



NATIONAL ASSOCIATION OF STATE FIRE MARSHALS

Classroom Door Security & Locking Hardware

The ability to protect students, teachers, and administrators from threatening situations is a high priority in all educational institutions. Many schools, school districts, colleges, and universities have taken measures to address this pressing concern of safety of occupants in schools, and especially classrooms. While protection against active shooters and violent events is a main concern, bullying and other affronts to personal safety also occur. Occupants of schools, including after-hours occupants, should be provided with a safe and secure educational environment.

Some of the proposed or implemented solutions specifically affecting classroom doors, while well intended, may compromise aspects of life safety while attempting to address security. In addition to the demand to protect students and teachers from outside-the-classroom threats, classroom doors are required to comply with other life safety and accessibility provisions.

To help prevent fire spread in a school building, building codes, fire codes, and life safety codes may require classroom doors to be fire-rated doors. Fire-rated doors are required to be self-latching when closed to ensure they perform their intended protective function in the event of a fire.

To facilitate immediate egress from the classroom, building codes, fire codes, and life safety codes require doors from inside the room (the egress side) to unlock and unlatch with one motion without the use of a key, tool, special knowledge, or effort.

To ensure access to and from classrooms by all occupants regardless of physical ability, classroom doors are required to meet federal accessibility laws, and building and fire code requirements, which include the ability to operate door hardware with no tight grasping, tight pinching, or twisting of the wrist; and the door operating hardware must be located between 34" and 48" above the floor. Federal accessibility laws and building codes require the bottom 10" of the push side of the door to be a smooth surface.

When selecting hardware which allows classroom doors to be lockable from inside the room, consideration must be given to the risks and potential consequences of utilizing a device which blocks the door from the inside potentially impeding or preventing immediate egress by occupants, at any time, and under any conditions.

Devices which prevent classroom doors from being unlocked and opened from outside the classroom may place the inhabitants of the room in peril. In addition to the requirement that classroom doors must be unlockable and unlatchable in a single motion from inside the classroom (discussed above), these doors should always be unlockable and openable from outside the classroom by authorized persons.

The "School Security – Classroom Door Checklist" on the next page identifies many parameters which should be satisfied when selecting and installing hardware on classroom doors intended to increase security in the classroom.

School Security – Classroom Door Checklist

- 1. The door should be lockable from inside the classroom without requiring the door to be opened¹
- 2. Egress from the classroom through the classroom door should be without the use of a key, a tool, special knowledge, or effort²
- 3. For egress, unlatching the classroom door from inside the classroom should be accomplished with one motion³
- 4. The classroom door should be lockable and unlockable from outside the classroom⁴
- 5. Door operating hardware should be operable without tight grasping, tight pinching, or twisting of the wrist⁵
- 6. Door hardware operable parts should be located between 34 and 48 inches above the floor⁶
- 7. The bottom 10 inches of the “push” side of the door surface should be smooth⁷
- 8. If the school building does not have an automatic fire sprinkler system, the classroom door and door hardware may be required to be fire-rated and the door should be self-closing and self-latching⁸
- 9. If the door is required to be fire-rated, the door should not be modified in any way that invalidates the required fire-rating of the door and / or door hardware⁹

In the Classroom Door Checklist, “should” is used throughout. However, based upon building codes, life safety codes, fire codes, and federal, state, and / or local laws and regulations that are applicable to a particular school, these requirements may be MANDATORY. Always check, and comply with, all applicable building and fire codes, life safety codes, and laws, regulations and other requirements.

¹ To help protect teachers and students in the classroom, the classroom door should be lockable from inside the classroom without requiring the door to be opened.

² Building codes, life safety codes, and fire codes require doors in the means of egress to be openable without the use of a key, a tool, special knowledge, or effort to ensure all occupants have the ability to evacuate the building quickly and easily in an emergency situation

³ Building codes and fire codes require doors in the means of egress to be unlatched with only one motion. Door hardware which requires more than one motion to unlock / unlatch the door is not allowed.

⁴ To allow securing the classroom during times the classroom is not occupied; and to allow access to the classroom at all times by authorized personnel.

