



Position Statement

Maintaining Building and Fire Safety During Active Assailant Events and Other Terrorist Events

Maintaining school safety in light of recent terrorist events is challenging for everyone, as overwhelming social media discussions often invoke emotional debates with good intentions. The risk is failing to address the multiple threats while trying to solve a single threat to our children's safety.

National fire and building codes address a broad spectrum of threats including fires, weather emergencies, and hostile situations. The goal for fire chiefs is to remain engaged in this planning process by using a coordinated approach so that unintended consequences can be avoided. We can all "what if" a situation, but the key is to provide as many options as possible, plan for all situations, and train for any situation.

It is the desire of the IAFC that fire chiefs should integrate themselves and their command staff with law enforcement officials, code officials and the leadership from their local schools to use that combined knowledge to assure appropriate egress and fire protection, while working to address the security needs of our schools. It is paramount that this team review procedures, training, and desired changes based on all threats.

In the United States, over the last 10 years, we average approximately 5,000 fires in our educational occupancies per calendar year. These may include situations where the fire is controlled by a working fire sprinkler system. In addition, the data from 2015 shows that the fire service responded to over 150,000 fire alarms in educational buildings.

It is recognized that perpetrators of violent crimes, such as school shootings, can use building fire protection systems and other fire safety systems as a tool to enhance the devastation they are seeking. Setting off the fire alarm could give an assailant more targets at a given time. Although part of this challenge is already addressed by the prevailing building, fire and life safety codes, it is clearly recognized that there is more that the codes must do to further address this issue.

The current editions of the National Fire Protection Association (NFPA) 1 *The Fire Code*, NFPA 101, *Life Safety Code* and the International Fire Code (IFC), are the

2018 editions. In many states and other jurisdictions, it takes two, and in most cases three or even more years before that edition will be officially adopted. We strongly urge fire chiefs and staff to review the current code requirements for new and existing school buildings. This is the most up to date resource for you on dealing with drills, training, and fire alarm systems. It is our belief even if not adopted directly by a community, this is your best resource at this time for dealing with school safety and fire protection systems.

Fire Alarm Systems

Many fire chiefs are being asked how to officially and safely remove manual pull-stations (technically referred to as manual fire alarm boxes in the code) in a school building. Both model codes (NFPA 1 and IFC) as well as NFPA 101 have parameters when the building is equipped with automatic fire sprinklers that some pull stations can be removed. Remember we want to keep a means for activation of the alarm system so our students are properly alerted with the threat of a fire.

- New schools built today that are provided with automatic fire sprinklers, may only require manual fire alarm boxes in normally occupied space.
 - This is addressed in the International Building Code (IBC) section 907.2.3 or NFPA 101 section 14.3.4.2.3.2 (new construction) and NFPA 101 section 15.3.4.2.3.2 (existing construction).
 - The same allowance to remove manual fire alarm boxes is also permitted by NFPA 101 when smoke detectors are present in the corridors and heat detectors are provided in other areas. This is addressed in NFPA 101 section 14.3.4.2.3.1 (new construction) and NFPA 101 section 15.3.4.2.3.1 (existing construction).
- The challenge is our existing schools that may not have fire sprinklers and have manual fire alarm boxes at every exit/entrance, etc. Suggestion: let the Authority Having Jurisdiction (AHJ) - in many cases this will be the fire marshal or Building Official - review the school facility. If there are smoke detectors in the corridors, heat detection systems in hazardous areas as well as other common areas in the school (shops, kitchen, administration offices), ; the existing manual alarm boxes at the exit/entrance doors may be removed provided the general evacuation alarm can be activated from a centrally located point.
- While compliance with the two features previously discussed will allow you to maintain a code compliant building, other ideas have been contemplated but have yet to be sanctioned as an acceptable solution. One of these considers the use of the presignal feature per NFPA 72 (23.8.1.1). Once

approved by the AHJ, the initial fire alarm feature will activate in school offices. This will allow human action, such as activation the pull station in the office area. If no action after one minute, the alarm will automatically activate on its own.

Drills and Training

All fire codes refer to requirements as it relates to frequency of drills and training. It is critical that the training include specific rules for when a building is in lock down and the fire alarm is activated.

An action item for every school to address is once a school is in a lock-down situation, what is their response when a fire alarm is activated? This is a training issue that is not easily managed, except through hyper vigilance of administration and teachers.

