

APPENDIX K
MODIFIED INDUSTRY STANDARDS FOR ELEVATORS AND
CONVEYING SYSTEMS

CHAPTER K1

MODIFICATIONS TO ASME A17.1-2013,

SAFETY CODE FOR ELEVATORS AND ESCALATORS

K101.1 General. As referenced by Chapter 30 of the *New York City Building Code*, the provisions of ASME A17.1-2013 shall be modified in accordance with this chapter. The section numbers correlate to those in the referenced ASME standard. Refer to the rules of the department for any subsequent additions, modifications or deletions that may have been made to this standard in accordance with Section 28-103.19 of the *Administrative Code*.

PART 1
GENERAL

SECTION 1.1
SCOPE

1.1.4 Effective date.

Delete Section 1.1.4 in its entirety.

SECTION 1.2
PURPOSE AND EXCEPTIONS

1.2.1 Purpose.

Delete and revise Section 1.2.1 to read as follows:

The purpose of this Code is to provide for the safety of life and limb, and to promote the public welfare. Compliance with this Code shall be achieved by:

- (a) conformance with the requirements in ASME A17.1/CSA B44; or
- (b) conformance with some of the requirements in ASME A17.1/CSA B44 and for systems, subsystems, components, or functions that do not conform with certain requirements in ASME A17.1/CSA B44, conform with the applicable requirements in ASME A17.7/ CSA B44-07, subject to the approval of the Commissioner; or
- (c) conformance with the requirements in ASME A17.7/CSA B44.7, subject to the approval of the Commissioner.

SECTION 1.3
DEFINITIONS

1.3 Add or delete and revise the following definitions to Section 1.3 as follows:

Delete and revise the definition of “Alternate level” to read as follows:

ALTERNATE LEVEL: Alternate levels shall be located in accordance with the following provisions:

- (a) Where no blind hoistway exists, the alternate level shall be three (3) levels above the designated level.
- (b) Where blind hoistways exist, the alternate level shall be the second level above the blind hoistway.
- (c) The sky lobby alternate level shall be three (3) levels above the sky lobby designated level.

(d) Where the designated level is the top floor, the alternate level shall be one floor below the designated level.

Delete and revise the definition of “Building code” to read as follows:

BUILDING CODE: New York City Building Code.

Delete and revise the definition of “Control space, elevator, dumbwaiter, material lift” to read as follows:

CONTROL SPACE, ELEVATOR, DUMBWAITER, MATERIAL LIFT: A space outside the hoistway, intended to be accessed with or without full bodily entry, that contains the motor controller. The space could also contain electrical and/or mechanical equipment used directly in connection with the elevator, dumbwaiter, or material lift but not the electric driving machine or the hydraulic machine. (See Nonmandatory Appendix Q).

Add new definition of “Hospital emergency service” to read as follows:

HOSPITAL EMERGENCY SERVICE: A special operating control function that may be provided for elevators in Occupancy Group I-2 (Hospital) or other applicable medical facility used to transport a patient in a life or death situation.

Delete and revise the definition of “In-car stop switch” to read as follows:

IN-CAR STOP SWITCH: A device located in the car that, when manually operated, causes the electric power to be removed from the driving-machine motor and brake of an electric elevator or from the electrically operated valves and pump motor of a hydraulic elevator.

Add new definition of “Load, balanced” to read as follows:

LOAD, BALANCED: The amount of weight measured as a percentage of the car capacity that must be placed in the elevator such that the suspended load of the car side is equal to the suspended load of the counterweight side.

Add new definition of “Lobby, elevator” to read as follows:

LOBBY, ELEVATOR: see *landing, elevator or material lift*.

Delete and revise the definition of “Occupant Evacuation Operation” to read as follows:

OCCUPANT EVACUATION OPERATION (OEO): The operation of an elevator system for occupant evacuation under emergency conditions.

Add new definition of “Patient elevator” to read as follows:

PATIENT ELEVATOR: An elevator located in a building classified in Occupancy Group I-2 (Hospital) reserved for the “sole” use of vertical transportation of nonambulatory patients who are incapable of self-preservation because of age, physical or mental disability. Hospital staff or other passengers transporting a patient are permitted to ride with the patient. Such elevators must be operated by a designated attendant and shall meet the requirements of Sections 2.27.4 and 2.27.5.3.

Add new definition of “Sky lobby” to read as follows:

SKY LOBBY: The lowest landing of an elevator or a group of elevators located above the street level.

Add new definition of “Smoke hole” to read as follows:

SMOKE HOLE: An opening for venting at the top of the elevator hoistway(s).

PART 2
ELECTRIC ELEVATORS

SECTION 2.1
CONSTRUCTION OF HOISTWAYS AND HOISTWAY ENCLOSURES

2.1.2 Construction at top and bottom of the hoistway.

Delete and revise Section 2.1.2.1 to read as follows:

2.1.2.1 Construction at top of the hoistway. The top of the hoistway shall be enclosed as required by the building code. A metal or concrete roof or floor shall be provided at the top of the hoistway and shall comply with Section 2.1.3.

2.1.4 Control of smoke and hot gases.

Delete Section 2.1.4 in its entirety.

2.1.5 Windows and skylights.

Delete and revise Section 2.1.5 to read as follows:

2.1.5 Windows and skylights.

Windows in the walls of hoistway enclosures are prohibited. Windows and skylights and their frames and sashes in machine rooms and control rooms shall conform to the requirements of the building code (see Section 1.3).

2.1.6 Projections, recesses, and setbacks in hoistway enclosures.

Delete and revise Subsections (a) and (c) of Section 2.1.6.2 to read as follows:

2.1.6.2 On sides not used for loading and unloading

(a) beams, floor slabs, or other building construction making an angle less than 75 deg with the horizontal shall not project more than 50 mm (2 in) inside the hoistway enclosure unless the top surface of the projection is beveled at an angle not less than 75 deg with the horizontal

(c) where recesses or setbacks exceeding 50 mm (2 in) occur in the enclosure wall, the top of the recess or setback shall be beveled at an angle of not less than 75 deg with the horizontal

SECTION 2.2
PITS

2.2.2 Design and construction of pits.

Delete and revise Section 2.2.2.5 to read as follows:

2.2.2.5 Elevators with sprinklers in the hoistway shall be provided with a drain or sump pump. The sump pump/drain shall have the capacity to remove a minimum of 11.4 m³/h (3,000 gal/h) per elevator.

2.2.4 Pit access.

Add new Subsection (f) to Section 2.2.4.5 to read as follows:

2.2.4.5 Separate pit access door, when provided, shall be subject to the following requirements:

(f) Pit doors shall be labeled “DANGER, ELEVATOR PIT” with letters not less than 51 mm (2 in.) high.

SECTION 2.5
HORIZONTAL CAR AND COUNTERWEIGHT CLEARANCES

2.5.1 Clearances between cars, counterweights, and hoistway enclosures.

Delete and revise Section 2.5.1.3 to read as follows:

2.5.1.3 Between cars in multiple hoistways. The running clearance between the cars and any equipment attached thereto, of elevators operating in a multiple hoistway, shall be not less than 50 mm (2 in.). Where the clearance between elevators exceeds 762 mm (30 in), emergency access doors shall be provided for each elevator and shall conform with Sections 2.11.1.1 and 2.11.1.2.

SECTION 2.7
MACHINERY SPACES, MACHINE ROOMS, CONTROL SPACES, AND CONTROL ROOMS

2.7.2 Maintenance path and clearance.

Delete and revise Section 2.7.2.4.1 to read as follows:

2.7.2.4.1 Where a space is intended to be accessed with full bodily entry, then the requirements of Section 2.7.2.3 shall apply. When the machine space is inside the hoistway, the following shall apply:

- (a) All components of driving machines, motors, brakes and governors shall be installed within 915 mm (36 inches) horizontally from the inside edge of the car top railing, or from the edge of the car top, if a car top railing is not required by Section 2.14.1.7.1.
- (b) The top of all components of driving machines, motors, brakes and governors shall be located no more than a maximum of 1825 mm (72 inches) vertically above the car enclosure top working surface when components are located outside the standard railing or car top perimeter, and within 1980 mm (78 inches) vertically when the components are located within the standard railing or car top perimeter.
- (c) The maximum vertical dimensions shall be measured from the car top working surface when the car has been moved as per Subsection 2.26.1.4.2(g) and the locking means required by Subsections 2.7.5.1.1 and 2.7.5.1.2(c) has been engaged.

