed for fire alarm applications, but is listed in accordance with applicable product standard for general communications equipment and is acceptable. [UL 60950-1, Information Technology Equipment — Safety — Part 1: General Requirements](#) or [UL 62368-1, Audio/Video, Information and Communication Technology Equipment — Part 1: Safety Requirements](#) are two commonly applied listing standards which may be suitable.

Statement of Problem and Substantiation for Public Comment

UL 60950-1 and UL 62368-1 are the most common listing standards. As we seek to increase the use of listed communications equipment, directing the use to appropriate standards via the annex is very helpful.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Richard Kluge
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Affiliation: ATIS
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 25 21:33:31 EDT 2023
Committee: SIG-SSS

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5152-NFPA 72-2023](#)
Statement: Secondary power is not being uniformly applied throughout the industry. Even in performance based design secondary power requirements should not be less than the minimum prescriptive requirements within the code.



Public Comment No. 240-NFPA 72-2023 [Section No. A.26.6.4.2.3]

A.26.6.4.2.3 [🔗](#)

To give the DACT the ability to disconnect an incoming call to the protected premises, telephone service should be of the type that provides for timed-release disconnect. In some telephone systems (step-by-step offices), timed-release disconnect is not provided. All equipment supplied by FCC approved carrier connected on the Network side of the FCC SNI or Demarc shall be required to meet FCC and Telecommunications Industry transmission standards including but not limited to functions regulating telecommunication systems including: Battery feed (B), Overvoltage protection (O), Ringing (R), Signaling (S), Coding (C), Hybrid (H), and Test (T) functions

Statement of Problem and Substantiation for Public Comment

Provides the proper industry standards for DACT signaling within the MFVN network.

Related Item

- CI-5176

Submitter Information Verification

Submitter Full Name: Jeffrey Betz

Organization: AT&T Corporation

Street Address:

City:

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Zip:

Submittal Date: Wed May 31 16:43:44 EDT 2023

Committee: SIG-SSS

Committee Statement

Committee Action: Rejected

Resolution: The submitted text doesn't provide additional guidance for the user as it relates to the requirement.



Public Comment No. 35-NFPA 72-2023 [Section No. A.29.5.8]

~~A.29.5.8~~ — [🔗](#)

~~Low frequency or tactile notification appliances such as bed shakers have been shown to be effective in waking those with normal hearing to profound hearing loss [CSE NIH report, 2005; Bruck and Thomas, 2009; Bruck, Thomas, and Ball, NFPA-RF report, 2007]. Additionally, see the NFPA Fire Protection Research Foundation report, *Review of Alarm Technologies for Deaf and Hard of Hearing Populations*, August 2021, for further details.~~

Statement of Problem and Substantiation for Public Comment

The charging paragraph for this annex material does not reference low frequency or tactile notification appliances – rather it refers to visual notification appliances. As such this annex entry should be removed. Note that there are two other annex sections (A.29.5.10.2 & A.18.10.2) that capture all this information, so nothing is being lost from the code by deleting this.

Related Item

- FR-5203

Submitter Information Verification

Submitter Full Name: Michael Pallett
Organization: Pallett Corner Consulting
Street Address:
City:
State:
Zip:
Submittal Date: Sat Apr 15 12:35:54 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR
Resolution: [SR-5145-NFPA 72-2023](#)
Statement: The charging paragraph for this annex material does not reference low frequency or tactile notification appliances – rather it refers to visual notification appliances. Annex material formerly located in A.29.5.10.2 on visual notification appliances has been relocated to be associated with requirements for visual notification appliances in 29.5.8.



Public Comment No. 18-NFPA 72-2023 [Sections

A.29.5.10.1, A.29.5.10.1(2), A.29.5.10.2, A.29.5.1...]

Sections A.29.5.10.1, A.29.5.10.1(2), A.29.5.10.2, A.29.5.10.2(1)

A.29.5.10.1 —

As an example, governing laws, codes, or standards might require a certain number of accommodations be equipped for those with hearing loss or other disability.