- Ensure plans address the response to a fire alarm when a lock-down has been initiated.
- Ensure training of teachers and staff has occurred and a means for mass-communication is established within the school.
- Develop and train on response plans to alert first responders that the building is in lock down and that responding firefighters to a fire alarm are accurately informed as the specific hazard to which they are responding.
- Develop training to include when a classroom should be evacuated due to active fire in a hallway or smoke entering a classroom with or without the presence of an assailant. An alternative means to evacuate a classroom that is under assault or fire and smoke should be identified.
- There is talk about having schools go into "lock down" and/or defend-in-place when a fire alarm is activated. Staff should be trained to evaluate current conditions and determine proper egress actions while remaining vigilant to movement of students. Sheltering in place is a dire concern when the threat of fire is a possibility, especially depending on building characteristics. We cannot forget the multiple fires that are occurring in our schools.

Special Locking Arrangements

We know that many schools are being approached by vendors to install non-code compliant locking devices. Properly installed listed hardware should be the only option for all schools. Removing door stops, prohibiting use of barricade devices,

ensuring that locks work, and that closers are operational will not only aid in security but ensure fire safety and egress is still met.

In 2015 the National Fire Protection Association (NFPA) released a [School Safety, Codes, and Security Workshop Report](https://www.nfpa.org/News-and-Research/Fire-statistics-and-reports/Research-reports/Building-and-life-safety/NFPA-Building-Safety-and-Security-Workshop/Codes-and-security-workshop). It identified these issues as work items for code organizations, including NFPA. The current standards address workshop report recommendations dealing with door locking and mass notification systems. Cross-training and cooperation between law enforcement, EMS and fire department personnel is also a major theme of the report. Additionally, the NFPA 3000 Standard for Preparedness and Response to Active Assailant and/or Hostile Events, was created to integrate these issues. NFPA's issued report is a very good resource and contains many excellent recommendations:

<https://www.nfpa.org/News-and-Research/Fire-statistics-and-reports/Research-reports/Building-and-life-safety/NFPA-Building-Safety-and-Security-Workshop/Codes-and-security-workshop>

Today is a perfect time for fire chiefs to start this conversation with law enforcement and local schools, if it hasn't already been started. Utilize the expertise around you in the fire department, building department, state fire marshal's office, school officials and local law enforcement. We know that there needs to be a delicate balance between fire safety and school safety, and current codes already provide that intent for you. Working together is our priority, and we want everyone to have these current and new resources available.

Finally, we cannot forget that school fires in our nation's history have changed the very way we live.

Submitted by the IAFC Fire & Life Safety Section

Adopted by IAFC Board of Directors: 13 September 2018

Appendix Items 2018 Code Reference:

2018 IBC With Fire Sprinklers No Manual Fire Alarm Boxes with EVACs (Voice) and One in Occupied Location

[F] 907.2.3 Group E. A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies.

3. Manual fire alarm boxes are not required in Group E occupancies where all of the following apply:

3.1. Interior *corridors* are protected by smoke detectors.

3.2. Auditoriums, cafeterias, gymnasiums and similar areas are protected by *heat detectors* or other *approved* detection devices.

3.3. Shops and laboratories involving dusts or vapors are protected by *heat detectors* or other *approved* detection devices.

4. Manual fire alarm boxes shall not be required in Group E occupancies where all of the following apply:

4.1. The building is equipped throughout with an ***approved automatic sprinkler system*** installed in accordance with Section 903.3.1.1.

4.2. The emergency voice/alarm communication system will activate on sprinkler waterflow.

4.3. Manual activation is provided from a normally occupied location.

NFPA 101-2018 offers two potential solutions based upon presence of detection systems or sprinklers

NEW CONSTRUCTION

14.3.4 Detection, Alarm, and Communications Systems.

14.3.4.1 General.

14.3.4.1.1 Educational occupancies shall be provided with a fire alarm system in accordance with Section 9.6.

14.3.4.1.2 The requirement of 14.3.4.1.1 shall not apply to buildings meeting all of the following criteria:

- (1) Buildings having an area not exceeding 1000 ft² (93 m²)
- (2) Buildings containing a single classroom
- (3) Buildings located not less than 30 ft (9.1 m) from another building

14.3.4.2.3.1* Manual fire alarm boxes shall be permitted to be eliminated where all of the following conditions apply:

- (1) Interior corridors are protected by smoke detectors in accordance with Section 9.6.
- (2) Auditoriums, cafeterias, and gymnasiums are protected by heat-detection devices or other approved detection devices.
- (3) Shops and laboratories involving dusts or vapors are protected by heat-detection devices or other approved detection devices.
- (4) Provision is made at a central point to manually activate the evacuation signal or to evacuate only affected areas.