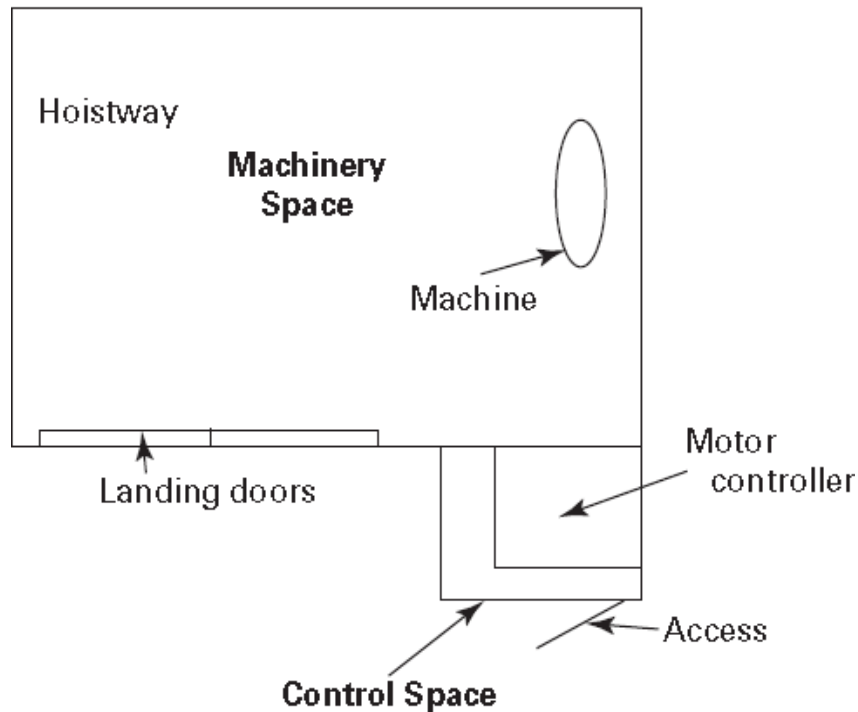
2.7.3 Access to machinery spaces, machine rooms, control spaces, and control rooms.

Add new Subsection (d) to Section 2.7.3.1.1 to read as follows:

2.7.3.1.1 A permanent and unobstructed means of access shall be provided to:

- (d) A control space for elevators must only be located where working clearances required for the control space will not impede upon the path of travel in unrestricted areas. Where the elevator control space is located in a path of travel in an unrestricted area, a clear path of travel parallel to the control space must not be less than the required working clearance plus 1219 mm (48 in) perpendicular to the control space. A permanent barricade is needed to establish the working clearances for the control space and must be accessible to elevator personnel from the control space. The barricade must be deployed whenever the doors to the control space are in the open position. (See figure Q-2.)

Fig. Q-2



Add new Subsection (d) to Section 2.7.3.4.1 to read as follows:

2.7.3.4.1 Access doors shall be

(d) labeled “ELEVATOR EQUIPMENT” with letters not less than 51 mm (2 in.) high.

Delete and revise Section 2.7.3.4.2 to read as follows:

2.7.3.4.2 Access doors to machine rooms, control rooms and control spaces shall be provided. They shall be of a minimum width of 750 mm (29.5 in.) and a minimum height of 2 030 mm (80 in.). Keys to unlock the access doors shall be Group 2 Security (see 8.1).

Add new Subsection (d) to Section 2.7.3.4.7 to read as follows:

2.7.3.4.7 Access openings in elevator hoistway enclosures where full bodily entry is not necessary for maintenance and inspection of components shall be

(d) labeled “DANGER: ELEVATOR HOISTWAY” with letters not less than 51 mm (2 in.) high and have an electrical safety switch that will remove power from the hoist machine and brake if the door is opened.

2.7.6 Location of machinery spaces, machine rooms, control spaces, control rooms, and equipment.

Delete and revise Section 2.7.6.3.1 to read as follows:

2.7.6.3.1 The electric driving machine shall be located in a machinery space or machine room. When the driving machine is located inside the hoistway

- (a) an access door conforming to the requirements of Sections 2.7.3.3 and 2.7.3.4 shall be provided for visual observation of the driving machine motor and brake(s).
- (b) landing inspection operation in accordance with Section 2.26.1.4.4 shall be provided at the access door and shall be permitted to be within the frame of the door. The machine and brake must be visible to the operator.

Delete and revise Section 2.7.6.3.2 to read as follows:

2.7.6.3.2 The motor controller shall be located in a machine room, control space, or control room.

NOTE: For electrical clearance requirements, see NFPA 70 or CSA-C22.1, whichever is applicable (see Part 9).

Delete and revise Section 2.7.6.3.4 to read as follows:

2.7.6.3.4 Where a governor is located inside the hoistway, means of access conforming to the requirements of Sections 2.7.3.3 and 2.7.3.4 for inspection and servicing the governor shall be provided from outside the hoistway. This access door is permitted to be the same as the door required by Section 2.7.6.3.1, provided that visual observation of the governor is possible.

Delete and revise Section 2.7.6.4 to read as follows:

2.7.6.4 Means necessary for tests. Where an elevator driving-machine brake or an emergency brake is located in the hoistway or pit, means necessary for tests that require movement of the car or release of the driving-machine brake or emergency brake shall be provided in the machine room, control room, or control space and arranged so that they can be operated from outside the hoistway and shall conform to Sections 2.7.6.4.1 through 2.7.6.4.3. These means are also permitted to be used by elevator personnel for passenger rescue.

Delete and revise the first sentence of Section 2.7.6.4.3 to read as follows:

2.7.6.4.3 A means to move the car from outside the hoistway shall be provided in the control room, control space, or machine room and it shall conform to the following:

2.7.8 Remote machine rooms and control rooms.

Delete and revise Section 2.7.8.4 to read as follows:

2.7.8.4 A permanent means of communication shall be provided between the elevator car, remote machine room and/or control room/control space, and the lobby fire command station (where required or provided).

SECTION 2.8
EQUIPMENT IN HOISTWAYS, MACHINERY SPACES, MACHINE ROOMS,
CONTROL SPACES, AND CONTROL ROOMS

2.8.3 Pipes, ducts, tanks, and sprinklers.

Delete and revise Section 2.8.3.3 to read as follows:

2.8.3.3 Sprinkler systems conforming to NFPA 13 shall be permitted to be installed in the hoistway, subject to Sections 2.8.3.3.1 through 2.8.3.3.4.

Delete and revise Section 2.8.3.3.2 to read as follows:

2.8.3.3.2 Where elevator equipment is located or its enclosure is configured such that application of water from sprinklers could cause unsafe elevator operation, means shall be provided to automatically disconnect the main line power supply to the affected elevator and any other power supplies used to move the elevator upon or prior to the application of water.

(a) This means shall be independent of the elevator control and shall not be self-resetting.

(b) Heat detectors and sprinkler flow switches used to initiate main line elevator power shutdown shall comply with the requirements of NFPA 72.

(c) The activation of sprinklers outside of such locations shall not disconnect the main line elevator power supply. See also Section 2.27.3.3.6.

Delete and revise the first sentence of Section 2.8.3.3.4 to read as follows:

2.8.3.3.4 When sprinklers are installed not more than 600 mm (24 in.) above the pit floor, Subsections 2.8.3.3.4(a) and (b) apply to elevator electrical equipment and wiring in the hoistway located less than 1 200 mm (48 in.) above the pit floor, except earthquake protective devices conforming to Subsection 8.4.10.1.2(d); and on the exterior of the car at the point where the car platform sill and the lowest landing hoistway door sill are in vertical alignment.

SECTION 2.11
PROTECTION OF HOISTWAY OPENINGS

2.11.1 Entrances and emergency doors required.

Delete and revise Section 2.11.1.1 to read as follows:

2.11.1.1 Hoistway landing entrances. All elevator hoistway landing openings shall be provided with entrances that shall guard the full height and width of the openings. Entrances shall be at least 2 030 mm (80 in.) in height and 915 mm (36 in.) in width.

Delete and revise Subsection (a) of Section 2.11.1.2 to read as follows:

2.11.1.2 Emergency doors in blind hoistways. 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 11 m (36 ft) from sill to sill, conforming to the following:

(a) The clear opening shall be at least 915 mm (36 in.) wide and 2 030 mm (80 in.) high.

2.11.2 Types of entrances.

Delete and revise Section 2.11.2.1 to read as follows:

2.11.2.1 Passenger elevators. For passenger elevators, entrances shall be one of the following types:

(a) horizontally sliding

(b) horizontally swinging, single-section

(c) hand- or power-operated vertically sliding that slide up to open

2.11.7 Glass in hoistway doors.

Delete and revise Sections 2.11.7.1 and 2.11.7.1.1 to read as follows:

2.11.7.1 Vision panels. For elevators with automatic or continuous-pressure operation, manually operated or self-closing hoistway doors of the vertically or horizontally sliding type must be provided with a vision panel. In multisection doors, the vision panel is required in one section only, but is permitted to be placed in all sections. All horizontally swinging elevator doors must be provided with vision panels. Vision panels are permitted for any type of hoistway door. Vision panels are not required at the landing of automatic operation elevators equipped with horizontally sliding car and hoistway doors. Where required or used, vision panels must conform to Sections 2.11.7.1.1 through 2.11.7.1.7.

2.11.7.1.1 The area of any single vision panel must not be less than 0.008 m² (12 in²), and the total area of one or more panels in any hoistway door must not be more than .026 m² (40 in²).

2.11.11 Entrances, horizontal slide type.

Delete and revise Subsection (a) of Section 2.11.11.6 to read as follows:

2.11.11.6 Bottom guides. Bottom guides shall conform to the following:

(a) The bottom of each panel shall be guided by two or more members.