A.29.5.10.1(2) —

Based on sleep studies to assess the waking effectiveness of different types of alarm signals, a low frequency alarm signal with a fundamental frequency of 520 Hz has been shown to provide improved awakening for people with hearing loss when compared to typical alarms from high frequency piezoelectric sounders used in most smoke alarms [Bruck and Thomas, 2008]. Visual alarm signals, such as xenon strobes or LED strobes, have also been shown to not be very effective at waking people with mild to severe hearing loss [Thomas and Bruck, 2008, Ashley and Du Bois, 2004]. As for all alarm signals, effectiveness of the installed notification for the specific occupants should be tested by the occupants, if possible. The low frequency alarm signal can be provided by the sounder in a smoke alarm or by a separate notification appliance. The exhibit below shows an example of a notification appliance that uses a low frequency wave to alert those with hearing loss, the appliance is activated by the sound from a traditional smoke alarm. This particular appliance also includes a supplementary bed shaker.

It is not the intent of this section to preclude devices that have been demonstrated through peer-reviewed research to awaken occupants with hearing loss as effectively as those using the frequency and amplitude specified in this section.

A.29.5.10.2 —

Tactile notification appliances such as bed shakers have been shown to be effective in waking those with normal hearing to profound hearing loss [Ashley et al., 2005,

UL 1974

UL 1974, 2018]. Tactile signaling has been studied and found to be an effective way to alert and notify sleeping persons. However, there are many variables that have not been tested that might affect the reliability of their performance: — Some of the appliance variables include the mass of the appliance, frequency of vibration, and the throw or displacement of the vibrating mass. Occupant variables that might affect the reporting of test results and the effectiveness of the appliance include the person's age, how long a person has lived with their hearing loss, and what sleep stage the person is experiencing when the appliance operates. The type of mattress might also have an effect of the performance of certain tactile appliances. Mattress variables can include thickness, firmness, memory foam, pillow; tops, water beds, air beds, and motion isolation mattresses. Users of tactile appliances should be cautioned to test how well they might sense the effect of the appliance.

The

The Code requires both visual notification appliances and tactile appliances. — Visual notification appliances can awaken sleeping persons, provide verification that there is a fire alarm condition, and serve to alert persons when

they

that are not in contact with a tactile appliance. — See the NFPA Fire Protection Research Foundation report, Review of Alarm Technologies for Deaf and Hard of Hearing Populations; August 2021, for further details.

A.29.5.10.2(1) —

As an example, governing laws, codes, or standards might require a certain number of

A.29.5.10.2(1) 

~~As an example, governing laws, codes, or standards might require a certain number of accommodations be equipped for those with hearing loss or other disability.~~

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
SIG-HOU_Low_Frequency_TG_Public_Comment_v2.docx	SIG-HOU Low frequency sounder public comment.	

Statement of Problem and Substantiation for Public Comment

This is the second comment relating to 29.5.10 and A29.5.10. This public comment seeks to provide clear and enforceable language for alerting all people sleeping especially people with hearing loss, school age children, the elderly and alcohol impaired.

Related Item

- PI-206, PI-175, PI-216, PI-177 and PI-178.

Submitter Information Verification

Submitter Full Name: Eric Sacco
Organization: Siemens Building Technologies
Affiliation: I am submitting this public comment on behalf of the SIG-HOU Task Group created during the first draft meeting.
Street Address:
City:
State:
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Submittal Date: Thu Mar 23 10:23:37 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-5144-NFPA 72-2023
Statement: This revision provides clear and enforceable language for alerting all people sleeping especially people with hearing loss, school age children, the elderly, and alcohol impaired. Visual appliances were removed from this section because they are covered in 29.5.8. The 75 dB level requirement at the pillow requirement was removed because it was based on requirements only specifying smoke alarms to be installed outside the sleeping areas. Current requirements for smoke alarms to be installed inside the sleeping areas provide the necessary sound level to notify the occupants. The requirements covering level of hearing loss created challenges for the enforcement community. Other revisions are made for compliance with the Manual of Style.

The annex revision adds language to provide clear guidance for alerting all people sleeping especially people with hearing loss, school age children, the elderly and alcohol impaired, also, to correlate and format the annex material accordingly. Annex material regarding audible tactile appliances formerly located in A.29.5.8 has been incorporated into this annex material. Annex material in this section covering visual notification appliances has been relocated as annex material for 29.5.8.



**Public Comment No. 85-NFPA 72-2023 [Sections
A.29.5.10.1, A.29.5.10.1(2), A.29.5.10.2, A.29.5.1...]**

Sections A.29.5.10.1, A.29.5.10.1(2), A.29.5.10.2, A.29.5.10.2(1)

[A.29.5.10](#)



A.29.5.10-1— 

As an example, governing laws, codes, or standards might require a certain space within an occupancy, like a sleeping room or guest suite, or a specific number of accommodations be equipped for those with hearing loss or other disability.