14.3.4.2.3.2* Manual fire alarm boxes shall be permitted to be eliminated where both of the following conditions apply:

- (1) The building is protected throughout by an approved, **supervised automatic sprinkler system** in accordance with Section 9.7.

- (2) Provision is made at a central point to manually activate the evacuation signal or to evacuate only affected areas.

NFPA 101-2018

EXISTING CONSTRUCTION

15.3.4 Detection, Alarm, and Communications Systems.

15.3.4.1 General.

15.3.4.1.1 Educational occupancies shall be provided with a fire alarm system in accordance with Section 9.6.

15.3.4.1.2 The requirement of 15.3.4.1.1 shall not apply to buildings meeting all of the following criteria:

- (1) Buildings having an area not exceeding 1000 ft² (93 m²)
- (2) Buildings containing a single classroom
- (3) Buildings located not less than 30 ft (9.1 m) from another building

15.3.4.2.3.1 * Manual fire alarm boxes shall be permitted to be eliminated where all of the following conditions apply:

- (1) Interior corridors are protected by smoke detectors using an alarm verification system as described in *NFPA 72*.
- (2) Auditoriums, cafeterias, and gymnasiums are protected by heat-detection devices or other approved detection devices.
- (3) Shops and laboratories involving dusts or vapors are protected by heat-detection devices or other approved detection devices.
- (4) Provision is made at a central point to manually activate the evacuation signal or to evacuate only affected areas.

15.3.4.2.3.2 * Manual fire alarm boxes shall be permitted to be eliminated where both of the following conditions apply:

(1) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

(2) Provision is made at a central point to manually activate the evacuation signal or to evacuate only affected areas.

NFPA 72 Alarm Pre-signal Feature:

23.8.1.1 * Presignal Feature.

23.8.1.1.1 Systems that have a presignal feature complying with 23.8.1.1 shall be permitted if approved by the authority having jurisdiction.

23.8.1.1.2 A presignal feature shall meet the following conditions:

(1) The initial fire alarm signals sound only in department offices, control rooms, fire brigade stations, or other constantly attended central locations.

(2) Where there is a connection to a remote location, the transmission of the fire alarm signal to the supervising station activates upon the initial alarm signal.

(3) Subsequent system operation is by either of the following means:

(a) Human action that activates the general fire alarm

(b) A feature that allows the control equipment to delay the general alarm by more than 1 minute after the start of the alarm processing

Annex

A.23.8.1.1 A system provided with an alarm verification feature as permitted by 23.8.5.4.1 is not considered a presignal system, since the delay in the signal produced is 60 seconds or less and requires no human intervention.

NFPA 72 Alarm Verification (Not Applicable for Manual Pull Stations)

23.8.5.4.1* Systems equipped with alarm verification features shall be permitted under the following conditions:

- (1) The alarm verification feature is not initially enabled, unless conditions or occupant activities that are expected to cause nuisance alarms are anticipated in the area that is protected by the smoke detectors. Enabling of the alarm verification feature shall be protected by password or limited access.
- (2) A smoke detector that is continuously subjected to a smoke concentration above alarm threshold does not delay the system functions of Sections 10.7 through 10.16, or 21.2.1 by more than 1 minute.
- (3) Actuation of an alarm-initiating device other than a smoke detector causes the system functions of Sections 10.7 through 10.16, or 21.2.1 without additional delay.
- (4) The current status of the alarm verification feature is shown on the record of completion *[see Figure 7.8.2(a), item 4.3]*.

ANNEX

A.23.8.5.4.1 The alarm verification feature should not be used as a substitute for proper detector location/applications or regular system maintenance. Alarm verification features are intended to reduce the frequency of false alarms caused by transient conditions. They are not intended to compensate for design errors or lack of maintenance.