2.11.14 Fire tests.

Delete and revise Section 2.11.14.1 to read as follows:

2.11.14.1 Reserved.

Delete and revise Section 2.11.14.2 to read as follows:

2.11.14.2 Sections 2.11.15 through 2.11.18, and 2.11.14.2.1 through 2.11.14.2.3 apply where fire-resistive construction is required by 2.1.1.1.3.

2.11.15 Marking.

Delete and revise Section 2.11.15.1 to read as follows:

2.11.15.1 Labeling of tested entrance assembly. A single label listing covered components included per Section 2.11.15.1.1, or separate labels on all individual components per Section 2.11.15.1.2 shall be provided. Where required by the New York City Building Code, the entire entrance assembly must be of an approved type.

Delete and revise Section 2.11.15.2 to read as follows:

2.11.15.2 Other entrance assemblies. Other entrance assemblies of the three basic types (see Section 2.11.14) shall qualify for labeling or listing/certification:

- (a) when composed of panel(s), frame, and hardware of the same type as tested and not exceeding the overall height and width of any panel and frame of the largest size tested; or
- (b) when such panel(s), frame, and hardware are modified, and test or technical data demonstrates that the modifications will meet the performance requirements of the test procedure in Section 8.3.3.

All other elements of the assembly shall conform to all other applicable requirements of this Code.

Delete and revise Section 2.11.15.3 to read as follows:

2.11.15.3 Entrances larger than tested assemblies. When the entrance is too large for the regularly available test facilities, the certifying organization shall be permitted to issue oversize certificates or oversize labels, or such entrances shall be permitted to be used subject to approval by the commissioner.

2.11.16 Factory inspections.

Delete and revise Section 2.11.16 to read as follows:

2.11.16 Factory inspections.

The manufacturing facilities for the production of entrances or components thereof shall be inspected by the certifying organization at random at least quarterly, or if they are not manufactured on a continuous basis, at the time they are being produced, to assure that production methods are such that entrances or components thereof similar to those tested are being produced.

2.11.17 Transoms and fixed side panels.

Delete and revise the opening paragraph of Section 2.11.17 to read as follows:

2.11.17 Transoms and fixed side panels.

Transoms and fixed side panels shall be permitted to close openings above and beside the horizontally sliding or horizontally swinging type entrances, provided that

2.11.18 Installation instructions.

Delete and revise Section 2.11.18 to read as follows:

2.11.18 Installation instructions.

(a) Instructions detailing the application and installation of door listed/certified panels and entrance hardware shall be provided.

(b) Where frames are used, instructions detailing the listed/certified frame-to-wall interface shall be provided.

2.11.19 Gasketing of hoistway entrances.

Delete and revise the first sentence of Section 2.11.19.4 to read as follows:

2.11.19.4 Labeled gasketing material shall conform to Section 2.11.16.

SECTION 2.12
HOISTWAY DOOR LOCKING DEVICES AND ELECTRIC CONTACTS, AND
HOISTWAY ACCESS SWITCHES

2.12.3 Hoistway door combination mechanical locks and electric contacts.

Delete Section 2.12.3 in its entirety.

2.12.4 Listing/certification door locking devices and door or gate electric contacts.

Delete and revise Section 2.12.4.1 to read as follows:

2.12.4.1 Type tests. Each type and make of hoistway-door interlock, electric contact, and door or gate electric contact must be of an approved type. Hoistway-door combination mechanical locks and electrical contacts are not permitted.

2.12.7 Hoistway access switches.

Delete and revise Subsection (b) of Section 2.12.7.3.3 to read as follows:

2.12.7.3.3 The operation of a hoistway access switch at the landing shall permit movement of the car with the hoistway door located adjacent to the switch at the landing unlocked or not in the closed position, and with only the car door or gate associated with this hoistway door unlocked or not in the closed position, subject to the following requirements:

(b) The car shall not be operated at a speed greater than 0.35 m/s (75 ft/min). For elevators with static control, a means independent from the normal means to control the speed shall be provided to limit the speed of the car on hoistway access operation to a maximum of 0.35 m/s (75 ft/min), should the normal means to control this speed (mechanical, electrical, or solid-state devices) fail to do so.

The car speed-sensing device used for the means to limit the speed of the car while operating in response to an access switch shall be permitted to be either a separate car speed-sensing device from that of the normal speed control system or the same car speed-sensing device, provided that a separate means is used to continuously verify the proper operation of this speed-sensing device. Where the same car speed-sensing device is used, the detection of a failure of this car speed-sensing device while operating in response to an access switch shall cause the power to be removed from the driving machine motor and brake.

The car speed-sensing device(s) and, where required, the verification means described above, shall conform to the following:

(1) a common actuating means (e.g., a driving-machine shaft, brake drum, etc.) shall be permitted provided that it is not dependent on the following connection types, unless the connection is continuously monitored:

(a) traction (excluding the traction between the drive sheave and suspension means and the traction between the governor and governor rope)

(b) friction (except for interference fits), or

(c) a flexible coupling where positive engagement is not assured between coupling halves.

Where monitoring is required, the monitoring shall detect a failure that prevents conformance with this requirement while operating in response to an access switch and shall cause the electric power to be removed from the elevator driving-machine motor and brake.

(2) a common member (e.g., tape, target, wire, etc.) that is sensed by both speed-sensing devices shall be permitted, provided that

(a) the member is monitored such that when its presence is not detected while operating in response to an access switch, this shall cause the electric power to be removed from the elevator driving-machine motor and brake

(b) the common member is securely mounted in such a manner that horizontal movement of the car shall not affect the operation of the sensors

(3) a common mounting means shall be permitted

SECTION 2.13
POWER OPERATION OF HOISTWAY DOORS AND CAR DOORS

2.13.2 Power opening.

Delete and revise Section 2.13.2.1.2 to read as follows:

2.13.2.1.2 Collapsible car gates shall not be power opened.

SECTION 2.14
CAR ENCLOSURES, CAR DOORS AND GATES, AND CAR ILLUMINATION

2.14.1 Passenger and freight enclosures, general.

Delete and revise Section 2.14.1.5.1 to read as follows:

2.14.1.5.1 Top emergency exits shall conform to the following requirements:

- (a) The top emergency exit opening shall have an area of not less than 0.26 m² (400 in.²) and shall measure not less than 508 mm (20 in.) on any side.
- (b) Where the distance between the platform and the top of car escape hatch is 2 743 mm (9 ft.) or greater, the emergency exit opening shall measure not less than 0.37 m² (576 in.²) and shall measure not less than 600 mm (24 in) on any side.
- (c) During an alteration involving installation of a new car enclosure, the top emergency exit opening shall have an area of not less than 0.26 m² (400 in.²) and shall measure not less than 400 mm (16 in.) on any one side where prevailing conditions prevent any increase in opening size.
- (d) The top emergency exit and suspended ceiling opening, if any, shall be so located as to provide a clear passageway, unobstructed by fixed equipment located in or on top of the car. Equipment is permitted directly above the exit opening, provided that
 - (1) it is not less than 1 070 mm (42 in.) above the top of the car; or
 - (2) the exit is located to allow unobstructed passage of a parallelepiped volume measuring 300 mm by 500 mm by 1 500 mm (12 in. by 20 in. by 59 in.) at an angle not less than 60 deg from the horizontal (see Nonmandatory Appendix C).
- (e) The top emergency exit cover shall open outward. It shall be securely attached with a chain when in both the open and closed positions. Hinges are not permitted. The chain shall be not more than 300 mm (12 in.) in length and have a factor of safety of not less than 5. The exit cover shall only be openable from the top of the car, where it shall be openable without the use of special tools. The exit cover of the lower compartment of a multideck elevator shall be openable from both compartments. On elevators with two compartments, if the emergency exit of the lower compartment does not open directly

into the upper compartment, a guarded passageway shall be provided between the lower compartment roof and the upper compartment floor.

(f) The movable portion (exit panel) of the suspended ceiling that is below the top exit opening shall be restrained from falling. It shall not be permitted to be hinged and shall provide a clear opening with the top exit opening.

(1) The movable portion of the suspended ceiling shall measure no less than 600 mm (24 in.) by 600 mm (24 in.).

(2) Where the distance between the platform and the top of car exit is greater than 2 743 mm (9 ft.), the movable portion of the suspended ceiling shall measure no less than 710 mm (28 in.) by 710 mm (28 in.).

(3) The movable portion and the fixed portion of a suspended ceiling shall not contain lamps that could be shattered by the rescue operation using the top emergency exit. The movable portion of the suspended ceiling shall be permitted to contain light fixtures connected to the stationary portion of the suspended ceiling wiring by means of a plug and socket or by flexible armored wiring. Flexible wiring shall not be used to support or restrain the exit opening in the suspended ceiling in the open position.

(g) Where elevators installed in enclosed hoistways are provided with special car top treatments such as domed or shrouded canopies, the exit shall be made accessible, including the car top refuge space as specified in 2.4.12.

