

ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS

* This information is a guideline for bringing the passenger elevator into compliance with ASME A17.3, 1996 as adopted by the State of Florida and Georgia. This is not a comprehensive list of every code within this section. It addresses the most common elevator violations. **For more specifics on any code item referenced or for any additional questions please contact Traveler Elevator for a free survey at 888-718-7283.**

CAB DOOR RESTRICTION SYSTEM (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 2.7.4.)

- (a) When a car is outside the unlocking zone, the hoistway doors or car doors shall be so arranged that they cannot be opened more than 4 in. from inside the car.
- (b) When the car doors are so arranged that they cannot be opened when the car is outside the unlocking zone, the car doors shall be opened from outside the car without the use of a special tool.
- (c) The doors shall be unlocked when the car is within 3 inches above or below the landing and shall be permitted to be unlocked up to 18 inches above or below the landing.

Firefighters' Service (A17.3 1996 - 3.11.3)

All elevators shall conform to the requirements of ASME/ANSI A17.1-1987 RULES 211.3 through 211.8 unless at the time of installation or alteration it was required to comply with a later edition of a 17.1.

All elevators that are a part of a group shall conform to identical firefighters' service operation requirements regardless of which edition A17.1 they complied with at the time of their installation or alteration. The Phase I and Phase II switches for all elevators in a building shall be operable by the same key.

All automatic (non-designated attendant) elevators having a travel distance of 25 feet or more above or below the designated level shall be equipped with Phase I Emergency Recall Operation as required by ASME 17.1-1987, Rules 211.3a and 211.3b.

At least one elevator shall be equipped with Phase II Emergency In-Car Operation, as required by ASME 17.1-1987, Rule 211.3c; and

(1) In buildings with multiple elevators, at least one elevator to each floor served by an elevator shall be equipped with Phase II Emergency In-Car Operation.

All designed attendant elevators having a travel distance of 25 feet or more above or below the designated level shall be equipped with emergency controls, as required by ASME A17.1-1987, Rule 211.4.

IN-CAR KEY OPERATED STOP SWITCH (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 3.10.4(t))

In-car Stop Switch. On passenger elevators equipped with non-perforated enclosures, a stop switch, either key operated or behind a locked cover, may be provided in the car located in or adjacent to the car operating panel. The switch must be clearly and permanently marked "STOP" and shall indicate the stop and run positions. The switch shall be positively opened mechanically and its opening shall not be solely dependent on springs. When opened, this switch shall cause the electric power to be removed from the elevator driving machine motor and brake.

TOP-OF-CAR OPERATING DEVICES (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 3.10.3.)

(a) Elevators with automatic or continuous-pressure operation shall have a continuous-pressure button operating switch mounted on the top of the car for the purpose of operating the car solely from the top of the car.

(b) The means for transferring the control of the elevator to the top-of-car operating device shall be on the car top and located between the car crosshead and the side of the car nearest the hoistway entrance normally used for access to the car top.

ACCESS TO HOISTWAY (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 2.7.3(a).)

Hoistway door unlocking devices or hoistway access switches shall be provided on elevators having hoistway doors which are unlocked when closed with car at landing, or locked but opened from the landing by means effective only when the car is in the landing zone. Hoistway door unlocking devices may be provided at all landings for emergency purposes.

(a) Hoistway Door Unlocking Devices. Hoistway door unlocking devices shall conform to the following:

1. The device shall unlock and permit the opening of the hoistway door from the access landing irrespective of the position of the car.
2. The device shall be designed to prevent unlocking the door with common tools.
3. The operating means for unlocking the door shall be available to and used only by inspectors, elevator maintenance and repair personnel, and qualified emergency personnel.
4. The unlocking-device keyway shall be located at a height not greater than 6 feet-11 inches above the floor.

TOE GUARDS (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 3.3.2.)

The entrance side of the platform of passenger elevators and freight elevators shall be provided with smooth metal guard plates of not less than 0.0598 inches thick steel, or material of equivalent strength and stiffness, adequately reinforced and braced to the car platform and conforming to the following:

(a) It shall be extended not less than the full width of the widest hoistway door opening.

(b) It shall have a straight vertical face, extending below the floor surface of the platform, of not less than the depth of the leveling, landing, or truck zone, plus 3 inches. The vertical face shall be a minimum of 21 inches except, where practical limitations do not permit 21 inches the maximum reasonable length shall be provided.

(c) If new guards are installed, the lower portion of the guard shall be bent back at an angle of not less than 60 degrees nor more than 75 degrees from the horizontal.

(d) The guard plate shall be securely braced and fastened in place to withstand a constant force of not less than 150 lbf applied at right angles to and at any portion on its face without deflecting more than 1/4 inches and without permanent deformation.