A.29.5.10.1(2)— 

Based on sleep studies to assess the waking effectiveness of different types of alarm signals, a low frequency alarm signal with a fundamental frequency of 520 Hz has been shown to provide improved awakening for people with hearing loss when compared to typical alarms from high frequency piezoelectric sounders used in most smoke alarms [Bruck and Thomas, 2008]. Visual alarm signals, such as xenon strobes or LED strobes, have also been shown to not be very effective at waking people with mild to severe hearing loss [Thomas and Bruck, 2008; Ashley and Du Bois, 2004]. As for all alarm signals, the effectiveness of the installed notification for the specific occupants should be tested by the occupants, if possible.

It is not the intent of this section to preclude devices that have been demonstrated through peer-reviewed research to awaken occupants with hearing loss as effectively as those using the frequency and amplitude specified in this section.

A.29.5.-10.2— 11

Tactile notification appliances such as bed shakers have been shown to be effective in waking those with normal hearing to profound hearing loss [Ashley et al., 2005,

UL 1971

UL 1971, 2018]. Tactile signaling has been studied and found to be an effective way to alert and notify sleeping

persons

people. However, there are many variables that have not been tested that might affect the reliability of their performance. Some of the appliance variables include the mass of the appliance, frequency of vibration, and the throw or displacement of the vibrating mass. Occupant variables that might affect the reporting of test results and the effectiveness of the appliance include the person's age, how long a person has lived with their hearing loss, and what sleep stage the person is experiencing when the appliance operates. The type of mattress might also have an effect of the performance of certain tactile appliances. Mattress variables can include thickness, firmness, memory foam, pillow, tops, water beds, air beds, and motion isolation mattresses. Users of tactile appliances should be cautioned to test how well they might sense the effect of the appliance.

The Code requires both visual notification appliances and tactile appliances. Visual notification appliances can awaken sleeping persons, provide verification that there is a fire alarm condition, and serve to alert persons when

they

that are not in contact with a tactile appliance. See the NFPA Fire Protection Research Foundation report, Review of Alarm Technologies for Deaf and Hard of Hearing Populations, August 2021, for further details.

A.29.5.10.2(1)— 

As an example, governing laws, codes, or standards might require a certain number of accommodations be equipped for those with hearing loss or other disability.

File Name	Description	Approved
Additional Proposed Changes PC_No_85_	Text of changes by PC No. 85 shows clearly what is being changed, as TerraView makes it challenging to see what is	

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Additional Proposed Changes PC_No_85_-_Text.docx	Text of changes by PC No. 85 shows clearly what is being changed, as TerraView makes it challenging to see what is actually being proposed.	

Statement of Problem and Substantiation for Public Comment

Related to PI 586, which was rejected by the SIG-HOU technical committee but was referred for follow-up by a Low Frequency Task Group. This revised Annex A language it to match the modified code language provided in PC No. 84. The SIG-HOU task group for low frequency agreed with this approach and this Public Comment provides a slight alternative to the language that the task group provided. It is believed that this language is more in line with the NFPA Manual of Style to not have two requirements in the same paragraph. It contains basically the same language as in the existing NFPA 72, but reformatted to meet the modified language.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
<u>Public Comment No. 84-NFPA 72-2023 [Section No. 29.5.10]</u>	Dependent
<u>Related Item</u>	
• PI No. 586 • SIG-HOU Low Frequency Task Group	

Submitter Information Verification

Submitter Full Name: Larry Rietz
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 16 12:35:28 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected
Resolution: Based on other revisions to this section, the proposed changes in this comment are not necessary. Annex material is informational and are not enforceable requirements of the Code thus the annex material is not contrary to Manual of Style requirements.



Public Comment No. 46-NFPA 72-2023 [Section No. A.29.5.10.2]

A.29.5.10.2 [🔗](#)

Tactile notification appliances such as bed shakers ~~have been shown to~~ may be effective in waking those with normal hearing to profound hearing loss [Ashley et al., 2005, UL 1971, 2018]. Tactile signaling ~~has been studied and found to~~ may be an effective way to alert and notify sleeping persons. However, there are many variables that have not been tested that might affect the reliability of their performance. Some of the appliance variables include the mass of the appliance, frequency of vibration, and the throw or displacement of the vibrating mass. Occupant variables that might affect the reporting of test results and the effectiveness of the appliance include the person's age, how long a person has lived with their hearing loss, and what sleep stage the person is experiencing when the appliance operates. The type of mattress might also have an effect of the performance of certain tactile appliances. Mattress variables can include thickness, firmness, memory foam, pillow tops, water beds, air beds, and motion isolation mattresses. Users of tactile appliances should be cautioned to test how well they might sense the effect of the appliance.