⁵ Building codes, fire codes, and Federal accessibility laws require door hardware to be operable without tight grasping, pinching, or twisting of wrist to ensure all occupants have the ability to operate and open the door.

⁶ Building codes, fire codes, and Federal accessibility laws require the operable components of door hardware, such as lockset lever handles, to be located within a relatively small range of height (34” to 48” above the floor). Door hardware which requires reaching above 48” to operate or requires reaching below 34” to operate is not allowed.

⁷ Building codes and Federal accessibility laws require the bottom 10” of the push side of the door to be a smooth surface.

⁸ If the school building is not protected by a fire sprinkler system installed and maintained in accordance with building and fire code requirements, most building codes and fire codes require classroom doors which open to an interior corridor to be fire-rated. Doors required to be fire-rated are also required to be self-closing and self-latching to ensure the fire-rated door is closed and latched in the event of a fire. Classroom doors that open directly to the outside are usually not be required to be fire-rated. Classroom doors in a school building protected by a code-compliant fire sprinkler system may not be required to be fire-rated, and may not be required to be self-closing and self-latching.

⁹ To ensure the fire rating of a door is maintained, modifications or alterations to doors required to be fire-rated are required to be done under the supervision of the door manufacturer or by a company specifically authorized by the door manufacturer.

References for Classroom Door Checklist Updated to Include 2021 IBC, 2021 IFC, and 2021 NFPA 101

Note: The 2018 and 2021 editions of NFPA 101 Life Safety Code includes new sections addressing locking of classroom doors with requirements consistent with the Classroom Door Checklist of this document. NFPA 101-2018 and NFPA 101-2021 sections 14.2.2.2.4 and 15.2.2.2.4 address new and existing K-12 educational occupancies respectively. Sections 16.2.2.2.6 and 17.2.2.2.6 address new and existing day-care occupancies. Contrary to NASFM's Resolution on Classroom Door Security & Locking Hardware ([available here](#)), NFPA 101-2021 permits – where approved by the authority having jurisdiction – up to two nonsimultaneous releasing motions to unlock and unlatch existing doors in K-12 schools and existing doors in day-care occupancies (NFPA 101-2021 sections 15.2.2.2.4 and 17.2.2.2.6, respectively). NFPA 101-2018 and NFPA 101-2021 sections 38.2.2.2.2 and 39.2.2.2.2 address new and existing business occupancies, which includes colleges and universities.

For brevity, the text of these six new sections is not included in this document.

1st Item in Checklist

“The door should be lockable from inside the classroom without requiring the door to be opened”

Assumes increasing the security of classroom doors by adding hardware that is lockable from the inside is under consideration; and assumes if this is not the situation, then this document is irrelevant.

Is consistent with Recommendation No. 1 of the “Final Report of the Sandy Hook Advisory Commission”, March 6, 2015, copied below.

RECOMMENDATION NO. 1: “The SSIC Report includes a standard requiring classroom and other safe-haven areas to have doors that can be locked from the inside. The Commission cannot emphasize enough the importance of this recommendation. *The testimony and other evidence presented to the Commission reveals that there has never been an event in which an active shooter breached a locked classroom door.* Accordingly, the Commission reiterates its recommendation that all classrooms in K-12 schools should be equipped with locked doors that can be locked from the inside by the classroom teacher *or substitute.*”

The SSIC report is the Connecticut School Safety Infrastructure Council report.

2nd Item in Checklist

“Egress from the classroom through the classroom door should be without the use of a key, a tool, special knowledge, or effort”

Requirements of these editions of the International Building Code (IBC) and International Fire Code (IFC) codes are below.

- 2006 IBC Section 1008.1.8
- 2006 IFC Section 1008.1.8
- 2009 IBC Section 1008.1.9
- 2009 IFC Section 1008.1.9
- 2012 IBC Section 1008.1.9
- 2012 IFC Section 1008.1.9
- 2015 IBC Section 1010.1.9
- 2015 IFC Section 1010.1.9
- 2018 IBC Section 1010.1.9
- 2018 IFC Section 1010.1.9
- 2021 IBC Section 1010.2
- 2021 IFC Section 1010.2

Door operations. Except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

Requirements of these editions of the NFPA 101 Life Safety Code are below.

