

**NFPA 101®-2018 Edition
Life Safety Code®**

TIA Log No.: 1314

Reference: 17.2.2.2.6, A.17.2.2.2.6 and A.17.2.2.2.6.4(new)

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1. *Revise 17.2.2.2.6 to read as follows:*

17.2.2.2.6* Emergency Locking of Classroom Doors ~~Locking to Prevent Unwanted Entry.~~

17.2.2.2.6.1* Classroom doors shall be permitted to be locked to prevent unwanted entry provided that the locking means is approved and all of the following conditions are met: Where emergency locking of classroom doors to resist forced entry is desired, doors shall be permitted to be equipped with approved locking hardware, provided all the following criteria are met:

(1)* For other than remotely locked electrified locking means, ~~The~~ emergency locking means shall be capable of being engaged locking doors against entry, from inside the classroom, when doors are closed, without opening the doors.

(2)* Where doors are equipped with electrified locking functions, remotely locked doors shall be openable from the classroom.

(2)(3) The unlocking and unlatching Egress from the classroom side of the door can shall be accomplished without the use of a key, tool, or special knowledge or effort.

(4)* Not more than one releasing operation shall be required to open doors from the classroom side of the door assemblies unless two separate nonsimultaneous releasing operations are approved by the AHJ.

(3)(5)* The releasing mechanism for unlocking and unlatching shall be Emergency locking hardware shall be permitted to be installed at any location on the door assembly, provided the releasing mechanism for opening the door is located at a height not less than 34 in. (865 mm) and not exceeding more than 48 in. (1220 mm) above the finished floor.

(4) Locks, if remotely engaged, shall be unlockable from the classroom side of the door without the use of a key, tool, or special knowledge or effort.

(5)(6)* The door shall be capable of being unlocked and opened from outside the entry side room with the necessary by key or other credential.

(6) The locking means shall not modify the door closer, panic hardware, or fire exit hardware.

(7) Modifications to fire door assemblies, including door hardware, shall be in accordance with NFPA 80.

(8)(7)* The emergency action plan, required by 17.7.1, shall address the use of the locking and unlocking means from within and outside the room both sides of the doors.

(9)(8) Staff shall be drilled in the engagement and release of the locking means, from within and outside the room both sides of the doors, as part of the emergency egress drills required by 17.7.2.

17.2.2.2.6.2* Where doors serving occupant loads of less than 100 persons are equipped with fire exit hardware or panic hardware, emergency locking means of 17.2.2.2.6.1 shall be permitted.

17.2.2.2.6.3 Installation of the emergency locking means of 17.2.2.2.6.1 shall not modify door closers, fire exit hardware, or panic hardware or prohibit their operation.

17.2.2.2.6.4* Doors other than classroom entry doors, equipped with emergency locking means complying with 17.2.2.2.4.1, shall have one releasing operation, unless two separate nonsimultaneous releasing operations are approved by the AHJ.

2. *Revise Annex A.17.2.2.2.6 to read as follows:*

A.17.2.2.2.6 While 16.2.2.2.4 establishes locking criteria for new classroom doors only, a school's emergency plan could identify situations where other areas could be secured. The provisions of this subsection should be considered when evaluating those areas as well. Examples of such areas are administrative offices, gymnasiums, teacher lounges, libraries, auditoriums, and cafeterias. Emergency locking provisions for classroom entry doors are designed to provide schools an option for the run, hide, fight scenarios that might be required during incidents such as active shooter attacks, workplace violence, or other circumstances that compel lockdown protocols to be initiated. In order to resist forced entry, classroom doors might be equipped with locking hardware components that temporarily hold doors closed against egress during such incidents, which is counter to the Code's core principle of providing free and unobstructed egress at all times. Accordingly, classroom entry doors outfitted with emergency locking functions should be capable of resisting forced entry and be arranged for swift and free egress.

It is not the intent of the Code to require all new classroom doors to be equipped with emergency locking hardware functions. Day-care facilities have the option of selecting which doors in their facilities are best served with such hardware arrangements.

A.17.2.2.2.6.1 Where facilities desire to equip classroom doors with emergency locking means, the locking hardware providing that function needs to be approved by the appropriate AHJ.

Older existing classroom doors might be equipped with traditional classroom function mortise or bored locks that are only lockable on the entry side of the doors (i.e., from the corridor), which do not provide the locking means required by 17.2.2.2.6.1(1). Traditional classroom locks can be replaced with security-classroom function locks (with and without integrated deadbolt functions) that are capable of locking doors against entry from inside the room without opening the door, reducing the faculty's exposure to emergency conditions that might be imminent in the corridor when doors need to be mechanically locked. Another emergency locking solution might include adding magnetic locking devices to the room side of existing classroom doors that satisfy the requirement of 17.2.2.2.6.1(1). In this scenario, traditional classroom function locks could remain in use, but might require adding latch bolt monitoring strikes to immediately turn off power to magnetic locks when latch bolts are released for egress purposes. Other emergency locking solutions can include mechanical and electrified hardware functions, or combinations thereof, while providing for swift and free egress from classrooms.

