



NIH Division of the Fire Marshal

Administrative Interpretation 17-3

Fire Watch Program

Code references: NFPA 1 (2015), NFPA 25 (2014), NFPA 72 (2016) NFPA 101 (2012 and 2015), NFPA 241 (2013)

Background: NFPA 1 gives the AHJ discretion to require an approved fire watch under several scenarios, including hazardous conditions, life safety deficiencies, increased occupant loads, and fire protection system impairments. NFPA 25 allows fire watches as an alternative to building evacuation. NFPA 1 and 101 require fire watches for certain impairments. The 2012 edition of NFPA 101 imposed by the Joint Commission in Health and Ambulatory Care areas is more restrictive than the 2015 edition, which is applicable to the remainder of NIH buildings. NFPA 241 regulates hot work fire watches and temporary storage. Thresholds of impairment time to trigger a fire watch varies across several NFPA standards. This interpretation will clarify which standards apply to common scenarios, reduce the number of different impairment thresholds, establish one alternative to NFPA 241, and coordinate with other Administrative Interpretations. This interpretation does not cover fire watch procedures or qualifications.

Interpretation:

1. In occupied buildings, provide a fire watch in affected areas when:

- a. More than one fire alarm system circuit is impaired over 10 hours in a 24 hour period (NFPA 101 (2015), 9.6.1.5 and NFPA 72, 10.20.4).
- b. Water-based fire protection systems are impaired over 10 hours in a 24 hour period (NFPA 25, 15.5.2).
- c. DFM determines the need as part of a hot work permit (NFPA 241, 5.1.1).
- d. Fire alarm systems exhibit chronic nuisance alarms (NFPA 1, 13.7.1.5.3).

2. In buildings or areas under construction or rehabilitation, provide a fire watch when:

- a. Temporary storage of combustible construction-related materials, packing, and/or equipment is located longer than 10 work days in areas without in-service suppression systems (alternative to NFPA 241, 8.3).
- b. It is not practical to provide construction separation and the sprinkler system is not compliant as per DFM Administrative Interpretation 17-4, section 3.g.

NOTE: If a portion of a building is occupied during construction or rehabilitation, refer also to section 1 above.

3. In the Building 10 Complex, provide a fire watch in affected areas when:

- a. More than one fire alarm system circuit is impaired in Health Care and/or Ambulatory Care areas over 4 hours in a 24 hour period (NFPA 101 (2012), 9.6.1.6).
- b. Water-based fire protection systems are impaired over 10 hours in a 24 hour period (NFPA 25, 15.5.2).
- c. DFM determines the need as an Interim Life Safety Measure to meet Joint Commission standards.
- d. For any areas under construction or rehabilitation over 3,000 square feet where the sprinkler system is not compliant.

4. Other Potentially Hazardous Conditions or Reduction in Life Safety Features:

DFM may, at its discretion, require a fire watch, standby DFM personnel, and/or standby fire department unit(s) during special performances, displays, exhibits, contests, or activities with high occupant loads or limited egress (NFPA 1, 1.7.17.1).

Supersedes: N/A

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NFPA excerpts provided for convenience

(Highlights by DFM)

NFPA 1 (2015)

1.7.17 Standby and Fire Watch Personnel.

1.7.17.1 The AHJ shall have the authority to require standby fire personnel or an approved fire watch when potentially hazardous

conditions or a reduction in a life safety feature exist due to the type of performance, display, exhibit, occupancy, contest, or activity; an impairment to a fire protection feature; or the number of persons present.

1.7.17.2 The owner, agent, or lessee shall employ one or more qualified persons, as required and approved, to be on duty.

1.7.17.2.1 The cost of standby fire personnel shall be at no cost to the AHJ.

1.7.17.3* Such standby fire personnel or fire watch personnel shall be subject to the AHJ's orders at all times and shall be identifiable and remain on duty during the times such places are open to the public, when such activity is being conducted, or as required by the AHJ.

13.3 Automatic Sprinklers

13.3.3.6.5* Preplanned Impairment Programs.

13.3.3.6.5.1 All preplanned impairments shall be authorized by the impairment coordinator. [25:15.5.1]

13.3.3.6.5.2 Before authorization is given, the impairment coordinator shall be responsible for verifying that the following procedures have been implemented:

- (1) The extent and expected duration of the impairment have been determined.
- (2) The areas or buildings involved have been inspected and the increased risks determined.
- (3) Recommendations to mitigate any increased risks have been submitted to management or the property owner or designated representative.
- (4) Where a fire protection system is out of service for more than 10 hours in a 24-hour period, the impairment coordinator shall arrange for one of the following:

(a) Evacuation of the building or portion of the building affected by the system out of service

(b)*An approved fire watch

(c)*Establishment of a temporary water supply

(d)*Establishment and implementation of an approved program to eliminate potential ignition sources and limit the amount of fuel available to the fire

(5) The fire department has been notified.