- 2012 NFPA 101 Section 7.2.1.5.3
- 2015 NFPA 101 Section 7.2.1.5.3
- 2018 NFPA 101 Section 7.2.1.5.3
- 2021 NFPA 101 Section 7.2.1.5.2

2012 – 2018 NFPA 101: 7.2.1.5.3 Locks, if provided, shall not require the use of a key, a tool, or special knowledge or effort for operation from the egress side.

2021 NFPA 101: 7.2.1.5.2 Locks and latches shall not require the use of a key, a tool, or special knowledge or effort for operation from the egress side.

The 2018 and 2021 editions of NFPA 101 Life Safety Code in sections 14.2.2.2.4, 15.2.2.2.4, 16.2.2.2.6, 17.2.2.2.6, 38.2.2.2.2, and 39.2.2.2.2 include this same requirement.

3rd Item in Checklist

“For egress, unlatching the classroom door from inside the classroom should be accomplished with one motion”

Requirements of these editions of the International Building Code (IBC) and International Fire Code (IFC) codes are below.

- 2006 IBC Section 1008.1.8.5
- 2006 IFC Section 1008.1.8.5
- 2009 IBC Section 1008.1.9.5
- 2009 IFC Section 1008.1.9.5
- 2012 IBC Section 1008.1.9.5
- 2012 IFC Section 1008.1.9.5
- 2015 IBC Section 1010.1.9.5
- 2015 IFC Section 1010.1.9.5
- 2018 IBC Section 1010.1.9.6
- 2018 IFC Section 1010.1.9.6
- 2021 IBC Section 1010.2.1
- 2021 IFC Section 1010.2.1

2006 – 2018 IBC: Unlatching. The unlatching of any door or leaf shall not require more than one operation.

2021 IBC: Unlatching. The unlatching of any door or leaf for egress shall require not more than one motion in a single linear or rotational direction to release all latching and locking devices.

Requirements of these editions of the NFPA 101 Life Safety Code are below.

- 2012 NFPA 101 Sections 7.2.1.5.10 and 7.2.1.5.10.2
- 2015 NFPA 101 Sections 7.2.1.5.10 and 7.2.1.5.10.2
- 2018 NFPA 101 Sections 7.2.1.5.10 and 7.2.1.5.10.2
- 2021 NFPA 101 Sections 7.2.1.5.3 and 7.2.1.5.3.2

2012 – 2018 NFPA 101:

7.2.1.5.10* A latch or other fastening device on a door leaf shall be provided with a releasing device that has an obvious method of operation and that is readily operated under all lighting conditions.

7.2.1.5.10.2 The releasing mechanism shall open the door leaf with not more than one releasing operation . . .

2021 NFPA 101:

7.2.1.5.3 Latch-Release Devices. All locks, latches, and all other fastening devices on a door leaf shall be provided with a releasing device that has an obvious method of operation and that is readily operated under all lighting conditions.

7.2.1.5.3.2 The operation of the releasing mechanism shall release all latching and all locking devices of the door leaf with not more than one motion in a single linear or rotational direction . . .

The 2018 edition of NFPA 101 Life Safety Code in sections 14.2.2.2.4, 16.2.2.2.6, and 38.2.2.2.2 include this same requirement. While not explicit in NFPA 101-2018 sections 15.2.2.2.4, 17.2.2.2.6, and 39.2.2.2.2, the requirements in 7.2.1.5.10 and 7.2.1.5.10.2 apply.

The 2021 edition of NFPA 101 requires not more than one releasing motion for new educational occupancies (14.2.2.2.4), new day-care occupancies (16.2.2.2.6), and new and existing business occupancies (38.2.2.2.2 and 39.2.2.2.2). However, the 2021 edition of NFPA 101 permits in sections 15.2.2.2.4 and 17.2.2.2.6 – where approved by the authority having jurisdiction – up to two nonsimultaneous releasing motions to unlock and unlatch existing doors in K-12 schools and existing doors in day-care occupancies.