The Code requires both visual notification appliances and tactile appliances. Visual notification appliances can awaken sleeping persons, provide verification that there is a fire alarm condition, and serve to alert persons when they are not in contact with a tactile appliance. See the NFPA Fire Protection Research Foundation report, *Review of Alarm Technologies for Deaf and Hard of Hearing Populations*, August 2021, for further details.

Statement of Problem and Substantiation for Public Comment

The NFPA Disability Access Review Advisory Committee (DARAC) supplies this Public Comment to address the following items:

- None of the studies reference included comprehensive research across a large sample size.
- Giving small scope of studies, "shown to be" draws a broad conclusion which may be misleading.
- "may be" indicates that these technologies might be effective for a given individuals unique response to the specific implementation of the technology.

Related Item

- FR 5210

Submitter Information Verification

Submitter Full Name: Jessica Hubert
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Affiliation: Representing the DARAC Advisory Group
Street Address:
City:
State:
Zip:
Submittal Date: Thu Apr 27 14:42:04 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Rejected

Resolution: The scientific studies performed to date do statistically show the effectiveness of tactile appliances in waking those with normal hearing to profound hearing loss.

Resolution: The scientific studies performed to date do statistically show the effectiveness of tactile appliances in waking those with normal hearing to profound hearing loss.



Public Comment No. 14-NFPA 72-2023 [Section No. A.29.7]

A.29.7

Hazardous concentrations of carbon monoxide can accumulate in a residence, generally from improperly operating ~~heating appliances~~ fuel-burning equipment, insufficient make-up air into the residence or space, or blocked chimneys or vents. However, there are many other potential sources of carbon monoxide within a home, including, but not limited to, the following:

- (1) Malfunctioning fossil fuel-burning ~~appliances~~ equipment
- (2) Wood stoves
- (3) Fireplaces
- (4) Idling automobiles in attached garages
- (5) Portable equipment such as gasoline-powered lawn and garden equipment and electric power generators
- (6) Barbecues

Carbon monoxide is odorless, tasteless, and colorless; therefore, its presence is undetectable by smell, taste, or sight. Carbon monoxide can be mixed and migrate throughout a residence through the HVAC system. Carbon monoxide alarms meeting the requirements of UL 2034, *Single and Multiple Station Carbon Monoxide Alarms*, carbon monoxide detectors meeting the requirements of UL 2075, *Safety Gas and Vapor Detectors and Sensors*, and installed in accordance with this standard should provide a significant level of protection against fatal carbon monoxide exposure.

The installation of additional carbon monoxide alarms could result in a higher degree of protection. Adding alarms to rooms where fuel-burning ~~appliances are located~~ equipment is located could provide earlier warning of carbon monoxide hazards caused by those sources. Additional alarms located in rooms normally closed off from the required alarms could increase the escape time, since the carbon monoxide concentration needed to force the carbon monoxide out of the closed rooms to the alarms would not be necessary. As a consequence, the installation of additional carbon monoxide alarms should be considered.

Carbon monoxide alarms or detectors are not substitutes for proper maintenance, inspection, and testing of fuel-burning equipment. Fuel-burning equipment ~~and appliances~~ should be used, maintained, tested, and inspected according to the manufacturers' instructions.

Carbon monoxide detectors/alarms are cross sensitive to hydrogen, an explosive gas that can be given off by recharging lead acid batteries. Where households include recharging stations (e.g., for golf carts), the alarm should be located away from the recharging location.

Statement of Problem and Substantiation for Public Comment

The term "fuel-burning appliances" is not defined. "Fuel-burning equipment" was defined under FR-5006. This change revises the text to match the defined term and be consistent throughout this section.