(6) The insurance carrier, the alarm company, property owner or designated representative, and other AHJs have been notified.

(7) The supervisors in the areas to be affected have been notified.

(8) A tag impairment system has been implemented. (See 13.3.3.6.3.)

(9) All necessary tools and materials have been assembled on the impairment site. [25:15.5.2]

13.3.3.6.6* Emergency Impairments.

13.3.3.6.6.1 Emergency impairments shall include, but are not limited to, interruption of water supply, frozen or ruptured piping, and equipment failure, and includes impairments found during inspection, testing, or maintenance activities. [25:15.6.1]

13.3.3.6.6.2* The coordinator shall implement the steps outlined in 13.3.3.6.5. [25:15.6.2]

13.3.3.6.7* Restoring Systems to Service. When all impaired equipment is restored to normal working order, the impairment coordinator shall verify that the following procedures have been implemented:

(1) Any necessary inspections and tests have been conducted to verify that affected systems are operational. The appropriate chapter of NFPA 25 shall be consulted for guidance on the type of inspection and test required.

(2) Supervisors have been advised that protection is restored.

(3) The fire department has been advised that protection is restored.

(4) The property owner or designated representative, insurance carrier, alarm company, and other AHJs have been advised that protection is restored.

(5) The impairment tag has been removed.

[25:15.7]

13.7.1.5* Impaired and Nuisance Alarm Prone Systems.

13.7.1.5.1 Impaired fire alarm systems shall include, but shall not be limited to, required systems that are not fully operational, are no longer monitored as required by the AHJ, or are under renovation or repair.

13.7.1.5.2 The system owner or designated representative shall immediately notify the AHJ in an approved manner when a fire alarm system is impaired.

13.7.1.5.3 The AHJ shall be authorized to require standby fire personnel or an approved fire watch in accordance with 1.7.16 at

premises in which required fire alarm systems are impaired or classified as chronic nuisance alarm prone systems.

13.7.1.5.4 Fire alarm systems that have produced five or more nuisance alarms in a 365-day period shall be classified as chronic nuisance alarm prone systems.

NFPA 13 (2016)

A.27.1 Impairments. Before shutting off a section of the fire service system to make sprinkler system connections, notify the authority having jurisdiction, plan the work carefully, and assemble all materials to enable completion in the shortest possible time. Work started on connections should be completed

without interruption, and protection should be restored as promptly as possible. During the impairment, provide emergency hose lines and extinguishers and maintain **extra watch service** in the areas affected.

When changes involve shutting off water from any considerable

number of sprinklers for **more than a few hours**, temporary water supply connections should be made to sprinkler systems so that reasonable protection can be maintained. In adding to old systems or revamping them, protection should be restored each night so far as possible. The members of the private fire brigade as well as public fire departments should be notified as to conditions.

NFPA 25 (2015)

15.5* Preplanned Impairment Programs.

A.15.5 The need for temporary fire protection, termination of all hazardous operations, and frequency of inspections in the areas involved should be determined. All work possible should be done in advance to minimize the length of the impairment.

Where possible, temporary feedlines should be used to maintain portions of systems while work is completed.

Water-based fire protection systems should not be removed from service when the building is not in use. Where a system that has been out of service for a prolonged period, such as in the case of idle or vacant properties, is returned to service, qualified personnel should be retained to inspect and test the systems.

15.5.1 All preplanned impairments shall be authorized by the impairment coordinator.

15.5.2 Before authorization is given, the impairment coordinator shall be responsible for verifying that the following procedures have been implemented:

(1) The extent and expected duration of the impairment have been determined.

(2) The areas or buildings involved have been inspected and the increased risks determined.

(3) Recommendations to mitigate any increased risks have been submitted to management or the property owner or designated representative.

(4) Where a fire protection system is out of service for more than **10 hours in a 24-hour period**, the impairment coordinator shall arrange for one of the following:

(a) Evacuation of the building or portion of the building affected by the system out of service

(b)*An approved fire watch

A.15.5.2(4)(b) A fire watch should consist of trained personnel who continuously patrol the affected area. Ready access to fire extinguishers and the ability to promptly notify the fire department are important items to consider. During the patrol of the area, the person should not only be looking for fire, but making sure that the other fire protection features of the building such as egress routes and alarm systems are available and functioning properly.

