

# Highlights of the International Code Council (ICC) International Building Code® 2009

Notes: In this Code Reference Guide, "fire protection system" means an approved sprinkler system, approved fire alarm system, or both. Numbers in brackets ( ) refer to applicable sections of the code publication.

## Power Operated Doors (1008.1.4.2)

- in power failure, doors must be capable of being opened manually, or closed where necessary to safeguard means of egress
- forces to operate manually must not exceed those specified in section 1008.1.2, except the force to set the door in motion shall not exceed 50 pounds, and door shall swing to full width of opening
- full-power-operated doors shall comply with Builders Hardware Manufacturers Association (BHMA) A156.10, power-assisted and low-energy operators shall comply with BHMA A156.19
- exceptions for group I-3, horizontal sliding doors complying with section 1008.1.3.3, and bi-parting doors

## Access-Controlled Egress Doors (1008.1.4.4)

Entrance doors and entrance doors to tenant spaces in groups A, B, E, M, 1-2, R-1, or R-2 may be equipped with an approved entrance and egress access control system installed in accordance with all of the following:

- sensor on egress side must detect an occupant approaching the door - door must unlock by a signal from, or loss of power to the sensor, and
- loss of power to locking device must unlock the door, and
- door shall unlock by a readily-accessible manual unlocking device (push button) marked "Push to Exit", located 40 inches to 48 inches above the floor within 5' of the door, and manual unlocking device must interrupt power to the lock, independent of the access control system, door must unlock for 30 seconds, and
- fire alarm or sprinkler system must unlock the door until system is reset, and
- entrance doors in Groups A, B, E, and M shall not be secured from the egress side when the building is open to the general public

## Door Operations (1008.1.9)

- Unless otherwise allowed within 1008.1.9, egress doors must always be openable from the egress side without using a key, special knowledge, or extraneous effort.
- operating devices on accessible doors shall not require tight grasping, tight pinching, or twisting of the wrist to operate
- door handles, pulls, latches, locks, and other operating devices shall be installed 34" minimum and 48" maximum above the floor
  - locks used for security purposes and not used for normal operation are permitted at any height
  - Locks used on access doors protecting pools, spas, and hot tubs can have operable parts up to 54" above the finished floor.

## Locks and Latches (1008.1.9.3)

Locks and latches shall be permitted to prevent operation of doors in the following conditions:

- places of detention or restraint
- in Group A with an occupant load of 300 or less, Groups B, F, M., and S, and in churches, the main exterior door may have a key operated lock on the egress side as long as:
  - lock is a type which can be readily distinguishable as locked, and
  - on or adjacent to the door on the egress side there is a sign (THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED) in 1 inch high letters on a contrasting background, and
  - use of key-operated locking device may be revoked by the building official for due cause
- where automatic flush bolts are used, the door leaf equipped with automatic flush bolts shall not have a door knob or surface mounted hardware, and the unlatching of any leaf shall not require more than one operation
- in Group R, egress doors from individual dwelling units or sleeping units having an occupant load of 10 or less may have a night latch, dead bolt, or security chain - devices must be openable from the inside without the use of a key or tool
- on fire doors where the elevated temperature has disabled the unlatching device in accordance with the listed fire test procedures.

## Bolt Locks (Flush and Surface Bolts) (1008.1.9.4)

Manually operated flush bolts and surface bolts are not permitted anywhere other than the following:

- in individual sleeping/dwelling units.
- on a pair of doors serving a storage or mechanical room.
- on a pair of doors in a Group B, F, or S occupancy that serves fewer than 50 occupants where the inactive leaf has no surface trim such as knobs, levers, panic bars, or similar hardware.
- on a pair of doors in a Group B, F, or S occupancy, that serves any number of occupants if building has an approved fire sprinkler system and the inactive leaf has no surface trim such as knobs, levers, panic bars, or similar hardware and is not required for egress width.
- on a pair of doors serving patient rooms in Group I-2 occupancy and the inactive leaf is not required for egress width.