4th Item in Checklist

“The classroom door should be lockable and unlockable from outside the classroom”

Criteria 6.15 of the SSIC standards provided in the “Final Report of the Sandy Hook Advisory Commission” require classroom doors to “allow for quick release in the event of an emergency”:

6.15. Classroom door locks shall be easy to lock and allow for quick release in the event of an emergency.

The 2018 editions of the International Building Code (IBC) and International Fire Code (IFC), in Section 1010.1.4.4 state:

1010.1.4.4 Locking arrangements in educational occupancies. In Group E and Group B educational occupancies, egress doors from classrooms, offices and other occupied rooms shall be permitted to be provided with locking arrangements designed to keep intruders from entering the room where all of the following conditions are met:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
2. The door shall be openable from within the room in accordance with Section 1010.1.9.
3. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.

The 2021 editions of the International Building Code (IBC) and International Fire Code (IFC), in Section 1010.2.8 state:

1010.2.8 Locking arrangements in educational occupancies. In Group E occupancies, Group B educational occupancies and Group I-4 occupancies, egress doors from classrooms, offices and other occupied rooms with locking arrangements designed to keep intruders from entering the room shall comply with all of the following conditions:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
2. The door shall be openable from within the room in accordance with Section 1010.2.
3. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.
4. Modifications to fire door assemblies shall be in accordance with NFPA 80.

The 2018 and 2021 editions of NFPA 101 Life Safety Code in sections 14.2.2.2.4, 15.2.2.2.4, 16.2.2.2.6, 17.2.2.2.6, 38.2.2.2.2, and 39.2.2.2.2 state: “The door shall be capable of being unlocked and opened from outside the room with the necessary key or other credential.”

5th Item in Checklist

“Door operating hardware should be operable without tight grasping, tight pinching, or twisting of the wrist”

Requirements of these International Building Code (IBC) and International Fire Code (IFC) codes are below.

- 2006 IBC Section 1008.1.8.1
- 2006 IFC Section 1008.1.8.1
- 2009 IBC Section 1008.1.9.1
- 2009 IFC Section 1008.1.9.1
- 2012 IBC Section 1008.1.9.1
- 2012 IFC Section 1008.1.9.1
- 2015 IBC Section 1010.1.9.1
- 2018 IBC Section 1010.1.9.1
- 2018 IFC Section 1010.1.9.1
- 2021 IBC Section 1010.2.2
- 2021 IFC Section 1010.2.2

Hardware. Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 (of the IBC) shall not require tight grasping, tight pinching or twisting of the wrist to operate.

The 2021 edition of NFPA 101, in section 7.2.1.5.3.3 states:

7.2.1.5.3.3 The releasing mechanism for new installations shall be capable of being operated with one hand and shall not require tight grasping, tight pinching, or twisting of the wrist to operate.

The U.S. Department of Justice 2010 ADA Standards for Accessible Design are applicable to classroom doors.

404.2.7 Door and Gate Hardware. Handles, pulls, latches, locks, and other *operable parts* on doors and gates shall comply with 309.4.

309.4 Operation. *Operable parts* shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

6th Item in Checklist

“Door hardware operable parts should be located between 34 and 48 inches above the floor”

Requirements of these International Building Code (IBC) and International Fire Code (IFC) codes are below.

- 2006 IBC Section 1008.1.8.2
- 2006 IFC Section 1008.1.8.2
- 2009 IBC Section 1008.1.9.2
- 2009 IFC Section 1008.1.9.2
- 2012 IBC Section 1008.1.9.2
- 2012 IFC Section 1008.1.9.2
- 2015 IBC Section 1010.1.9.2
- 2015 IFC Section 1010.1.9.2
- 2018 IBC Section 1010.1.9.2
- 2018 IFC Section 1010.1.9.2
- 2021 IBC Section 1010.2.3
- 2021 IFC Section 1010.2.3

Hardware height. Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor.

Requirements of these editions of the NFPA 101 Life Safety Code are below.