Related Public Comments for This Document

<u>Related Comment</u>	<u>Relationship</u>
Public Comment No. 12-NFPA 72-2023 [Section No. 29.7.1.1] <u>Related Item</u>	similar change to existing text
• FR-5006	

Submitter Information Verification

Organization: Code Consultants, Inc.
Submitter Full Name: Cory Osle
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Organization: Code Consultants, Inc.
Submitter Full Name: Cory Ogilvie
Amiation: SIG-HOU Technical Committee
Street Address:
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Zip:
Submittal Date: Tue Mar 21 12:36:47 EDT 2023
Committee: SIG-HOU

Committee Statement

Committee Action: Accepted
Resolution: [SR-5120-NFPA 72-2023](#)
Statement: The term "fuel-burning appliances" is not defined. "Fuel-burning equipment" was defined under FR-5006 in Chapter 3 of the First Draft Report. This change revises the text to match the defined term and be consistent throughout this section.



Public Comment No. 7-NFPA 72-2023 [Section No. A.29.11.3.4(4)]

A.29.11.3.4(4) 

A.29.11.3.4(4) 

As per annex material located in A.29.8.1, it is not normally recommended that smoke alarms or smoke detectors be placed in kitchen spaces. This section of the code provides guidelines for safe installation if a need exists to install a smoke alarm or smoke detector in a residential

As per annex material located in A.29.8.1, it is not normally recommended that smoke alarms or smoke detectors be placed in kitchen spaces. This section of the code provides guidelines for safe installation if a need exists to install a smoke alarm or smoke detector in a residential kitchen space or cooking area.

Within this Code section, a fixed cooking appliance is any appliance that is intended to be permanently connected electrically to the wiring system or the fuel source. A stationary cooking appliance is any appliance that is intended to be fastened in place or located in a dedicated space, and is connected to the supply circuit or fuel source.

Smoke alarms and smoke detectors that ~~are currently~~ were previously available to consumers (i.e. not listed for resistance to common nuisance sources from cooking) are susceptible to particles released into the air during normal cooking procedures. If ~~these~~ smoke alarms and smoke detectors ~~are placed~~ were placed too close to the area where the cooking source originates, a high level of nuisance alarms ~~can occur~~ often occurred. Frequent nuisance alarms can result in an occupant disabling the smoke alarm or smoke detector.

Nuisance alarm studies show that legacy commercially available residential smoke alarms and smoke detectors ~~are susceptible~~ were susceptible to nuisance alarms when installed too close to cooking appliances. As the horizontal distance between the smoke alarm or smoke detectors and the cooking appliance increases, the frequency of nuisance alarms decreases. ~~Smoke~~ Legacy smoke alarms or smoke detectors that use ionization smoke detection have been shown to be generally more susceptible to cooking nuisance alarms than those that use photoelectric smoke detection when the alarms or detectors are installed within 10 ft (3.0 m) along a horizontal smoke travel path from a cooking appliance. Smoke alarms or smoke detectors that use photoelectric smoke detection also produce nuisance alarms when installed ~~less than 10 ft (3.0 m) from~~ near a cooking appliance, though to a lesser degree.

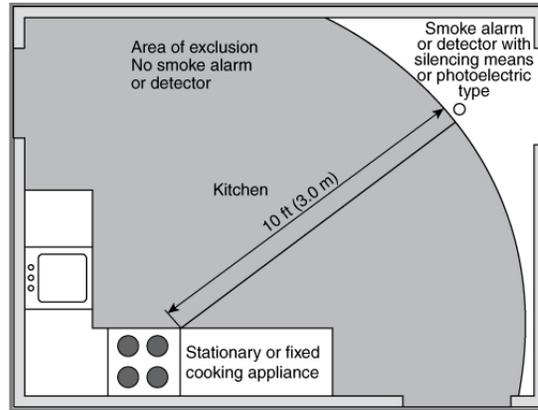
The occurrence of the higher frequency of nuisance alarms observed in legacy smoke alarms or smoke detectors that use ionization detection ~~have been~~ has been documented in the fire research data. Due to the differences in technology between ionization detection and photoelectric detection, the sensitivity typically used for legacy ionization detection is much higher than that used for photoelectric detection. This sensitivity difference ~~is~~ was a result of each type of the detection being required to satisfy UL 217 performance tests. Removing detection technology from consideration, the frequency of nuisance alarms is solely due to the sensitivity of the detection method used. Thus, both ionization and photoelectric legacy detector technologies will produce nuisance alarms due to cooking, but ~~currently available~~ legacy smoke alarms and smoke detectors that use ionization detection typically produce more cooking-related nuisance alarms. ~~The higher sensitivities of currently available smoke alarms and smoke detectors that use ionization detection do provide a benefit at the expense of a potentially higher rate of cooking-related nuisance alarms. Research has demonstrated that ionization detection will typically respond faster than photoelectric detection to flaming fires, providing earlier warning to occupants that might allow for quicker intervention or faster egress. In general, the installation of smoke alarms or smoke detectors that use ionization detection will result in increased fire safety at the risk of a higher frequency of nuisance alarms. The installation of smoke alarms or smoke detectors that use photoelectric detection will result in reduced fire safety for flaming fires and a reduced risk of nuisance alarms. Based on the trade-off between faster response to fires and the frequency of nuisance alarms, detectors that utilize both technologies (i.e., ionization, photoelectric, and a combination) are allowed to be installed between 10 ft (3.0 m) and 20 ft (6.1 m) along a horizontal flow path from a standard or fixed cooking appliance if the specific detector is equipped with an alarm silencing means or is of the photoelectric type~~