Platform guards are a safety device used to prevent evacuated passengers from falling back into the hoistway upon exiting the elevator cab if it is above floor level.

EMERGENCY CAR ILLUMINATION (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 3.4.5)

(d) Passenger elevators shall be provided with a standby (emergency) lighting power source on each elevator conforming to the following:

1. The standby system shall provide general illumination in the car. The intensity of illumination 4 feet above the car floor and approximately 1 foot in front of the car-operating device shall be not less than 0.2 ftc. Lights shall be automatically turned on in all elevators in service immediately after normal car lighting power fails. The power system shall be capable of maintaining the above light intensity for a period of at least 4 hours.
2. Not less than two lamps shall be provided.

CAR EMERGENCY SIGNALING DEVICES (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 3.11.1.)

Elevators shall be provided with the following signaling devices.

(a) In all buildings, the elevator shall be provided with the following:

1. An audible signaling device, operable from the emergency stop switch, when provided, and from a switch marked "ALARM" which is located in or adjacent to each car operating panel. The signaling device shall be located inside the building and audible inside the car and outside the hoistway. One signaling device may be used for a group of elevators.
2. Means of two-way conversation between the car and a readily accessible point outside the hoistway which is available to emergency personnel.
3. If the audible signaling device, or the means of two-way conversation, or both, are normally connected to the building power supply, they shall automatically transfer to a source of emergency power within 10 seconds after the normal power supply fails. The power source shall be capable of providing for the operation of the audible signaling device for at least 1 hour, and the means of two-way conversation for at least 4 hours.

(b) In buildings in which a building attendant is not continuously available to take action when the required emergency signal is operated, the elevator shall be provided with a means within the car for communication with or signaling to a service which is capable of taking appropriate action when a building attendant is not available.

ACCESS TO PITS (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 2.3.1.)

(a) Means of access for authorized personnel shall be provided to all pits.

(b) Where a separate pit access door is provided, it shall be self-closing and provided with a spring-type lock arranged to permit the door to be opened from inside the pit without a key. Such doors shall be kept locked.

(c) Keys to unlock the pit access door shall be kept on the premises in a location readily accessible to authorized personnel, but not where they are accessible to the general public. The keys shall be permitted to be the same as those used for the machine room access door.

PIT STOP SWITCH (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 2.3.3.)

A stop switch conforming to the requirements of 3.10.4(e) shall be provided in the pit of every elevator. The switch shall be located adjacent to the normal pit access.

3.10.4(e) Stop Switch on Top of Car. A stop switch shall be provided on top of every elevator car, which shall cause the electric power to be removed from the elevator driving machine motor and brake; and

1. Be of manually operated and closed type;
2. Have red operating handles or buttons;
3. Be conspicuously and permanently marked "STOP" and shall indicate the stop and run positions;
4. Be positively opened mechanically (opening shall not be solely dependent on springs).

EMERGENCY EXITS (ASME A17.3 – 1996 SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS. SECTION 3.4.4.)

(a) Top Emergency Exits

1. For elevators installed in enclosed hoistways, cars shall be provided with a top emergency exit with a cover hinged or otherwise attached to the car top so that the cover can be opened from the top of the car only and opens outward.
2. For multi-deck elevator cars, the exit cover of the lower compartment shall be opened from either compartment.
3. For elevators installed in unenclosed hoistways:
 - a. (a) Top emergency exits shall not be installed in cars in an unenclosed hoistway. Existing top emergency exits shall be permanently secured closed.
 - b. (b) Where an elevator is installed in a single blind hoistway, there shall be installed in the blind portion of the hoistway an emergency door at every third floor, but not more than 36 feet from sill to sill conforming to the following:
 1. The clear opening shall be at least 28 inches wide and 6 feet-6 inches high.
 2. It shall be easily accessible and free from fixed obstructions.
 3. It shall be either of the horizontal sliding or swinging single-Section type, irrespective of the type of door installed at other landings.
 4. It shall be self-closing and self-locking and shall be marked, in letters not less than 2 inches high, "DANGER, ELEVATOR HOISTWAY."
 5. It shall be provided with an electric contact conforming to the requirements of 2.7.5.
 6. It shall be unlocked from the landing side only through the use of a cylinder-type lock, having not less than a five-pin or five-disk combination. The cylinder shall:
 - a. not be unlocked by any key or combination which will open any other lock or device used for any purpose in the building;
 - b. be so designed that the key shall be removable only in the locked position.
 7. The key combination shall be kept where it is available only to authorized persons.

(b) Side Emergency Exits. Side emergency exit doors or panels, where provided, shall have a lock arranged so that the door may be opened from the inside of the car only by a special shaped removable key and outside the car by means of a non-removable handle. All side emergency car exits shall be equipped with electric contacts to prevent the movement of the car if the exit door or panel is not closed. Side emergency door panels shall open only into the car.