- 2012 NFPA 101 Section 7.2.1.5.10.1
- 2015 NFPA 101 Section 7.2.1.5.10.1
- 2018 NFPA 101 Section 7.2.1.5.10.1
- 2021 NFPA 101 Section 7.2.1.5.3.1

The releasing mechanism for any latch shall be located as follows:

- (1) Not less than 34 in. (865 mm) above the finished floor for other than existing installations
- (2) Not more than 48 in. (1220 mm) above the finished floor.

The 2018 and 2021 editions of NFPA 101 Life Safety Code in sections 14.2.2.2.4, 15.2.2.2.4, 16.2.2.2.6, 17.2.2.2.6, 38.2.2.2.2, and 39.2.2.2.2 include the same requirements.

The U.S. Department of Justice 2010 ADA Standards for Accessible Design are applicable to classroom doors.

404.2.7 Door and Gate Hardware. Handles, pulls, latches, locks, and other *operable parts* on doors and gates shall comply with 309.4. *Operable parts* of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the finish floor or ground.

7th Item in Checklist

“The bottom 10 inches of the “push” side of the door surface should be smooth”

Requirements of these International Building Code (IBC) codes are pasted below.

- 2006 IBC Section 1102.1
- 2009 IBC Section 1102.1
- 2012 IBC Section 1102.1
- 2015 IBC Section 1102.1
- 2018 IBC Section 1102.1
- 2021 IBC Section 1102.1

1102.1 Design. Buildings and facilities shall be designed and constructed to be accessible in accordance with this code and ICC A117.1.

The 2006 and 2009 editions of the IBC reference the 2003 ICC A117.1; the 2012, 2015, and 2018 editions of the IBC reference the 2009 ICC A117.1. The 2021 edition of IBC references 2017 ICC A117.1 All of these editions of ICC A117.1 require:

2003 – 2009 ICC A117.1: 404.2.9 Door Surface. Door surfaces within 10 inches (255 mm) of the floor, measured vertically, shall be a smooth surface on the push side extending the full width of the door.

2017 ICC A117.1: 404.2.9 Door and gate surface. Door and gate surfaces within 10 inches (255 mm) of the floor, measured vertically, shall be smooth surfaces on the push side extending the full width of the door or gate. Door and gate hardware or any other obstruction or protrusion shall not be mounted in nor extend into the area within 10 inches (255 mm) of the floor.

The U.S. Department of Justice 2010 ADA Standards for Accessible Design are applicable to classroom doors.

404.2.10 Door and Gate Surfaces. Swinging door and gate surfaces within 10 inches (255 mm) of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate.

8th and 9th Items in Checklist

“If the school building does not have an automatic fire sprinkler system, the classroom door and door hardware may be required to be fire-rated and the door should be self-closing and self-latching” and “If the door is required to be fire-rated, the door should not be modified in any way that invalidates the required fire-rating of the door and / or door hardware”

The 2006 IBC in Chapter 10 requires corridors in Occupancy Group E to have a fire resistance rating of 1 hour (if the occupant load served by the corridor is greater than 30) if the building does not have an approved fire sprinkler system. This section of the 2006 IBC requires these corridor walls to comply with the requirements for fire partitions of Section 708.

- 2006 IBC Section 708 requires openings in corridors to be protected by opening protectives complying with IBC Section 715.
- 2006 IBC Section 715 requires fire doors to be self-closing, and to have an active latch which will secure the door when closed.
- 2006 IBC Section 715 requires minimum 20 minute rated fire doors in corridor walls serving as fire partitions. Section 715 requires these fire rated doors to comply with NFPA 252 or UL 10C, and requires fire door assemblies to be labeled by an approved agency. The labels are required to comply with NFPA 80.
- Summarizing: If the classroom doors to the corridor are required to be fire rated, then the classroom doors – assembled of only labeled components such as frame, door panel, and door hardware with minimum 20 minute fire rating – are required to be self-closing and self-latching, and are to be modified only when following the procedures and requirements of the door manufacturer and / or hardware manufacturer to ensure the required fire rating is maintained.

The 2006 IFC in Section 703 requires the required fire-resistance rating to be maintained.

Subsequent editions of the IBC and IFC retain these requirements but the specific sections are revised.