In response to the above noted nuisance alarm studies, the 8th edition of UL 217, *Smoke Alarms*, and the 7th edition of UL 268, *Smoke Detectors for Fire Alarm Systems*, have added a new performance test to help reduce nuisance alarms from normal cooking. Smoke alarms complying with these UL standards, and subsequent editions, will be listed "for resistance to common nuisance sources from cooking" and are suitable for installation at distances from cooking appliances outlined in this Code.

Nuisance alarm studies provide data on cooking nuisances that emanate from both fixed ~~cooking appliances and~~ (stationary) cooking appliances (e.g., stove, oven) as well as portable cooking appliances (e.g., toaster). Based on these studies, which demonstrate the potential of all cooking appliances to generate nuisance sources, a zone of exclusion has been specified surrounding each stationary or fixed cooking appliance. The purpose of this zone is to limit the installation of smoke alarms and detectors in areas where stationary, fixed, or portable cooking appliances will ~~be located and the fire resistance of the appliance could be applied.~~ This zone of exclusion is determined by the size of the zone of exclusion is specified for the product and stationary or fixed cooking appliance. The zone of exclusion is not intended to pass through walls or

be located within the residential kitchen space containing appliances. This zone of exclusion is determined by the size of the zone of exclusion specified for the product listed for a stationary or fixed cooking appliance. The zone of exclusion is not intended to pass through walls or doorways. Figure A.29.11.3.4(4)(a) provides an example of the zone of exclusion in a generalized residential kitchen.

Figure A.29.11.3.4(4)(a) Example of Zone of Exclusion (gray area) Within Typical Residential Kitchen. CHANGE FIGURE TO "SMOKE ALARM OR DETECTOR LISTED FOR RESISTANCE TO COMMON NUISANCE SOURCES FROM COOKING"



If other areas of this code require that a smoke alarm or smoke detector be placed within a horizontal flow path distance between 10 ft (3.0 m) and 20 ft (6.1 m) from a stationary or fixed cooking appliance, the following method should be used to determine the distance, and only photoelectric detection or smoke alarms/detectors with alarm silencing means detection equipment listed for resistance to common nuisance sources from cooking can be installed in this area.

To install a smoke alarm or detector between 10 ft (3.0 m) and 20 ft (6.1 m) from the cooking appliance, an installer must first determine the 10 ft (3.0 m) area of exclusion. Once the area of exclusion is determined, an installer must then determine the horizontal flow distance. This is the horizontal distance along the ceiling from the closest edge of the cooking appliance to the smoke alarm or detector. The horizontal distance can consist of line segments due to impediments, such as interior partitions. Once an impediment is met, the measurement of the distance will then continue along the new horizontal path segment until the distance requirement is met or another impediment is encountered. Figure A.29.11.3.4(4)(b) provides an example for placement outside a kitchen in a nearby hallway. Figure A.29.11.3.4(4)(c) provides another example of appropriate placement outside of a kitchen in an adjacent room.

Figure A.29.11.3.4(4)(b) Example of Smoke Alarm or Smoke Detector Placement Between 10 ft (3.0 m) and 20 ft (6.1 m) Away in Hallway from Center of Stationary or Fixed Cooking Appliance. CHANGE FIGURE TO "SMOKE ALARM OR DETECTOR LISTED FOR RESISTANCE TO COMMON NUISANCE SOURCES FROM COOKING"