Some types of locking hardware components are available with optional visual indicators that show the locks are in the secured condition. Such visual indicators might be useful on the room side of doors to confirm the emergency locking means has been engaged.

A.17.2.2.2.6.1(1) Emergency locking means could be comprised of mechanical locking hardware, electrified locking hardware, or combinations thereof. Where electrified locking means are considered, they could be arranged for remote locking and unlocking only, and not be lockable from within each classroom directly. Some arrangements of electrified locking hardware solutions could include a means for locking classroom doors from inside each room

in addition to being locked as part of building system. Locking functions of mechanical emergency locking means to resist forced entry need to permit occupants inside classrooms to lock doors without opening doors, exposing themselves to dangerous circumstances in corridors possibly.

In any case, the Code intends that doors are locked against entry on the corridor side of the door assemblies and doors should open freely for egress when needed.

A.17.2.2.2.6.1(2) Electrified locking means that hold doors closed against egress should be avoided, unless a fail-safe manual override is included in the classroom to allow occupants to open doors. Manual override devices should be accessible and clearly identified by a sign stating PUSH TO EXIT. Similarly, an override device on the corridor side of the doors, such as a card reader or proximity reader, might be needed at each classroom to provide faculty, staff, and first responders access to individual classrooms without unlocking all locked-down classroom doors. Coordination with other building systems such as fire alarm, smoke and heat detectors, and sprinkler systems might be necessary.

Because magnetic locks hold doors closed against entry and egress, they create a hazard under emergency lockdown conditions potentially. Other applications in the Code that permit magnetic locks require these electrified locking means to release upon actuation of the fire alarm system (when actuated by smoke and/or heat detectors), by flow sensors in sprinkler systems, and upon loss of power. Conceivably, conditions leading to the actuation of fire alarm systems and/or loss of power could be created during lockdown situations that result in unlocking magnetically locked doors, circumventing emergency locking means.

Under lockdown conditions, actuation of fire alarm systems by manual pull stations should not disable electrified emergency locking systems. For these reasons, users of the Code are encouraged to consider how electrified emergency locking means might function under all types of emergency conditions.

A.17.2.2.2.6.1(4) The intent of the Code is to ensure doors are arranged for free egress under all conditions, which is best accomplished with a single releasing operation. However, AHJs should have the discretion of approving a second releasing operation where a single releasing operation for certain existing doors might not be feasible, provided the releasing operations are not simultaneous.

A.17.2.2.2.6.1(5) Emergency locking hardware such as magnetic locks might be installed at the top of door leaves, provided the means for releasing them are located as specified. In this case, magnetic locks might be integrated with other door-leaf-mounted hardware that, when operated by occupants as they egress, result in releasing doors immediately.

A.17.2.2.2.6.1(6) The entry side of doors might be in a corridor or in another room; it's the side opposite the egress side of the door.

A.17.2.2.2.6.1(7) The emergency action plan should describe the processes for the following:
(1) Locking doors against forced entry from inside classrooms (when doors are closed)
(2) Egressing from locked-down classrooms
(3) Opening doors from the entry side when locked by the emergency locking means
(4) Unlocking doors after lockdown protocols have ceased

Where classroom doors are held closed by magnetic locks, the emergency action plan should include directions for releasing the doors for egress from inside the rooms including use of manual override devices. The emergency action plan should include the location (e.g., placed in key boxes) of keys, fobs, card keys, and other credentials needed by first responders to open locked-down doors.

A.17.2.2.2.6.2 Facilities might choose to equip certain classroom entry doors with fire exit hardware or panic hardware as their building standard even though these doors serve occupant loads of less than 100 persons. In these cases, the emergency locking provisions of this section can be applied to the doors, provided the fire exit hardware and panic hardware devices are not modified or otherwise prohibited from functioning by the installation of the emergency locking means as prohibited in 17.2.2.2.6.3.

Some types of fire exit hardware and panic hardware include features that allow operable components such as levers, knobs, and turn-pieces on the entry side of doors to be mechanically locked from the egress side of closed doors. Other types of fire exit hardware and panic hardware are available with electrified locking functions that provide remote locking (against entry), while allowing free egress at all times.