(h) Immediately adjacent to the top emergency exit there shall be a space available for standing when the emergency exit cover is open. This space shall be permitted to include a portion of the refuge area (see Section 2.4.12). All exit covers shall be provided with a car top emergency exit electrical device (see Section 2.26.2.18) that will prevent operation of the elevator car if the exit cover is open more than 50 mm (2 in.), and the device shall be so designed that it

(1) is positively opened

(2) cannot be closed accidentally when the cover is removed

(3) must be manually reset from the top of the car and only after the cover is within 50 mm (2 in.) of the fully closed position

(4) shall be protected against mechanical damage

2.14.2 Passenger-car enclosures.

Delete and revise Section 2.14.2.1.1 to read as follows:

2.14.2.1.1

(a) materials in their end-use configuration, other than those covered by Subsections 2.14.2.1.1(b) and (c), 2.14.2.1.3, and 2.14.2.1.4, shall conform to the following requirements, based on the tests conducted in accordance with the requirements of ASTM E84, ANSI/UL 723, NFPA 255, or CAN/ULC-S102:

(1) flame spread rating of 0 to 50

(2) smoke development of 0 to 100

(b) napped, tufted, woven, looped, and similar materials in their end-use configuration on car enclosure walls shall conform to Section 8.3.7. The enclosure walls to which this material is attached shall conform to Subsection 2.14.2.1.1(a).

(c) floor covering, underlayment, and its adhesive shall have a critical radiant flux of not less than 0.45 W/cm², as measured by ASTM E648.

Delete and revise Section 2.14.2.1.2 to read as follows:

2.14.2.1.2 Reserved.

Delete and revise Section 2.14.2.5 to read as follows:

2.14.2.5 Vision panels. Vision panels are not required, but where used, shall meet the following requirements:

(a) Be of a total area of not more than 0.047 m² (72 in²) and contain no single glass panel having a width exceeding 101 mm (4 in.);

(b) Hoistway door vision panels must be protected by protective grills made of number sixteen (16) gauge stainless or galvanized steel in accordance with the following specifications:

(1) Grills shall be sized to fit within or over the vision panel frame and completely cover the vision panel opening in the elevator, car doors and hoistway doors.

(2) Grills and vision panel frames shall be secured by means of non-reversible screws or other tamper proof fasteners.

(3) Grills shall contain openings that shall not be larger than 19 mm (0.75 in.) in diameter.

(4) All cut edges shall be deburred.

(5) Requirements for such grills may be waived if certification is submitted that such elevator is operated manually or twenty-four (24) hour doorman service is provided. A security guard shall not be considered doorman service.

(6) For the purpose of this subsection (b), a vandal resistant 6 mm (0.25 in.) polycarbonate sheet, such as Lexan, in two (2) layers, one (1) on each side of the required wire glass, may be used in lieu of the metal protective.

2.14.4 Passenger and freight car doors and gates, general requirements.

Delete and revise Section 2.14.4.11 to read as follows:

2.14.4.11 Closed position of car doors or gates. Car doors or gates shall be considered to be in the closed position under the following conditions:

(a) for horizontally sliding doors or gates, when the clear open space between the leading edge of the door or gate and the nearest face of the jamb does not exceed 25 mm (1 in.) except where car doors are provided with a car door interlock(s), 10 mm (0.375 in.)

(b) for vertically sliding counterweighted doors or gates, when the clear open space between the leading edge of the door or gate and the car platform sill does not exceed 25 mm (1 in.)

(c) for horizontally sliding center-opening doors, or vertically sliding biparting counterbalanced doors, when the door panels are within 25 mm (1 in.) of contact with each other, except where horizontally sliding center-opening car doors are provided with a car door interlock(s), 10 mm (0.375 in.)

2.14.5.10 Folding Car Doors

Section 2.14.5.10 is renumbered Section 2.14.6.4.

2.14.7 Illumination of cars and lighting fixtures.

Delete and revise Section 2.14.7.1.4 to read as follows:

2.14.7.1.4 Each elevator shall be provided with lighting and a duplex receptacle fixture on the car top and under the car platform. The lighting shall be permanently connected, fixed, or portable, or a combination thereof, to provide an illumination level of not less than 100 lx (10 fc) measured at the point of any elevator part or equipment, where maintenance or inspection is to be performed from the car top or under the car platform. All lighting shall be equipped with guards. The light switch shall be accessible from the landing when accessing the car top or under the car platform.

SECTION 2.15 **CAR FRAMES AND PLATFORMS**

2.15.8 Protection of platforms against fire.

Delete and revise Section 2.15.8 to read as follows:

2.15.8 Protection of platforms against fire.

Exposed wood shall not be used on Fire Service Access Elevators and Occupant Evacuation Elevators. All platform materials exposed to the hoistway shall be either of the following:

(a) metal

(b) other materials that, in their end-use configuration, conform to the following requirements, based on the tests conducted in accordance with the requirements of ASTM E84, UL 723, NFPA 255, or CAN/ULC-S102.2, whichever is applicable (see Part 9):

(1) flame spread rating of 0 to 50

(2) smoke development of 0 to 100

SECTION 2.16 **CAPACITY AND LOADING**

2.16.1 Minimum rated load for passenger elevators.

Delete and revise Section 2.16.1.3 to read as follows:

2.16.1.3 Carrying of freight on passenger elevators. When freight is to be carried on a passenger elevator, the requirements of Sections 2.16.1.3.1, 2.16.1.3.2 and 2.16.1.3.3 shall be conformed to.

2.16.1.3.1 The minimum rated load shall conform to Sections 2.16.1 or 2.16.2, whichever is greater.

2.16.1.3.2 The elevator shall be designed for applicable class of freight elevator loading.

2.16.1.3.3 Nonpermanent freight-handling equipment (Section 2.14.1.9.1), and freight materials, shall be removed when the elevator is used for passenger service.

2.16.3 Capacity and data plates.

Delete and revise Section 2.16.3.2.1 to read as follows:

2.16.3.2.1 Capacity plates must indicate the rated load of the elevator in pounds or kilograms and pounds (see Appendix D). In addition, this plate or a separate plate shall indicate

(a) the capacity lifting one-piece loads where the elevator conforms to Section 2.16.7

(b) for freight elevators designed for Class C2 loading, the maximum load the elevator is designed to support while being loaded or unloaded (see Subsection 2.16.2.2.4(c)), and

(c) calculated per Appendix D, the number of persons on passenger elevators and freight elevators permitted by Section 2.16.4 to carry passengers.

Add new Subsection (f) to Section 2.16.3.2.2 to read as follows:

2.16.3.2.2 Data plates shall indicate

(f) the weight required for balanced load.

Add new Section 2.16.10 to read as follows:

2.16.10 Detection of overload on passenger elevators and freight elevators permitted by Section 2.16.4 to carry passengers.

Passenger elevators and freight elevators permitted by Section 2.16.4 to carry passengers must be designed with the means to detect if the load exceeds the rated capacity of the elevator. If an overload is detected, the elevator doors must reopen and remain open and a voice notification and visual signal must indicate that the car is overloaded.

SECTION 2.18
SPEED GOVERNORS

2.18.1 Speed governors required and location.

Delete and revise Section 2.18.4.1.3 to read as follows:

2.18.4.1.3 The switches required in Section 2.18.4.1.1 shall remain in the open position until manually reset. Manual reset is defined here as personal intervention by elevator personnel at the governor and can include means such as a finger, hand or cable-actuated lever, or some form of electromechanical actuation from the access door specified in Section 2.7.6.3.4.

Add new Subsection (c) and Note to Section 2.18.4.2.5 to read as follows:

2.18.4.2.5 The speed-governor overspeed switch shall be permitted to open in the down direction of the elevator at not more than 100% of the speed at which the governor is set to trip in the down direction, subject to the following requirements:

(c) An access door is required when the governor is installed at the top of the hoistway for access to reset switches by elevator personnel. The access door must comply with Section 2.7.3.4.6.

NOTE: Manual reset is defined here as personal intervention by elevator personnel at the governor.

SECTION 2.20
SUSPENSION MEANS AND THEIR CONNECTIONS

2.20.1 Suspension means.

Delete and revise Section 2.20.1 to read as follows:

2.20.1 Suspension means.

Elevator cars and counterweights shall be suspended by steel wire ropes, or noncircular elastomeric-coated steel suspension members attached to the car frame or passing around sheaves attached to the car frame specified in Section 2.15.1. Suspension means that have previously been installed and used on another installation shall not be reused. All suspension members in a set of suspension means shall be the same material, grade, construction, and

dimensions. A suitable means shall be provided to protect the suspension means during the installation process.

Only the following shall be permitted:

(a) steel wire ropes constructed in accordance with ASME A17.6, Part 1

(b) noncircular elastomeric-coated steel suspension members constructed in accordance with ASME A17.6, Part 3

2.20.2 Suspension-means data.

Delete and revise Subsection (a) of Section 2.20.2.2.2 to read as follows:

2.20.2.2.2 The following data shall be provided:

(a) type of suspension (steel wire rope or noncircular elastomeric-coated steel suspension member)

2.20.4 Minimum number and diameter of suspension means.

Delete Section 2.20.4.2 in its entirety.

