



Electronic Locking Device Uses on Egress Doors

Building Division Interpretations and Procedures

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Issue

The limited use of special electronic locking devices on exit doors is a reality that must be addressed in today's office and technology buildings. Providing a safe exiting system is one of the most fundamental safety features in any building. To maintain an unobstructed and undiminished path of exit travel, criteria for acceptance of these locking devices is established to preserve the level of building safety intended by the International Building Code.

Background

The provisions addressing the design and function of the means of egress system are found in IBC Section 1001. The scoping section of Chapter 10 states: *Buildings or portions thereof shall be provided with a means of egress system as required by this chapter. A means of egress is defined as "A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way." A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge.* As noted, the means of egress system must provide a continuous and unobstructed path of egress travel. A locked door that requires a code, key, or other special knowledge or effort to open is considered an egress pathway obstruction.

Specific language regarding door operation is emphasized in IBC Section 1010.1.9. With some exceptions, *"The unlatching of any door leaf shall not require more than one operation."* The code is providing certainty that the means of egress system remains unobstructed at all times so occupants can safely and quickly exit the building.

With the increasing need for building and office security in today's business climate, we are seeing the growing use of electronic locking devices on doors along the exit pathway. In installations where the doors have a time delay lock release feature or "Delayed Egress Lock," the IBC provides specific criteria for approval in Section 1010.1.9.7. Installation of "Access-controlled egress doors" on entrance doors of buildings and tenant spaces is addressed in IBC Section 1010.1.9.8.

Installation of electromagnetically locked egress doors is addressed in IBC Section 1010.1.9.9. The end result of these provisions is very similar to what would occur if regular door locks or latches were installed; the door must always be openable from the egress side without special knowledge or effort when occupants need to exit the building.

City of Bellevue Policy on Security Locks Installed on Group B Occupancy Egress Doors

There are cases when, in order to maintain adequate security in office buildings, the options to egress the building may be affected. An electronic locking device requiring a card key, code, security clearance or special knowledge, may only be installed within the means of egress path when the installation complies with all of the following:

1. The floor area served by the egress path in which the electronic locking device is installed shall include the elevator lobby and may include other rooms and spaces adjacent to and directly connected to the elevator lobby but shall not exceed an occupant load of 30 or 1000 square feet of total floor area.

Exception: The occupant load may be increased to 75 and the floor area may be increased to 2500 square feet maximum when one exit leads directly from the described floor area into an interior exit stairway per IBC 1023, without passing through any door equipped with a device affecting egress in that direction, including any electronic locking device or any device per IBC 1010.1.9.7, 1010.1.9.8, or 1010.1.9.9.

2. The doors shall unlock upon loss of power controlling the lock or lock mechanism (locks shall be fail-safe), and the doors shall remain unlocked until the power supply is restored.
3. The door locking system shall have the capability of being deactivated at the fire command center and other approved locations, where a fire command center or other approved locations are provided.
4. The building shall be provided with an approved automatic sprinkler system throughout.
5. An approved smoke detector shall be installed within the elevator lobby in accordance with the manufacturer's listing instructions and shall initiate a general fire alarm when activated.
6. Activation of the building alarm system shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.
7. A building occupant shall not be required to pass through more than one access-controlled egress door lock before entering an approved and unobstructed means of egress.
NOTE: Once an occupant has selected one of two possible paths of egress, an unobstructed path back in the exact reverse direction is not intended.
8. The doors shall be arranged to unlock from a manual unlocking device on the secured side, located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within five

feet (1524 mm) and in the same plane as the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO UNLOCK EXIT DOOR" or "PUSH TO OPEN EMERGENCY EXIT", or similar wording conveying the same message elements. When operated, the manual unlocking device shall result in direct interruption of power to the lock, independent of the access control system electronics, and the door shall remain unlocked for minimum of 30 seconds. The manual unlocking device shall meet the currently adopted edition of ICC A117.1.

Exception: When the occupant load of the lobby is such that only one exit access is required per IBC Section 1015.1 and access to both stair enclosures is available without having to pass through the elevator lobby, only one door is required to be provided with a manual release device, exit sign and emergency light, as specified above.

9. Emergency lighting and exit signage shall be provided at all secured doors where a manual unlocking device is installed. See IBC Sections 1008 and 1013.
10. Unless otherwise permitted by the building code, occupants shall have unobstructed access to not less than two separate exits off the floor after leaving the elevator lobby via the designated exit complying with all criteria specified in this policy.
11. The electronic locking/unlocking device(s) shall be listed and labeled by an approved, accredited electrical products testing laboratory.
12. The installation of cover devices must be approved by the Building Official and Fire Marshal prior to installation.
13. Electronic locking devices shall be removed or otherwise rendered inoperative immediately if they are not maintained in proper working order and in compliance with all conditions of this policy.

For questions concerning required permits, contact Development Services (425-452-4121) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4).

Signature Gregg Schrader Date: 12/18/2019
Gregg Schrader, PE, SE, Building Official

Attachments **Supersedes:** IBC-06-001