Where doors are required to have fire exit hardware or panic hardware, special consideration should be given to the potential consequences that might arise from equipping such doors with emergency locking functions. Likewise, special consideration should be given to doors equipped with delayed egress locking systems regarding how they might function under lockdown conditions. Delayed egress doors could temporarily block occupants from reaching a point of safety, sounding alarm, and calling attention to the doors. Facilities could require delayed egress doors to unlock in the direction of egress under lockdown conditions, allowing immediate and free egress.

3. Add new Annex A.17.2.2.2.6.4 to read as follows:

A.17.2.2.2.6.4 While 17.2.2.2.6.1 establishes emergency locking criteria for classroom entry doors, a day-care facility's emergency action plan could identify situations where other areas could be secured. The provisions of this subsection should be considered when evaluating those areas as well. Examples of such areas are administrative offices, nonhazardous storage rooms, and janitorial closets. The provisions of 7.2.1.5.10.1 and 7.2.1.5.10.6 might also be applicable to such doors.

Substantiation: (Note: This is the fourth of a series of six TIAs that address the classroom locking provisions for the 2018 edition of NFPA 101.)

Summary

Section 17.2.2.2.6 Classroom Door Locking to Prevent Unwanted Entry is new to the 2018 edition of the Code. As these provisions and requirements appear in the Second Draft Report, it is unclear as to what conditions they are intended to address or create. For example, the phrase "...to Prevent Unwanted Entry" is ambiguous—the purpose of locking any door is "to prevent unwanted entry." Other than the provisions of 7.2.1.5.9 that requires stair tower doors leading to roofs to be locked (against entry/access to the roof), the Code is silent as to when doors are REQUIRED to be locked "to prevent unwanted entry." As written, 14.2.2.2.4 could be construed as REQUIRING all classroom doors to be locked against entry; eliminating the owner's option to not lock classroom doors at all.

Setting the above aside for the moment, it's more likely that 17.2.2.2.6 is intended to address concerns regarding locking of doors in emergency conditions (e.g., active-shooter and other violent incidents) rather than "...to Prevent Unwanted Entry." The alternate version of **Section 17.2.2.2.6 Emergency Locking of Classroom Doors** is offered for the committee's consideration. It contains provisions that attempt to provide resistance to forced entry, while creating swift and free egress conditions that might be needed under emergency conditions. The proposed annex section reflects the intent of these new provisions.

The provisions of 17.2.2.2.6, as they are about to appear in the 2018 edition of NFPA 101, are flawed and result in requirements that do not achieve their intended goal for emergency locking of doors for the following reasons:

1. The charging statement could be interpreted as requiring daycare facilities to "upgrade" all existing classroom doors to comply with these new provisions, which would be a precedence in the Code on two counts. First, it would mandate the upgrading of existing the doors without any technical justification—daycare facilities subject to the 2018 edition of the Code would not have a choice. Second, the Code would require certain doors to be locked, a subject on which the Code has been silent on until now (save for doors leading to roof access from stair towers).
2. Item (1) does not require the locking means to be "lockable" from the room; it merely requires the locking means to be "...engaged without opening the door." The intent of this provision is to require doors to be "lockable" from inside classrooms to protect faculty and staff from dangerous circumstances in corridors to which they might be exposed when manually locking doors, but item (1) neglects to require locks to be engaged from inside the room. Further, all key operated locking hardware devices are capable of being engaged without opening doors, albeit from the entry side of the doors. An argument could be made that the application of a door barricade device on the inside of classroom doors (locking doors against egress) complies with item (1); especially, in combination with items (2) and (3).
3. Original items (2), (4), and (5) imply that doors are locked against egress, which is the condition these new provisions were designed to prevent. In fact, these conditions permit the installation of so-called door barricade devices instead of severely restricting the use of such devices.
4. Item (2) explicitly addresses "the unlocking" *and* "unlatching" of doors from the classroom as two distinctly separate actions; actions that are separate from the "releasing operation" required in item (3). It could be construed that items (2) and (3) result in at least three separate actions that would be necessary to egress from classrooms. Consequently, items (2) and (3), when combined, seem to allow the application of door barricade devices.
5. AHJs should have the discretion of determining when a second non-simultaneous releasing operation is acceptable for existing classroom doors.

Other issues in the original language include:

- A. Item (1) requires locking hardware to be engaged without opening the doors, but it fails to specify the engagement of the locking hardware is to be accomplished from the classroom side of the door; all locks can be engaged from the corridor side without opening the door, rendering item (1) useless as written.
- B. Original item (2) relies on the word "can," which creates a non-mandatory requirement that is subjective, and is noncompliant with the NFPA Manual of Style. Item (2) also requires

unlocking of the hardware to be accomplished from the classroom side of the door—under these provisions, the corridor side of the door is locked against entry—unlocking the corridor side of the door is unnecessary for egress purposes. More importantly, item (2) should address egress since egress requires unlatching of doors, regardless of whether the corridor side of the doors are locked.