Section 2.20.4.3 is renumbered to Section 2.20.4.2.

2.20.9 Suspension-member fastening.

Delete and revise Section 2.20.9.5 to read as follows:

2.20.9.5 Wedge rope sockets. The use of wedge rope socket assemblies shall be permitted only for steel wire ropes. When used, the wedge rope socket assemblies shall be of a design as shown in Fig. 2.20.9.5 and shall conform to Sections 2.20.9.2, 2.20.9.3, and 2.20.9.5.1 through 2.20.9.5.7. Socket and wedge surfaces that contact the rope shall be free of burrs or sharp edges that could damage the rope. Wedge rope sockets are not permitted on counterweighted winding drum machines.

Delete Section 2.20.9.5.5 in its entirety.

Section 2.20.9.5.6 is renumbered to Section 20.9.5.5.

Section 2.20.9.5.7 is renumbered to Section 20.9.5.6.

SECTION 2.21 **COUNTERWEIGHTS**

2.21.1 General requirements.

Add new Section 2.21.1.2.1 to read as follows:

2.21.1.2.1 Weight section material. Weight section material shall be steel, iron or lead only and shall have a minimum melting temperature of 620°F (327°C).

SECTION 2.22 **BUFFERS AND BUMPERS**

2.22.4 Oil buffers.

Delete and revise Section 2.22.4.6 to read as follows:

2.22.4.6 Means for determining oil level. Oil buffers shall be provided with means for determining that the oil level is within the maximum and minimum allowable limits. Transparent sight gauges shall be permitted to be used provided they meet the requirements for the purpose in accordance with good engineering practice. They shall resist shock loading on the buffer or pressure rise as a result of impact, and not be stained by the presence of buffer oil or a means shall be provided to ensure that any staining does not affect the reading of the oil level.

- (a) A fixed inclined ladder shall be provided where the top of the buffer cylinder is over 1 524 mm (5 ft.) in height above the pit floor.
- (b) A fixed vertical or inclined ladder fitted with an inspection and maintenance platform with guard rails shall be provided where the top of the car buffer cylinder is over 2 134 mm (7 ft.) from the pit floor.

SECTION 2.24 **DRIVING MACHINES AND SHEAVES**

2.24.2 Sheaves and drums.

Delete and revise Section 2.24.2.1.1 to read as follows:

2.24.2.1.1 Sheaves. Driving-machine sheaves shall be integral with or directly attached to driving machine shafts. Sheaves shall be provided with steel shafts and metal bearings. Non-metallic sheaves are not permitted.

Delete Section 2.24.2.3.2 in its entirety.

Section 2.24.2.3.3 is renumbered to 2.24.2.3.2.

Section 2.24.2.3.4 is renumbered to 2.24.2.3.3.

2.24.10 Means for inspection of gears.

Delete and revise Section 2.24.10 to read as follows:

2.24.10 Means for inspection of gears.

Each gear case of geared machines shall have access to permit inspection of the contact surfaces of the gears.

SECTION 2.25
TERMINAL STOPPING DEVICES

2.25.3 Final terminal stopping devices.

Add new Subsection (d) to Section 2.25.3.1 to read as follows:

2.25.3.1 General requirements. Final terminal stopping devices shall conform to Section 2.25.1 and the following:

(d) Final limit switches and bracket shall be permanently secured and pinned.

Delete and revise Section 2.25.3.3.1 to read as follows:

2.25.3.3.1 Traction machine elevators shall have final terminal-stopping switches located in the hoistway and operated by cams attached to the car.

SECTION 2.26
OPERATING DEVICES AND CONTROL EQUIPMENT

2.26.1 Operation and operating devices.

Add new Items 3 and 4 to Subsection (c) of Section 2.26.1.4.1 to read as follows:

2.26.1.4.1 General requirements.

(c) Inspection operating devices shall

(3) be provided with a separate device of the continuous-pressure type labeled “ENABLE”, adjacent to the inspection operating devices; and

(4) become effective only when the “ENABLE” device is activated.

Add new Item 3 to Subsection (e) of Section 2.26.1.4.2 to read as follows:

2.26.1.4.2 Top-of-car inspection operation. Top-of-car inspection operation shall conform to Section 2.26.1.4.1 and the following:

(e) The inspection operating devices (see Subsection 2.26.1.4.1(c)) shall be permitted to be of the portable type, provided that

(3) when the machine is located in the hoistway, inspection operating devices shall be of the portable type.

Delete and revise Subsection (g) of Section 2.26.1.4.2 to read as follows:

(g) When in top-of-car inspection operation, a separate additional device shall be permitted to render ineffective the top final terminal stopping device, and the buffer switch for gas spring-return counterweight oil buffers, in conformance with the requirements of Subsections

2.26.4.3, 2.26.9.3.1(a), 2.26.9.3.2, and 2.26.9.4, and it shall allow the car to be moved to a position in conformance with the requirements of Subsections 2.7.4.5 and 2.7.5.1.3(c). When operating in the up direction with these devices rendered ineffective, the elevator shall stop when it reaches its maximum upward movement and shall be able to travel in the down direction without the need for any devices to be manually reset.

2.26.2 Electrical protective devices.

Delete and revise Section 2.26.2.5 to read as follows:

2.26.2.5 Emergency stop switch. On all elevators, an emergency stop switch must be provided in the car, and located in or adjacent to each car operating panel. When open (“STOP” position), this switch must cause the electric power to be removed from the elevator driving-machine motor and brake. Emergency stop switches must:

- (a) Be of the manually opened and closed type;
- (b) Have red operating handles or buttons;
- (c) Be conspicuously and permanently marked “STOP” and must indicate the “STOP” and “RUN” positions; and
- (d) While opened, cause the audible device to sound (see Section 2.27.1.2).

Delete and revise Section 2.26.2.21 to read as follows:

2.26.2.21 Reserved.

Delete Section 2.26.2.33 in its entirety.

2.26.5 System to monitor and prevent automatic operation of the elevator with faulty door contact circuits.

Add new Exception to Section 2.26.5 to read as follows:

EXCEPTION: When operating on Firefighters’ Service Phase II, item (b)(2) shall not be permitted.

2.26.6 Phase protection of motors.

Delete and revise Section 2.26.6 to read as follows:

2.26.6 Phase protection of motors.

Elevators having a polyphase AC power supply shall be provided with means to prevent the operation of the elevator drive motor or door motor if a reversal of phase rotation, or phase failure of the incoming polyphase AC power, will cause the elevator car or elevator door(s) to operate in the wrong direction.

SECTION 2.27
EMERGENCY OPERATION AND SIGNALING DEVICES

Add new Note to the header of Section 2.27 to read as follows:

NOTE: Additional requirements, including those for firefighters' communications systems, Fire Service Access Elevators (see Section 2.27.10) and Occupant Evacuation Operation (see Section 2.27.11), may be found in the building code.

2.27.1 Car emergency signaling devices.

Delete and revise Section 2.27.1.1 to read as follows:

2.27.1.1 Emergency communications. The two-way communications shall conform to 2.27.1.1.1 through 2.27.1.1.6.

2.27.1.1.1 A communications means between the car and a location staffed by authorized personnel who can take appropriate action shall be provided.

2.27.1.1.2

(a) Two-way voice communication shall be provided between the elevator car and elevator machine room, and/or control room.

(b) If the call is not acknowledged [Subsection 2.27.1.1.3(c)] within 45 s, the call shall be automatically directed to an alternate on- or off-site location.

2.27.1.1.3 The permanent two-way communication means within the car shall comply with the following requirements:

(a) ICC/ANSI A117.1.

(b) A push button to actuate the two-way communication means shall be provided in or adjacent to a car operating panel. The push button shall be visible and permanently identified with the "PHONE" symbol (see Section 2.26.12.1). The identification shall be on or adjacent to the "PHONE" push button. The communications means shall be initiated when the push button is actuated.

(c) On the same panel as the "PHONE" push button, a message shall be displayed that is activated by authorized personnel to acknowledge that communications are established. The message shall be permitted to be extinguished where necessary to display a new message [see Subsections 2.27.1.1.3(d) and 2.27.1.1.3(e)] or when the communications are terminated.

(d) On the same panel as the "PHONE" push button, messages shall be displayed which permit authorized personnel to communicate with and obtain responses from a trapped passenger(s) including a passenger(s) who cannot verbally communicate or cannot hear.

- (e) On the same panel as the “PHONE” push button, a message shall be displayed that is activated by authorized personnel to indicate when help is on the way. The message shall continue to be displayed until a new message is displayed [see Subsection 2.27.1.1.4(c)] or the communication is terminated.
- (f) The communications means shall provide on demand to authorized personnel, information that identifies the building location and elevator number.
- (g) The communications, once established, shall be disconnected only when authorized personnel terminate the call or a timed termination occurs. A timed termination by the communications means in the elevator, with the ability to extend the call by authorized personnel, is permitted if voice notification is sent by the communications means to authorized personnel a minimum of 3 min after communication has been established. Upon notification, authorized personnel shall have the ability to extend the call; automatic disconnection shall be permitted if the means to extend are not enacted within 20 s of the voice notification.
- (h) The communications means shall not use a handset in the car.
- (i) The communications shall not be transmitted to an automated answering system. The call shall be answered by authorized personnel.
- (j) Operating instructions shall be incorporated with or adjacent to the “PHONE” push button.
- (k) A means to display video to observe passengers at any location on the car floor, to authorized personnel for entrapment assessment, shall be provided.