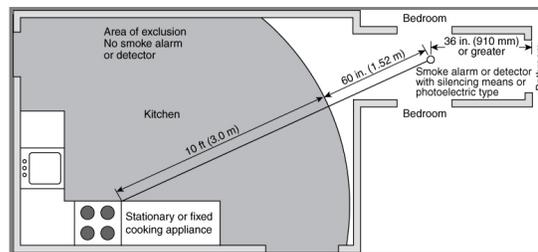
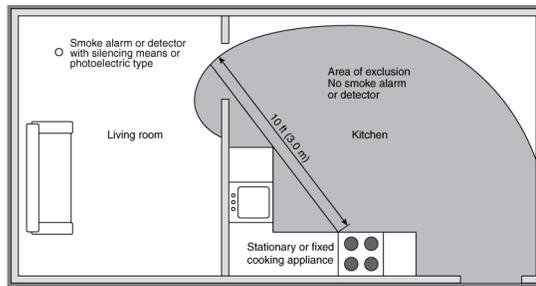


Figure A.29.11.3.4(4)(c) Example of Smoke Alarm or Smoke Detector Placement Between 10 ft (3.0 m) and 20 ft (6.1 m) Away in Hallway from Center of Stationary or Fixed Cooking Appliance. CHANGE FIGURE TO "SMOKE ALARM OR DETECTOR LISTED FOR RESISTANCE TO COMMON NUISANCE SOURCES FROM COOKING"

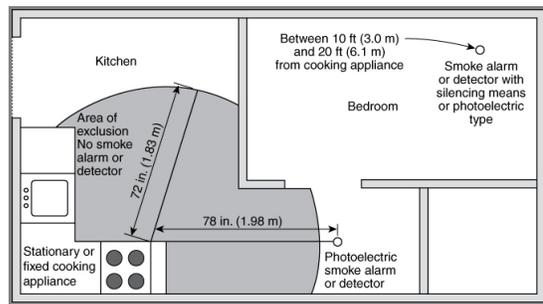




At a horizontal flow path distance of greater than 20 ft (6.1 m), any type of smoke alarm or smoke detector can be installed.

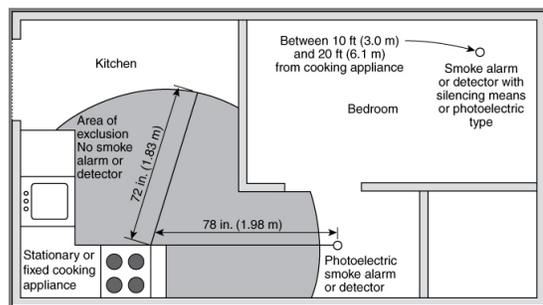
In rare cases, a residential dwelling can be of such size and configuration that an area of exclusion of 10 ft (3.0 m) from a stationary or fixed cooking appliance excludes the placement of a smoke alarm or smoke detector required by other areas of this Code. In these cases, a smoke alarm or smoke detector using photoelectric detection - listed for resistance to common nuisance sources from cooking, can be installed at least 72 in 6 ft . (1.83 m 8 m) from the fixed or stationary cooking appliance. Figure A.29.11.3.4(4)(d) provides an example of this situation in practice where a smoke alarm or smoke detector is required outside of the sleeping area, but the space is in close proximity to the kitchen space.

Figure A.29.11.3.4(4)(d) Example of Exception Placement of Photoelectric Smoke Alarm or Smoke Detector at 72 in 6 ft . (1.83 m 8 m) from Stationary or Fixed Cooking Appliance.



~~In response to the above noted nuisance alarm studies, the 8th edition of UL 217, *Smoke Alarms*, and the 7th edition of UL 268, *Smoke Detectors for Fire Alarm Systems*, have added a new performance and listing requirement to help reduce nuisance alarms from normal cooking. This end-product performance and listing requirement aligns with 29.11.3.4 (6) of this Code. Smoke alarms complying with these UL standards will be listed "for resistance to common nuisance sources from cooking" and are suitable for installation at distances from cooking appliances outlined in this Code.~~

CHANGE FIGURE TO "SMOKE ALARM OR DETECTOR LISTED FOR RESISTANCE TO COMMON NUISANCE SOURCES FROM COOKING" IN BOTH LOCATIONS AND CHANGE "72 IN." TO "6 FT." AND "1.83 M" TO "1.8 M". ALSO CHANGE "78 IN." TO "6.5 FT" AND "1.98 M" TO "2.0 M"



Statement of Problem and Substantiation for Public Comment
 This section provides significant provisions based on changes that have been made to the body in 29.11.3.4 which basically allows only detection equipment listed for nuisance resistance to cooking to be installed between 10 and 20 feet from a cooking appliance, with a small except for these same types of