- C. In item (2) (as originally written) the phrase “*the unlocking and unlatching from the classroom...*” [underlining added for emphasis] implies the doors are locked against egress, which is the condition these provisions seek to prevent. Several of the modern security-classroom locks are designed to lock doors against entry by use of a key on the room side of the door, which means they can be unlocked (for entry) by a key on the egress side—they cannot comply with the latter condition of item (2). The modified statement eliminates this concern by focusing on egress rather than unlocking the doors.
- D. Original item (3) was modified on the floor of the NFPA assembly on June 7th to require a single releasing operation for existing classroom doors. The original language put forth by the technical committee permitted two releasing operations for existing classroom doors. The proposed changes in this application should alleviate concerns regarding to two releasing operations.
- E. Bearing in mind that the doors affected by 17.2.2.2.6 are existing classroom doors that span many generations of the Code, original item (3) needs to provide for the installation of auxiliary locking hardware components to secure the doors. It is unreasonable to require school districts to decide between replacing existing door leaves or locking hardware that are otherwise serviceable and not taking steps to prepare their doors for emergency locking conditions when there are auxiliary locking hardware components that can be used. Many older existing classroom doors are not fire-rated making installation of auxiliary locking components more feasible and affordable. The proposed changes to item (3) does not mandate two (non-simultaneous) releasing operations; it merely allows for the possibility when single releasing operation is not feasible.

Regarding two releasing operations, there is precedence in the Code under the health care occupancies that can be applied to issue of locking of classroom doors. For instance, health care occupancies allow for the locking of doors “...*where the clinical needs of the patients require specialized security measures...*” (see paragraph 18.2.2.2.5.2), provided all of the listed criteria are met. Patient room doors are not required to be fire-rated, due to a number of factors. Key to both of these conditions is that the health care facilities have trained staff on duty to handle emergency conditions.

The Code allows more than one releasing operation on apartment, dormitory, hotel, and motel unit entry doors because the people using these doors are familiar with how the doors operate under normal and emergency conditions. In other words, people are trained on how to lock, unlock, and open the doors.

Items 17.2.2.2.6.1(9) and (10) require daycare facilities to have an emergency plan and trained faculty and staff to guide students through emergency situations. Substitute teachers (and others) would be required to be trained before they can teach. Very much like the provisions in health care occupancies, items (9) and (10) create the same type of trained staff. For these reasons, a second releasing operation for existing classroom doors is a reasonable and low-risk solution.

The proposed language in revised section 17.2.2.2.6.1(4) provides AHJs the discretion to allow two releasing operations for existing doors when circumstances warrant it, which is similar to the provisions for 15-second (default) and 30-second (where approved) time delays the Code allows for delayed egress locking systems.

- F. In item (4), the placement of the releasing device for egress purposes is more important than its function; releasing the locking hardware results in unlatching the door. Additionally, item (4) should address the placement of the releasing device on the classroom side of the door, which is unclear in the current language.
- G. In item (5), the phrase, “*Locks, if remotely engaged,...*” could be interpreted as requiring all classroom doors to be capable of being remotely locked since the charging statement of 17.2.2.2.6.1 requires all conditions to be met. In order for item (5) to be possible, the locking means must be electrified.
- H. Similar to item (2), the original phrase in item (5), “*Locks, if remotely engaged, shall be unlockable from the classroom...*” implies remotely locked doors are locked against egress. For egress purposes, original item (5)—moved to item (2) in the revised version—should require doors to be openable when doors are remotely locked; the corridor side of the doors can remain locked against entry.
- I. Item (8) is unnecessary since new fire-rated door assemblies are required to be installed in accordance with NFPA 80, as specified in 8.3.3.1. Installation of hardware components is NOT considered to be a modification of a fire door frame or door when it complies with the listings and installation instructions of the affected components. NFPA 80 does not address modifications to door hardware components.

The proposed revised section “***Emergency Locking of Classroom Doors***” corrects all the above flaws and provides guidance to users of the Code through the expanded annex commentary.

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process. The NFPA Standard contains a conflict within the NFPA Standard or within another NFPA Standard. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. The proposed TIA intends to correct a circumstance in which the revised NFPA Standard has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process or was without adequate technical (safety) justification of the action.

The 2018 edition of NFPA 101 is about to be issued with the above described flawed language and revisions. Section 17.2.2.2.6 is not in a condition to be published, for all of the reasons explained above. Emergency action is necessary to address the issues cited in this application.

Anyone may submit a comment by the closing date indicated above. Please identify the TIA number forward to the Secretary, Standards Council. [SUBMIT A COMMENT](#)