2.27.1.1.4 Where the elevator rise is 18 m (60 ft) or more, a permanent two-way voice communication means within the building accessible to emergency personnel shall be provided at the designated level, and shall comply with the following requirements:

- (a) The means shall enable emergency personnel within the building to establish communications to each car individually. The communications shall be established without any intentional delay and shall not require intervention by a person within the car. The means shall override voice communications to outside of the building.
- (b) The communications, once established, shall be disconnected only when emergency personnel outside the car terminates the call or a timed termination occurs. A timed termination by the communications means in the elevator, with the ability to extend the call by emergency personnel, is permitted if voice notification is sent by the communications means to emergency personnel a minimum of 3 min after communication has been established. Upon notification, emergency personnel shall have the ability to extend the call; automatic disconnection shall be permitted if the means to extend are not enacted within 20 s of the voice notification.
- (c) Once the communications have been established, a message shall be displayed on the same panel as the “PHONE” push button, that is activated by emergency

personnel, to indicate that help is on site. The message shall be permitted to be extinguished where necessary to display a new message [see Subsection 2.27.1.1.4(e)] or when the communications are terminated.

(d) Operating instructions shall be incorporated with or adjacent to the communications outside the car. Instructions shall conform to Section 2.27.7.3.

(e) On the same panel as the “PHONE” push button, messages shall be displayed that permit emergency personnel to communicate with and obtain responses from a trapped passenger including a passenger who cannot verbally communicate or cannot hear. If the means of communication is behind a locked panel, it shall be accessible with the NYC Fire Department standard and New York City standard keys.

(f) A means to display video to observe passengers at any location on the car floor to emergency personnel for entrapment assessment shall be provided. The communications system shall be located within the fire command center where one is provided.

2.27.1.1.5 If the two-way communications means is normally connected to the building power supply, it shall automatically transfer to a source of standby or emergency power as required by the applicable building code or, where applicable, Standard for Health Care Facilities (ANSI/NFPA-99), after the normal power supply fails. The power source(s) shall be capable of providing for the means of communications [see Sections 2.27.1.1.3 and 2.27.1.1.4] for at least 4 h; and the audible signaling device (see Section 2.27.1.2) for at least 1 h.

2.27.1.1.6

(a) The voice communications means within the car shall include a means to verify operability of the telephone line, where

(1) verification of the telephone line operability shall be automatically performed

(2) verification may be continuous or periodic

(3) periodic verification shall be at least on a daily basis

(4) verification shall not require activation of the communications link(s). If means other than a telephone line (e.g., VOIP, network, intercom, etc.) is used for the communications, similar verification of this equivalent means shall be performed.

(b) If the verification means in 2.27.1.1.6(a) determines that the telephone line or equivalent means is not functional, an audible and illuminated visual signal shall be activated. A minimum of one visual and one audible signal shall be provided for each group of elevators controlled by a “FIRE RECALL” switch.

(1) The visual signal shall

(a) be located at the designated level in the vicinity of the “FIRE RECALL” switch and visible to elevator user(s)

(b) be labeled “ELEVATOR COMMUNICATIONS FAILURE” in red letters a minimum of 5 mm (0.25 in.) high

(c) illuminate intermittently

(d) continue illuminating intermittently until the telephone line or equivalent means is functional

(2) The audible signal shall

(a) be 10 dBA minimum above ambient, but shall not exceed 80 dBA measured at the designated landing “FIRE RECALL” switch

(b) sound at least once every 30 s with a minimum duration of half a second

(c) continue to sound until silenced by authorized personnel or the telephone line or equivalent means is functional

(3) A means to silence the audible signal shall be provided and shall be accessible only to authorized personnel. The signal when silenced shall remain silent for a period of no less than 12 hr or until activated by the next failed periodic verification [see 2.27.1.1.6(a)(3)].

(4) The verification means in 2.27.1.1.6(a) shall continue to monitor the operability of the telephone line or equivalent means while the telephone line or equivalent means is not functional on a continuous basis or periodically with intervals of not more than 5 min.

When the verification determines that the operability of the telephone line or equivalent means has been restored after being nonfunctional, the audible signal shall be silenced unless the signal has already been silenced in accordance with 2.27.1.1.6(b)(3) and the illuminated visual signal shall be extinguished.

2.27.2 Emergency or standby power system.

Delete and revise Section 2.27.2.4.1 to read as follows:

2.27.2.4.1 A selector switch(es) marked “ELEVATOR EMERGENCY POWER” in red lettering a minimum of 5 mm (0.25 in.) in height, that is key operated or under a locked cover (see Section 2.27.8), shall be provided to permit the selection of the elevator(s) to operate on the emergency or standby power system. The key shall be Group 3 Security (see Section 8.1). (NYC Fire Department and NYC standard keys.)

Delete and revise Section 2.27.2.4.3 to read as follows:

2.27.2.4.3 Means shall be provided adjacent to the selector switch(es) to indicate that the elevator is at the designated level with the doors in the normally open position.

2.27.3 Firefighters’ Emergency Operation: Automatic elevators.

Delete and revise the Note to Section 2.27.3 to read as follows:

2.27.3 Firefighters’ Emergency Operation: Automatic elevators.

Firefighters’ Emergency Operation shall apply to all automatic elevators except where the hoistway or a portion thereof is not required to be fire-resistive construction (see 2.1.1.1), the rise does not exceed 2 000 mm (80 in.), and the hoistway does not penetrate a floor.

NOTE: When the structure (building, etc.) is located in a flood hazard area, the alternate and designated levels (see Section 8.12.1) should be above the base flood elevation.

Delete and revise Section 2.27.3.1 to read as follows:

2.27.3.1 Phase I Emergency Recall Operation.

2.27.3.1.1 A two-position key-operated switch that will not change position without a deliberate action by the user, shall be

(a) provided at the designated or sky lobby level for each single elevator or for each group of elevators.

(b) labeled “FIRE RECALL” and its positions marked “NORMAL” and “FIREMAN SERVICE” (in that order). The “FIRE RECALL” letters shall be a minimum of 5 mm (0.25 in.) high. Text shall be either red on a background that contrasts with red, or a color that contrasts with red on a red background.

(c) located in the lobby or sky lobby within sight of the elevator or all elevators in that group and shall be readily accessible.

Delete and revise Section 2.27.3.1.2 to read as follows:

2.27.3.1.2 An additional key-operated “FIRE RECALL” switch, with two positions that will not change position without a deliberate action by the user, marked “NORMAL” and “FIREMAN

SERVICE” (in that order), shall be permitted only at the fire command center and the secondary fire command center where provided.

Delete and revise Section 2.27.3.1.3 to read as follows:

2.27.3.1.3 The switch(es) shall be rotated clockwise to go from the “NORMAL” to “FIREMAN SERVICE” positions. Keys shall be removable in the “NORMAL” and “FIREMAN SERVICE” positions.

Delete and revise Section 2.27.3.1.5 to read as follows:

2.27.3.1.5 All “FIRE RECALL” switches shall be provided with an illuminated visual signal (see Fig. 2.27.3.1.6(h)) to indicate when Phase I Emergency Recall Operation is in effect.

Delete and revise Section 2.27.3.1.6 to read as follows:

2.27.3.1.6 When a “FIRE RECALL” switch is in the “FIREMAN SERVICE” position, all cars controlled by the switch shall operate as follows:

- (a) A car traveling towards the designated or sky lobby level shall continue nonstop to the designated or sky lobby level and power operated doors shall open and remain open. On cars with more than one entrance, if the doors for another entrance can be opened at the designated or sky lobby level, only the doors serving the lobby where the “FIRE RECALL” switch is activated shall automatically open and remain open. Once at the designated or sky lobby level, all in-car door open button(s) shall be operative. Once the doors at an entrance other than the entrance serving the lobby where the “FIRE RECALL” switch is activated, are opened by means of an in-car door open button, they shall initiate reclosing within 15 s of reaching the normal open position.
- (b) A car traveling away from the designated or sky lobby level shall reverse at or before the next available landing without opening its doors and proceed to designated or sky lobby level.
- (c) A stopped car shall have the in-car stop switch (see Section 2.26.2.21) and the emergency stop switch in the car (see Section 2.26.2.5) when provided, rendered inoperative as soon as the car moves away from the landing. A moving car shall have the in-car stop switch and the emergency stop switch in the car when provided, rendered inoperative without delay. Once the emergency stop switch in the car and the in-car stop switch have been rendered inoperative, they shall remain inoperative while the car is on Phase I Emergency Recall Operation. All other stop switches required by Section 2.26.2 shall remain operative.
- (d) A car standing at a landing other than the designated or sky lobby level, with the doors open and the in-car stop switch and the emergency stop switch in the car when provided, in the run position, shall conform to the following:
 - (1) Elevators having automatic power-operated horizontally sliding doors shall close the doors without delay and proceed to the designated level.