## Unlatching (1008.1.9.5)

Unlatching any leaf shall not require more than one operation; exceptions: places of detention or restraint, where manual bolts are permitted by section 1008.1.8.4, doors with auto flush bolts and doors from individual dwelling units and guest rooms as permitted by section 1008.1.8.3

**Special Delayed Egress Locks for Group I-2 (1008.1.9.6)**  
delayed egress devices may be used in group I-2 occupancies when the building is equipped throughout with an automatic sprinkler or automatic smoke or heat detection system, as long as (note that the first three requirements are not applicable in areas where patients need to be restrained as a functioning part of an I-2 mental facility):

- upon actuation of the fire alarm or sprinkler system, there must be no delay, and
  - there is no delay upon loss of power to the egress control device, and
  - the device has the capability of being unlocked manually by a signal from the fire command center or nurse station, and
  - the emergency plan (see ch. 4 of IFC) contains procedures for the operation of the unlocking system, and
  - all clinical staff has keys, codes, or other modes to operate the unlocking device(s) as needed, and
  - emergency lighting must be provided at the door
- a building occupant shall not encounter more than 1 delay before entering an exit

**Delayed Egress Locks (1008.1.9.7)**  
delayed egress devices may be used in any occupancy except Group A, E, and H, in buildings equipped throughout with an automatic sprinkler or automatic smoke or heat detection system, as long as:

- upon actuation of the fire alarm or sprinkler system, there must be no delay, and
  - there is no delay upon loss of power to the egress control device, and
  - the device has the capability of being unlocked manually by a signal from the fire command center, and
  - latch is released within 15 seconds when a force of 15 pounds maximum is applied for 1 second, device may only be rearmed manually; exception: code official may approve 30 second delay, and
  - initiation of cycle shall activate audible alarm in vicinity of door, and
  - sign with 1" high letters mounted on the door within 12" of the release device states "Push until alarm sounds. Door can be opened in 15 seconds.", and
  - emergency lighting must be provided at the door
- a building occupant shall not encounter more than 1 delay before entering an exit

**Electromagnetically Locked Egress Doors (1008.1.9.8)**  
Egress doors in A, B, E, M, R-1, or R-2 occupancies that are not required to have panic devices are allowed to have electromagnetic locks in addition to listed hardware that has a built-in switch and meets the following requirements:

- the operation of the listed hardware is simple and obvious, and
- the listed hardware can be operated no matter the lighting conditions, and
- when the listed hardware is operated, the electromagnetic lock releases, unlocking the door, and
- loss of power to the listed hardware automatically releases the electromagnetic lock, unlocking the door.

**Stairway Doors (1008.1.9.10)**  
Interior stairway means of egress doors shall be openable from both sides without the use of a key or special knowledge or effort.

Exceptions:

- stairway discharge doors shall be openable from the egress side and shall only be locked from the opposite side
- section 403.12 refers to high-rise buildings (over 75 feet in height) and states that stair doors which are locked on the stair side must unlock simultaneously without unlatching upon a signal from the fire command system, and that a telephone or other 2-way communication device connected to a constantly attended station must be provided at every fifth floor if the stair doors are locked
- in stairways serving not more than 4 stories, doors may be locked on the stair side, as long as they are not locked on the egress side provided they are openable from the egress side and capable of being unlocked simultaneously without unlatching upon a signal from the fire command system

**Panic and Fire Exit Hardware (1008.1.10)**  
Doors equipped with latches in groups A or E and serving an occupant load greater than 50 or in groups H-1, H-2, H-3, H-5 regardless of occupant load shall have panic hardware

- actuating portion of device must extend at least 1/2 the width of the door leaf
- maximum force to unlatch is 15 pounds
- balanced doors with panic hardware must have push-pad type panics, and the pad shall not extend more than one-half the width of the door measured from the latch side
- Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet wide that contain overcurrent devices, switching devices or control devices with exit access doors must be equipped with panic hardware and doors must swing in the direction of egress.

**Positive Pressure (715.4.1)**  
Fire doors must be tested in accordance with NFPA 252 or UL10C; after 5 minutes into the NFPA 252 test, the neutral pressure level in the furnace shall be 40" or less above the sill

**Temperature Rise Doors (715.4.4)**  
Fire doors in vertical exit enclosures and exit passageways shall have a max. transmitted temperature end point of not more than 450°F above ambient after 30 minutes of fire test exposure; exception: not required in buildings equipped throughout with an automatic sprinkler system