

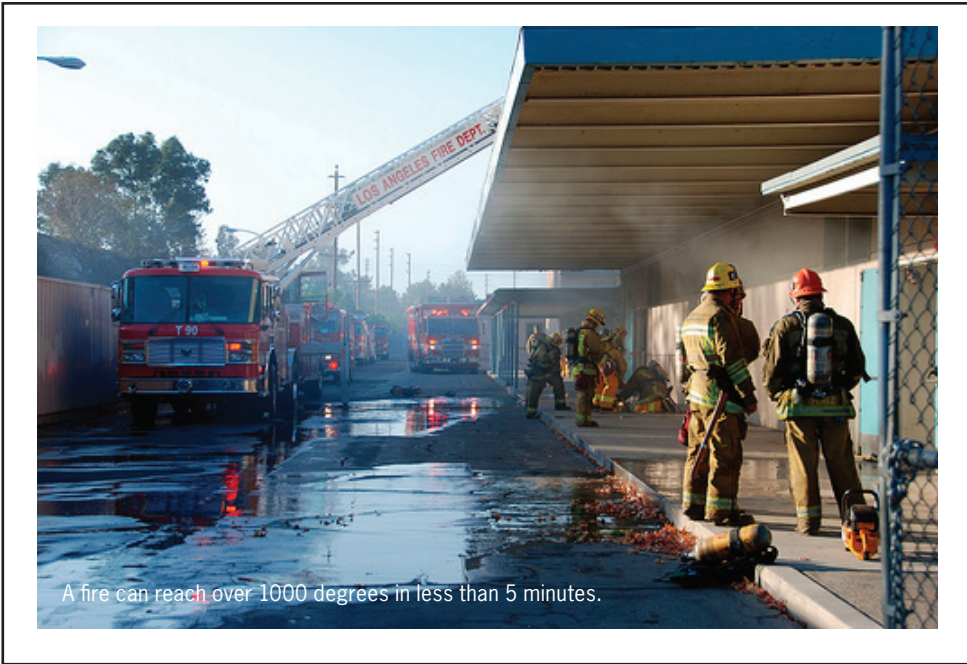
FIRE & LIFE SAFETY

SECURITY VS. EXITING...

Door Locking Hardware in Schools



DSA Guidelines for Door Locking Hardware in Schools



A fire can reach over 1000 degrees in less than 5 minutes.

“Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.”



With the acknowledged need for campus security due to the increase of school violence, numerous questions have arisen as to what are the acceptable choices in the California Building Code for door hardware and under what circumstances may the different types be used? This document is produced to assist school districts and design professionals in selecting door hardware for their projects and answer some of these questions.

- From a security perspective, the most important function of a door is to **control entry**. Entry control involves the configuration, strength, durability, composition of the door, its hinges and its frame, and the control and effectiveness of its latching and locking hardware.
- From the standpoint of fire safety, however, a door's **exit function** is the ruling factor, one that is highly regulated by the California Building Code by classifying doors as part of a building's **means of egress**.

Watch *“The Power of Fire Timeline”* @ http://www.thehartford.com/firesense/power_of_fire/main.htm

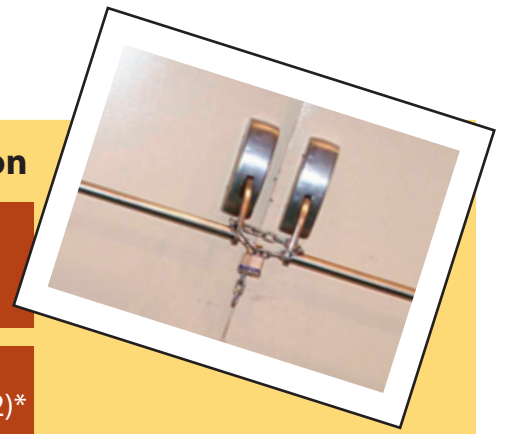
Access control is the primary area of conflict between security and life-safety provisions. While locking outside doors to prevent people from entering a building is permissible under Building Code requirements, inhibiting free egress is not.

The general requirement for exit/egress doors is found in the 2007 California Building Code (CBC) Section 1008.1.8 which states that, except as specifically permitted, “Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.” Per the State Fire Marshal Interpretation 02-035 this requirement would include restrooms in “E” (Educational) occupancies.

At a Quick Glance

Is Proposed Action Permitted?	YES	NO	CBC Section
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1. Chain and padlock panic hardware		✓	1008.1.9
2. Have locking hardware on building entrance doors to assemblies and offices.	✓		1008.1.8.3 (2)*
3. Lock perimeter fencing gates when safe dispersal area is provided.	✓		1008.2.1
4. Lock access gates to safe dispersal area.		✓	1008.1.9
5. Have remote total campus lock down for both entrance and exiting/egress.		✓	1008.1.8.5
6. Install hardware that allows classroom locking from classroom side of the door and allows exiting.	✓		1008.1.8
7. Install security bars and grilles on any portion of school campus access ways.		✓	1008.1.3.5
8. Install special entrance devices such as cardreader, punch keys, or biometric scanners.	✓		1008.1.3.4**
9. Have manually operated flush bolts or surface bolts on storage or equipment room inactive door.	✓		1008.1.8.4
10. Install delayed egress locks on assembly or classroom doors.		✓	1008.1.8.6
11. Provide padlocks for equipment areas.	✓		***



* This allowance requires that the locking device is readily distinguishable as locked and a readily visible sign is posted on the egress side on or adjacent to the door which states, "THIS DOOR IS TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED"