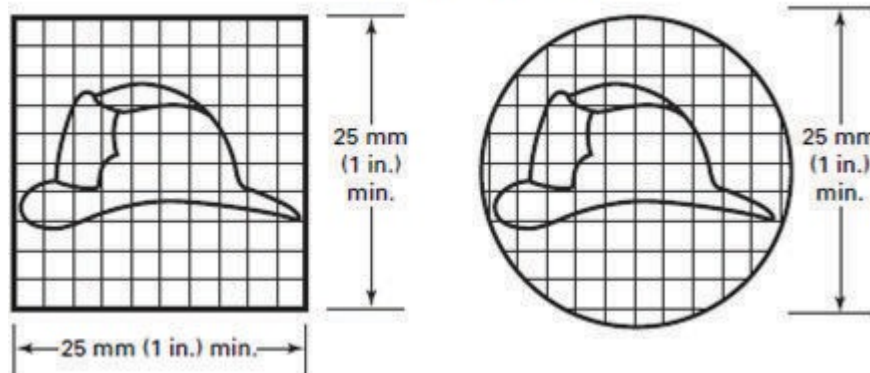
- (2) Elevators having power-operated vertically sliding doors provided with automatic or momentary pressure closing operation shall have the closing sequence initiated without delay in accordance with Section 2.13.3.4, and the car shall proceed to the designated level.
- (3) Elevators having power-operated doors provided with continuous pressure closing operation (see Section 2.13.3.2), or elevators having manual doors, shall be provided with a visual and audible signal system [see Subsection 2.27.3.1.6(h)] to alert an operator to close the doors and shall, when the doors are closed, proceed to the designated level. Sequence operation, if provided, shall remain effective.
- (e) Door reopening devices for power-operated doors that are sensitive to smoke or flame shall be rendered inoperative without delay. Door reopening devices not sensitive to smoke or flame (e.g., mechanically actuated devices) are permitted to remain operative.
- (1) Door closing for power-operated horizontally sliding doors shall conform to Section 2.13.5.
- (2) Door closing for power-operated vertically sliding doors shall conform to Section 2.13.6.1.2 and shall have an average closing car door or gate speed not to exceed 0.20 m/s (0.67 ft/s).
- (f) Floor selection means, lanterns, and indicators
- (1) in the car
- (a) floor selection means shall be rendered inoperative
- (b) car call-registered lights and car lanterns, where provided, shall be extinguished and remain inoperative
- (c) position indicators and car-direction indicators, where provided, shall remain operative
- (2) at the fire command center and secondary fire command center where provided
- (a) position indicators and car-direction indicators shall remain operative
- (3) at the designated or sky lobby level
- (a) hall call-registered lights and hall lanterns, where provided, shall be extinguished and remain inoperative
- (b) position indicators and car-direction indicators, where provided, shall remain operative

- (4) at all landings, except at the designated or sky lobby level
- (a) hall call-registered lights and hall lanterns, where provided, shall be extinguished and remain inoperative
 - (b) position indicators and car-direction indicators, where provided, shall be extinguished and remain inoperative
- (g) Where provided on elevators with vertically sliding doors, corridor door open and door close buttons shall remain operative.
- (h) An illuminated visual and audible signal system shall be activated. The visual signal shall be one of the symbols shown in Fig. 2.27.3.1.6(h) and located on the car-operating panel. The entire circular or square area or the outline of the hat, or the outline of the area shown in Fig. 2.27.3.1.6(h) shall be illuminated. The visual signal shall remain activated until the car is restored to automatic operation. When the door is open, the audible signal shall remain active until the door is closed. When the door is closed, the audible signal shall remain active for a minimum of 5 s. The audible signal shall not be active when the car is at the recall level.
- (i) A car stopped at a landing shall have the in-car door open button(s) rendered inoperative as soon as the car moves away from the landing. The in-car door open button(s) shall remain inoperative when a car stops to reverse direction. Once the in-car door open button(s) has been rendered inoperative, it shall remain inoperative until the car has returned to the designated level.
- (j) Where additional “FIRE RECALL” switches are provided, any “FIRE RECALL” switches shall be in the “FIREMAN SERVICE” position to recall the elevator to the designated level if the elevator was recalled to the alternate level (see 2.27.3.2.4).
- (k) To remove the elevator(s) from Phase I Emergency Recall Operation, the “FIRE RECALL” switch shall be rotated to the “NORMAL” position, provided that
- (1) the additional two-position “FIRE RECALL” switch, where provided, is in the “NORMAL” position
 - (2) no fire alarm initiating device is activated (see Section 2.27.3.2)
- (l) Means used to remove elevators from normal operation shall not prevent Phase I Emergency Recall Operation, except
- (1) as specified in this Code
 - (2) as controlled by elevator personnel
- (m) No device that measures load shall prevent operation of the elevator.

(n) If the normal power supply, emergency power supply, and standby power supply are not available and the elevator is equipped with an alternate source of power that can move the car to a floor, but is insufficient to move the car to the recall level, the following requirements shall apply:

- (1) The visual signal [2.27.3.1.6(h)] shall extinguish.
- (2) A car that is not at a landing shall move to the closest landing it is capable of reaching.
- (3) A car that has automatic power-operated horizontally sliding doors or power-operated vertically sliding doors provided with automatic closing operation and is stopped at a landing, shall open the doors, and then within 15 s, initiate reclosing.
- (4) A car that is stopped at a landing shall have its door open button operative.
- (5) A car stopped at a landing shall not move until normal power, emergency power, or standby power becomes available.

Fig. 2.27.3.1.6(h) Visual Signal



2.27.3.2 Phase I Emergency Recall Operation by fire alarm initiating devices.

Delete and revise the first sentence of Section 2.27.3.2.1 to read as follows:

2.27.3.2.1 Smoke detectors or other automatic fire detectors in environments not suitable for smoke detectors (fire alarm initiating devices) used to initiate Phase I Emergency Recall Operation shall be installed in conformance with the requirements of NFPA 72, and shall be located

Delete and revise Section 2.27.3.2.2 to read as follows:

2.27.3.2.2 Reserved.

Delete and revise Subsections (c) and (e) of Section 2.27.3.2.3 to read as follows:

2.27.3.2.3 Phase I Emergency Recall Operation to the designated level shall conform to the following:

(c) The activation of a fire alarm initiating device specified in Subsection 2.27.3.2.1(c) shall cause all elevators having any equipment in that hoistway, and any associated elevators of a group automatic operation, to be returned nonstop to the designated level, except that initiating device(s) installed at or below the designated landing shall cause the car to be sent to the alternate level.

(d) The Phase I Emergency Recall Operation to the designated level shall conform to Subsections 2.27.3.1.6(a) through (n).

Delete and revise Section 2.27.3.2.5 to read as follows:

2.27.3.2.5 The recall level shall be determined by the first activated fire alarm initiating device for that bank (see Section 2.27.3.2.1 or 2.27.3.2.2). If the car(s) is recalled to the designated level by the “FIRE RECALL” switch(es) [see also 2.27.3.1.6(j)], the recall level shall remain the designated level.

Delete and revise the first sentence of Section 2.27.3.2.7 to read as follows:

2.27.3.2.7 Listed relay(s) or other listed appliance(s) as specified and defined in NFPA 72 for connection to the fire alarm system shall be provided, and shall be

Delete and revise Section 2.27.3.3 to read as follows:

2.27.3.3 Phase II Emergency In-Car Operation. A three-position (“NORMAL”, “HOLD,” and “FIREMAN SERVICE”, in that order) key-operated switch that will not change position without a deliberate action by the user, shall be labeled “FIRE OPERATION,” provided in an operating panel in each car, and shall be readily accessible. The label “FIRE OPERATION” lettering shall be a minimum of 5 mm (0.25 in.) high. Text shall be either red on a background that contrasts with red, or a color that contrasts with red on a red background. It shall become effective only when Phase I Emergency Recall Operation is in effect and the car has been returned to the recall level.

The switch shall be rotated clockwise to go from “NORMAL” to “HOLD” to “FIREMAN SERVICE”. The key shall only be removable in the “NORMAL” and “HOLD” position. For elevators with power-operated doors, the “NORMAL”, “HOLD,” and “FIREMAN SERVICE” positions shall not change the mode of operation within Phase II Emergency In-Car Operation until the car is at a landing with the doors in the normal open position, except as required by Sections 2.27.3.3.4 and 2.27.3.4. The three modes of operation within Phase II In-Car Operation, “NORMAL”, “HOLD,” and “FIREMAN SERVICE”, are specified by Sections 2.27.3.3.1 through 2.27.3.3.4.

For elevators with manual doors, after the car and hoistway doors have been opened at least once at the recall level, the “NORMAL”, “HOLD,” and “FIREMAN SERVICE” positions shall then change the mode of operation in accordance with Sections 2.27.3.3.1 through 2.27.3.3.4.