(c)*Establishment of a temporary water supply

(d)*Establishment and implementation of an approved program to eliminate potential ignition sources and limit the amount of fuel available to the fire

A.15.5.2(4)(d) Depending on the use and occupancy of the building, it could be enough in some circumstances to stop certain processes in the building or to cut off the flow of fuel to some machines. It is also helpful to implement "No Smoking" and "No Hot Work" (cutting, grinding, or welding) policies while the system is out of service because these activities are responsible for many fire ignitions.

(5) The fire department has been notified.

(6) The insurance carrier, the alarm company, property owner or designated representative, and other authorities having jurisdiction have been notified.

(7) The supervisors in the areas to be affected have been notified.

(8) A tag impairment system has been implemented. (*See Section 15.3.*)

(9) All necessary tools and materials have been assembled on the impairment site.

NFPA 72 (2016)

10.20* Impairments.

10.20.1 The system owner or the owner's designated representative shall be notified when a system or part thereof is impaired. Impairments to systems shall include out-of-service events.

10.20.2 A record of the impairments shall be maintained by the system owner or the owner's designated representative for a period of 1 year from the date the impairment is corrected.

10.20.3 The supervising station shall report to the authority having jurisdiction any system for which required monitoring has been terminated.

10.20.4* The service provider shall report to the authority having jurisdiction any system that is out of service for **more than 8 hours**.

A.10.20.4 It is important for the authority having jurisdiction, typically the local fire official, to be informed when systems have been out of service for **more than 8 hours** so that appropriate measures can be taken. The term *out of service* is meant to refer to the **entire system or a substantial portion thereof**.

10.20.5* Where required by the authority having jurisdiction, mitigating measures shall be implemented for the period that the system is impaired.

A.10.20.5 The need for mitigating measures is typically determined on a case-by-case basis. This considers the building, occupancy type, nature and duration of impairment, building occupancy level during impairment period, active work being conducted on the fire alarm system during the impairment, condition of other fire protection systems and features (i.e., sprinklers, structural compartmentation, etc.), and hazards and assets at risk. Appropriate mitigating measures range from simple occupant notification to full-time fire watch. Determining factors vary from testing-related impairments and maintenance activities during normal business through extensive impairments to high-value, high-hazard situations.

10.20.6 The system owner or the owner's designated representative and the authority having jurisdiction shall be notified when an impairment period ends.

NFPA 101 (2012)

9.6.1.6* Where a required **fire alarm system** is out of service for more than **4 hours in a 24-hour period**, the authority having jurisdiction shall be notified, and the building shall be evacuated, or an approved **fire watch** shall be provided for all parties left unprotected by the shutdown until the fire alarm system has been returned to service.

NFPA 101 (2015)

9.6.1.5* Fire alarm system impairment procedures shall comply with **NFPA 72**, *National Fire Alarm and Signaling Code*.

A.9.6.1.5 A **fire watch** should at least involve some special action beyond normal staffing, such as assigning an additional security guard(s) to walk the areas affected. Such individuals should be specially trained in fire prevention and in occupant and fire department notification techniques, and they should understand the particular fire safety situation for public education purposes. (*Also see NFPA 601, Standard for Security Services in Fire Loss Prevention.*)

The term *out of service* in 9.6.1.5 is intended to imply that a

significant portion of the fire alarm system is not in operation, such as an entire initiating device, signaling line, or notification appliance circuit. It is not the intent of the *Code* to require notification of the authority having jurisdiction, or evacuation of the portion of the building affected, for a single nonoperating device or appliance.

NFPA 241 (2013)

Chapter 5 Processes and Hazards

5.1 Hot Work.

5.1.1* Responsibility for hot work operations and fire prevention

precautions, including permits and fire watches, shall be in accordance with NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, except as modified in Chapter 9.

A.5.1.1 For a sample permit and procedure, see NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*.

Additional fire watches should be provided during welding or cutting operations where sparks or molten metal could drop several floors.

5.1.2 Gas-operated cutting and welding equipment using multiple oxygen and fuel gas cylinders shall be in accordance with NFPA 51, *Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes*.

5.1.3 Fire Watch.

5.1.3.1 Fire watches shall be assigned no other duties.

5.1.3.2 A fire watch shall be posted for the duration of the work and for 2 hours thereafter for torch-applied roofing operations (see 9.3.9).

8.3 Construction Material and Equipment Storage.

8.3.1 Temporary storage of equipment to be installed, combustible construction materials, or combustible packing materials shall not be permitted in unprotected structures under construction or alteration unless authorized by the authority having jurisdiction.

8.3.2* Storage shall not be permitted in protected structures until protection is in service.

8.3.3 Yard storage of equipment to be installed or combustible construction materials shall not be stored closer than 9m (30 ft) from the structure under construction or alteration. (See 4.2.1.)

9.3.9* Fire Watch. A fire watch shall be conducted for at least 2 hours after torches have been extinguished.