** Door must be openable from the inside without a key, special knowledge, use, or effort.

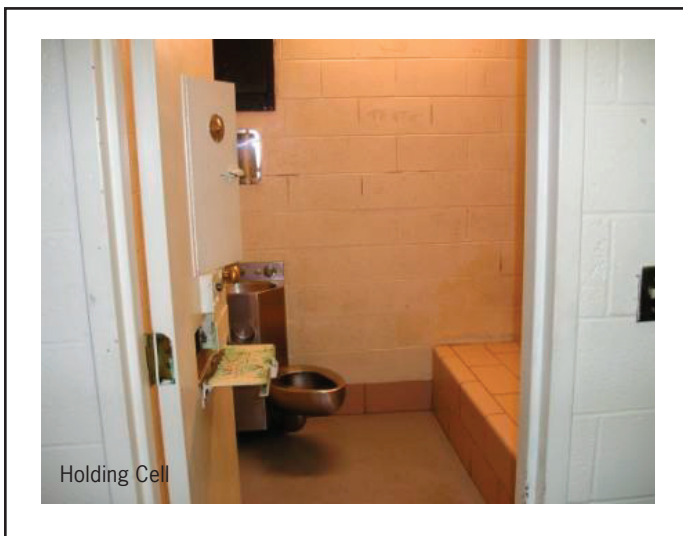
*** Gates and door may be padlocked shut when the area is not a portion of normally occupied space.

Details of Locking Devices with Definitions, Requirements, & Examples

Restraint Locks

Definition: Adding a locking device to the exit/ egress side of the door which prohibits exiting the area or building. Area is classified per CBC as an “I-3” Occupancy.

Requirements: Multiple, including, but not limited to, CBC Section 308.4, 408, and Chapter 10



Examples:

- Quiet Rooms or Holding Rooms until law enforcement arrives
- Buildings and Structures whose Occupants are under restraint

Access Controlled Locks

Definition: Security and monitoring for authorized entry.

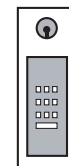
Requirements: Access Controlled Devices are permitted for entrance, but not for exiting buildings. (See CBC Sections 1008.1.3.4 and 1008.1.8.)

For controller locking device the central control panel may be a physical device, or software that runs on a computer server. It lets you create accounts, change access rules, and view entry reports. The smallest systems don't have a central panel; they're run from the keypad or scanner, and you program them using a laptop. Look carefully at what options you have for reports and setting up usage rules; cheaper systems are often less flexible.

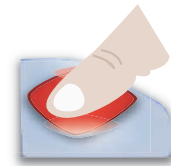
Automatic or controlled locks against exiting are not allowed on K-12 school campuses. For all requirements see California Building Code Section 1008.1.8.4.



Card Reader



Key Number Access



Biometric Finger Print Reader



Biometric 4 Finger Print Reader

Examples: This is the most variable part of an access control systems; it can include several types of card readers, keypads, or biometric scanners. However it's done, the access device is what lets users identify themselves to the system.

Mortise Locksets

Definition: Locks that fit into a mortise in the door edge and typically feature levers to operate a latch bolt.

Requirements: New innovations in door hardware are continuously emerging to meet society's changing needs. Take, for example, recent developments in mortise locking functions specifically designed for the school environment. One of these is the "security classroom" function. A traditional classroom lockset requires the door to be locked from the outside, while the inside lever remains operable. In theory this is great, since unauthorized individuals cannot enter the room without a key. But it actually creates vulnerability by forcing the teacher to open the door, insert their key in the outside cylinder, turn their key to lock the door and then close the door. This takes considerable time and may expose the faculty member to the very danger they are locking the door against.

Example:



A Solution Exists

Imagine the same lockset with a cylinder on the inside that does the same thing as the cylinder on the outside, that is, locks the outside lever. You now have a "security classroom function" lockset that can easily be locked from inside the room. These are allowed on all educational classrooms and buildings where operation of the egress lever hardware is not disabled.

Questions & Answers:

1. Question: How can the school prevent a violent person from locking students in a large room and holding them as hostages?

Answer: Consider replacing older model panic exit hardware with flush push bar hardware that cannot be chained shut or otherwise secured against exiting.

2. Question: Why do the National Clearinghouse for Educational Facilities and others state different requirements for locks and door hardware than from what DSA requires?

Answer: When a national publication is a source of information it may quote standards and codes which California does not adopt, and also does not include the California State Fire Marshal Amendments.

3. Question: Is panic hardware available that can be locked from the inside yet allows exiting from the area?

Answer: Yes, there are a few types and manufacturers who supply this device.

4. Question: Can we have power-operated doors where means of egress doors are operated by power, such as doors with a photoelectric-actuation mechanism to open the door upon the approach of a person?

Answer: Yes, provided that the doors are designed that in the event of a power failure, the door is capable of being opened manually. The door(s) shall be capable of swing from any position to the full width of the opening. See CBC Section 1008.1.3.2 for more information.

5. Question: Can I make all door hardware free swinging without latching?

Answer: No, if the door is part of a rated wall assembly it must be positive latching.

Contact Information

Contact your local Fire Department or State Fire Marshal's Office for information concerning changes in door hardware that may occur after completion of construction projects.

The State Fire Marshal number is (916) 445-8500. You are also welcome to contact the Fire & Life Safety Lead in one of the following regional offices:

DSA Headquarters Office

1102 Q Street, Suite 5100
Sacramento, California 95811
916 445-8100

DSA Sacramento Regional Office

1102 Q Street, Suite 5200,
Sacramento, California 95811
916 445-8730

DSA Oakland Regional Office

1515 Clay Street, Suite 1201
Oakland, California 94612
510 622-3101

DSA Los Angeles Basin Regional Office

700 N. Alameda Street, Suite 5-500
Los Angeles, California 90012
213 897-3995

DSA San Diego Regional Office

10920 Via Frontera, Suite 300
San Diego, California 92127
858 674-5400