



The National Association of STATE FIRE MARSHALS

Classroom Door Security & Locking Hardware

The ability to protect students and teachers while in the classroom is a high priority in all educational institutions. Many schools and school districts have taken measures to address this pressing concern of safety of occupants in classrooms in the event of a threatening situation. 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, building codes or fire codes may require classroom doors to function as fire-rated doors or smoke and draft control doors. Fire-rated doors and smoke and draft control doors are required to be self-latching when closed to ensure the doors perform their intended protective function in the event of a fire.

Building codes, fire codes, and life safety requirements include the ability to readily unlatch the door from inside the classroom with one motion without the use of a key, a tool, or special knowledge, or effort to facilitate immediate egress from the classroom.

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; 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 considering the selection of hardware which allows classroom doors to be lockable from inside the classroom, consideration should be given to the risks and potential consequences of utilizing a device which blocks the classroom door from the inside. For example, devices which prevent classroom doors from being unlocked and openable from outside the classroom may place the inhabitants of the room in peril. In addition to the requirement that classroom doors must be 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 – Suggested Classroom Door Checklist" identifies many parameters which should be satisfied when selecting and installing hardware on classroom doors intended to increase security in the classroom.



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School Security – Suggested Classroom Door Checklist

- The door should be lockable from inside the classroom without requiring the door to be opened¹
- Egress from the classroom through the classroom door should be without the use of a key, a tool, special knowledge, or effort²
- For egress, unlatching the classroom door from inside the classroom should be accomplished with one operation³
- The classroom door should be lockable and unlockable from outside the classroom⁴
- Door operating hardware shall be operable without tight grasping, tight pinching, or twisting of the wrist⁵
- Door hardware operable parts should be located between 34 and 48 inches above the floor⁶
- The bottom 10 inches of the “push” side of the door surface should be smooth⁷
- 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
- 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 Suggested 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 in 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 operation. Door hardware which requires more than one operation 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 Suggested Classroom Door Checklist

1st Item in Checklist

- 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, available here: http://www.shac.ct.gov/SHAC_Final_Report_3-6-2015.pdf and 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" (School Safety Infrastructure Council report) is available here: <http://das.ct.gov/images/5510/Security%20Report%20June27.pdf>

2nd Item in Checklist

- The requirements of these International Building Code (IBC) and International Fire Code (IFC) codes are pasted 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

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 Section 7.2.1.5.3 of 2012 NFPA 101 Life Safety Code, and Section 7.2.1.5.3 of 2015 NFPA 101 Life Safety Code:

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.

3rd Item in Checklist

- The requirements of these International Building Code (IBC) and International Fire Code (IFC) codes are pasted 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

Unlatching. The unlatching of any door or leaf shall not require more than one operation.

- Requirements of Section 7.2.1.5.10 of 2012 NFPA 101 Life Safety Code, and Section 7.2.1.5.10 of 2015 NFPA 101 Life Safety Code:

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

4th Item in Checklist

- Criteria 6.15 of the SSIC standards provided in the draft “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.

5th Item in Checklist

- The requirements of these International Building Code (IBC) and International Fire Code (IFC) codes are pasted below.
 - 2006 IBC Section 1008.1.8.1
 - 2009 IBC Section 1008.1.9.1
 - 2012 IBC Section 1008.1.9.1
 - 2015 IBC Section 1010.1.9.1

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

- 2006 IFC Section 1008.1.8.1
- 2009 IFC Section 1008.1.9.1
- 2012 IFC Section 1008.1.9.1
- 2015 IFC Section 1010.1.9.1

Hardware. Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 of the *International Building Code* 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

- The requirements of these International Building Code (IBC) and International Fire Code (IFC) codes are pasted 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

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 Section 7.2.1.5.10.1 of 2012 NFPA 101 Life Safety Code, and Section 7.2.1.5.10.1 of 2015 NFPA 101 Life Safety Code:

7.2.1.5.10.1 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 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 requirements of these International Building Code (IBC) codes are pasted below.
 - 2006 IBC Section 1008.1.8.5
 - 2009 IBC Section 1008.1.9.5
 - 2012 IBC Section 1008.1.9.5
 - 2015 IBC Section 1010.1.9.5

1101.2 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 and 2015 editions of the IBC reference the 2009 ICC A117.1. Both these editions of ICC A117.1 require:

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.

- 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

- 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.

Final Report of the Sandy Hook Advisory Commission; Pages 56-57

Classroom Security

All classrooms shall be equipped with a communications system to alert administrators in case of emergency. Such communication systems may consist of a push-to-talk button system, an identifiable telephone system, or other means.

Door hardware, handles, locks and thresholds shall be ANSI/BHMA Grade 1.

All classroom doors shall be lockable from the inside without requiring lock activation from the hallway, and door locks shall be tamper resistant.

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

Classroom doors with interior locks shall have the capability of being unlocked/ released from the interior with one motion.

All door locking systems must comply with life safety and State of Connecticut building and fire codes to allow emergency evacuation.

Provide doors between adjacent classrooms to provide means of moving classroom occupants from one classroom to the next as a means to relocate students and teachers from an impending hallway threat. Provide such doors with suitable locking hardware to preclude unauthorized tailgating.

Provide closers on these doors so that they automatically return to a closed, latched, and locked position to preclude unauthorized entry.

If classroom doors are equipped with a sidelight, the glazing should be penetration/forced entry resistant to the project forced entry standard.