Statement of Problem and Substantiation for Public Comment

This article requires significant revisions based on changes that have been made to the body in 29.11.3.4 which basically allows only detection equipment listed for nuisance resistance to cooking to be installed between 10 and 20 feet from a cooking appliance, with a small exception for these same types of nuisance-resistant detection equipment to be installed between 6 and 10 feet from a cooking appliance if 10 to 20 feet is not feasible. The rewrites change some of the figures, re-orders the section to provide a shorter introduction to the issue with nuisance alarms from legacy detection equipment followed by the discussion of nuisance-resistant equipment, and then discusses the areas of exclusion. The reference to 29.11.3.4(6) is removed. This section relates to bathrooms/showers.

Related Item

- FR 5220

Submitter Information Verification

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Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-5146-NFPA 72-2023

Statement: The first change addresses a sentence that is not written correctly. As written, it is prohibiting the use of detection equipment listed for nuisance sources between 6 and 10 feet from a cooking appliance. The intent is to allow such devices. The second change addresses what appears to be a typo. Both of these issues are also present at least in the 2022 edition.

The annex material required significant revisions based on changes that have been made to the body in 29.11.3.4 which basically allows only detection equipment listed for nuisance resistance to cooking to be installed between 10 and 20 feet from a cooking appliance, with a small exception for these same types of nuisance-resistant detection equipment to be installed between 6 and 10 feet from a cooking appliance if 10 to 20 feet is not feasible. The rewrites change some of the figures, re-orders the section to provide a shorter introduction to the issue with nuisance alarms from legacy detection equipment followed by the discussion of nuisance-resistant equipment, and then discusses the areas of exclusion. The reference to 29.11.3.4(6) is removed. This section relates to bathrooms/showers. Annex material that is more applicable to (5) has been relocated from (4).



Public Comment No. 167-NFPA 72-2023 [Section No. B.5.1.6]

B.5.1.6 Detector Response Model.

The response of radiant energy-sensing detectors is modeled with a modified inverse square relationship as shown in the following equation [5]:

$$S = \frac{kPe^{-\zeta d}}{d^2} \quad \text{[B.5.1.6]}$$

where:

S = radiant power reaching the detector (W or Btu/sec) sufficient to produce alarm response

k = proportionality constant for the detector

P = radiant power emitted by the fire (W or Btu/sec)

ζ = extinction coefficient of air at detector operating wavelengths

d = distance between the fire and the detector (m or ft)

This relationship models the fire as a point source radiator, of uniform radiant output per steradian, some distance (d) from the detector. This relationship also models the effect of absorbance by the air between the fire and the detector as being a uniform extinction function. The designer must verify that these modeling assumptions are valid for the application in question.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
CN_No._15.pdf	NFPA 72 Correlating Note No. 15	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 15 appeared in the First Draft Report.

Review formula A.17.8.3.1.1 for accuracy. The formula does not match formula B.5.1.6. The exponent in the annex A formula should match the exponent in annex B for the same formula on radiant power reaching the detector.

Related Item

- CN - 15

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Committee: SIG-IDS

Committee Statement

Committee Action: Rejected but see related SD

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5033-NFPA 72-2023](#)

Statement: The definition of e is missing from Annex B.



Public Comment No. 125-NFPA 72-2023 [Section No. J.1.2.17.8]

J.1.2.17.8 References to A.24.4.8.3.2.

Kailes, J.I. and Enders, A., "Moving Beyond "Special Needs": A Function Based Framework for Emergency Management and Planning," *Journal of Disability Policy Studies*, SAGE Publications, March 2007.

Morrow, B.H., "Identifying and Mapping Community Vulnerability," *Disasters*, 23(1), 1–18, 1999.

[National Council on Disability, *Effective Emergency Management: Making Improvements for Communities and People with Disabilities*, 2009.](#)

Proulx, G., *Occupant Behaviour and Evacuation*, National Research Council of Canada, Ottawa, Ontario, 2001.

Shields, T.J., Boyce, K.E., and Silcock, G.W.H., *Client Report: Unannounced Evacuation of Marks & Spencer, Sprucefield Store*, Fire Safety Engineering Research and Technology Centre, University of Ulster, Northern Ireland, 1997.

Statement of Problem and Substantiation for Public Comment

This reference was missing.

Related Item

- FR-5278

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Committee: SIG-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: [SR-5097-NFPA 72-2023](#)

Statement: Certain references in Annex J are updated and new references are added.