Delete and revise Section 2.27.3.3.1 to read as follows:

2.27.3.3.1 When the “FIRE OPERATION” switch is in the “FIREMAN SERVICE” position, the elevator shall be on Phase II Emergency In-Car Operation, for use by emergency personnel only, and the elevator shall operate as follows:

(a) The elevator shall be operable only by a person in the car.

(b) Floor selection means, lanterns, and indicators

(1) in the car

(a) floor selection means shall function as required in Subsection 2.27.3.3.1(i)

(b) car call-registered lights, where provided, shall remain operative

(c) car lanterns, where provided, shall remain inoperative

(d) position indicators and car-direction indicators, where provided, shall remain operative

(2) at the fire command center

(a) position indicators and car-direction indicators, where provided, shall remain operative

(3) at the designated level

(a) the car shall not respond to hall calls

(b) hall call-registered lights, where provided, shall remain inoperative, except where associated cars of a group have been returned to group automatic operation

(c) position indicators and car-direction indicators, where provided, shall remain operative

(4) at all landings, except at the designated level

(a) the car shall not respond to hall calls

(b) hall call-registered lights, where provided, shall remain inoperative, except where associated cars of a group have been returned to group automatic operation

(c) position indicators, car-direction indicators, and hall lanterns, where provided, shall remain inoperative

(c) Door open and close buttons shall be provided for power-operated doors only and located as required by Section 2.27.3.3.7. Buttons shall be a minimum of 19 mm (0.75 in.) in the smallest dimension. The door open and door close buttons shall be labeled “OPEN” and “CLOSE” and when applicable “REAR OPEN” and “REAR CLOSE” or “SIDE OPEN” and “SIDE CLOSE” in lettering a minimum of 5 mm (0.25 in.) in height with a contrasting background. The labeling shall be on or adjacent to the buttons. The door open and close buttons shall be operative when the elevator is stopped within an unlocking zone.

(d) The opening of power-operated doors shall be controlled only by a continuous-pressure door open button. If the button is released prior to the doors reaching the normal open position, the doors shall automatically reclose. Requirements 2.13.3.3, 2.13.3.4, 2.13.4.2.1(b)(2), and 2.13.4.2.1(c) do not apply. All door open button(s) in the car shall be operational.

(e) Open power-operated doors shall be closed only by momentary pressure on the door close button. Where provided, additional door close button(s) in the car shall be operational.

(f) Opening and closing of power-operated car doors or gates that are opposite manual swing or manual slide hoistway doors shall conform to 2.27.3.3.1(d) and (e).

(g) All door reopening devices, except the door open button(s), shall be rendered inoperative. Full-speed closing shall be permitted. Landing door opening and closing buttons, where provided, shall be rendered inoperative.

(h) Every car shall be provided with a button labeled “CALL CANCEL” that shall be effective during Phase II Emergency In-Car Operation. When activated, all registered calls shall be canceled and a traveling car shall stop at or before the next available landing. The button shall be a minimum of 19 mm (0.75 in.) in the smallest dimension. Button labeling shall be in lettering a minimum of 5 mm (0.25 in.) in height with a contrasting background. The labeling shall be on or adjacent to the button.

(i) Floor selection means shall be provided in the car to permit travel to all landings served by the car, and shall be operative at all times, except as in Sections 2.27.3.3.2 and 8.12.1. Means to prevent the operation of the floor selection means or door-operating buttons shall be rendered inoperative. Floor selection means that provide access to all landings served by the elevator shall be located below the firefighters’ operating devices. The floor selection means shall be operable without the use of keys, cards, tools, or special knowledge. Where buttons not accessible to the public are provided, they shall be a minimum of 19 mm (0.75 in.) in the smallest dimension.

(j) A traveling car shall stop at the next available landing for which a car call was registered. When a car stops at a landing, all registered car calls shall be canceled.

(k) Means used to remove elevators from normal operation shall not prevent Phase II Emergency In-Car Operation, except

(l) as specified in this Code

(2) as controlled by elevator personnel

(l) No device that measures load shall prevent operation of the elevator at or below the capacity and loading required in Section 2.16.

(m) If the normal power supply, emergency power supply, and standby power supply are not available and the elevator is equipped with an alternate source of power that can move the car to a floor, but is insufficient to move the car to all landings, the following requirements shall apply:

(1) The visual signal [2.27.3.1.6(h)] shall illuminate intermittently.

(2) A car that is not at a landing shall not start until a car call is entered. After a car call is entered, the car shall move to the closest landing it is capable of reaching.

(3) A car stopped at a landing shall not move until normal power, emergency power, or standby power becomes available.

Delete and revise Sections 2.27.3.3.3, 2.27.3.3.4, and 2.27.3.3.5 to read as follows:

2.27.3.3.3 When the car is at a landing other than the recall level, with the doors in the normal open position, and the “FIRE OPERATION” switch is in the “NORMAL” position, power-operated doors shall operate as follows:

(a) Horizontal sliding doors shall close automatically. All door reopening devices shall remain inoperative. Door open buttons in the car shall remain operative. Full-speed closing is permitted. If the “FIRE OPERATION” switch is turned to the “FIREMAN SERVICE” or “HOLD” position prior to the completion of door closing, the doors shall reopen.

(b) Elevators having vertically sliding doors shall have corridor “DOOR OPEN” and “DOOR CLOSE” buttons rendered operative. All door reopening devices shall remain inoperative. Door closing shall be in accordance with Subsection 2.27.3.3.1(e). Full-speed closing is permitted. If the “FIRE OPERATION” switch is turned to the “FIREMAN SERVICE” or “HOLD” position prior to the completion of door closing, the doors shall reopen.

2.27.3.3.4 When the doors are in the closed position and the “FIRE OPERATION” switch is placed in the “NORMAL” position, the car shall return to the recall level in conformance with Subsections 2.27.3.1.6(a) through (n) and 2.27.3.2.5. If the normal power supply, emergency power supply, and standby power supply are not available and the elevator is equipped with an alternate source of power that can move the car to a floor, and the “FIRE OPERATION” switch in the car is in the “NORMAL” position, the following requirements shall apply:

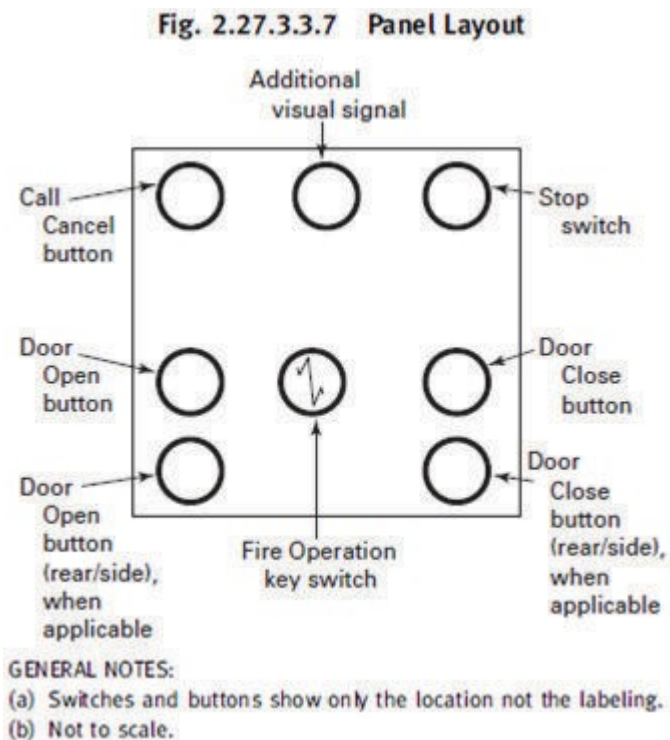
(a) The visual signal [2.27.3.1.6(h)] shall illuminate intermittently.

(b) The requirements of 2.27.3.1.6(n)(2) through (5) shall apply.

2.27.3.3.5 Elevators shall be removed from Phase II Emergency In-Car Operation only when the “FIRE OPERATION” switch is in the “NORMAL” position and the car is at the designated level and the doors are in the normal open position.

Delete and revise Section 2.27.3.3.7 to read as follows:

2.27.3.3.7 The “FIRE OPERATION” switch (2.27.3.3), the “CALL CANCEL” button (2.27.3.3.1(h)), and the additional visual signal (2.27.3.3.8), shall be grouped together as shown in Fig. 2.27.3.3.7, exposed and accessible, on the cover of the main car operating panel and shall be located more than 1 220 mm (48 in.) and less than 1 830 mm (72 in.) above the floor as measured to the centerline of the “CALL CANCEL” button, “FIRE OPERATION” switch and visual signal.



Delete Section 2.27.3.3.8 in its entirety.

Delete and revise Subsections (b) and (d) of Section 2.27.3.4 to read as follows:

2.27.3.4 Interruption of power. The failure and subsequent restoration of electrical power (normal, emergency, or standby) shall not cause any elevator to be removed from Phase I Emergency Operation or Phase II Emergency In-Car Operation.

(b) Elevators on Phase II Emergency In-Car Operation with the key in the “NORMAL” position shall be permitted to move only to the next floor in the direction of the recall level to reestablish absolute car position prior to conforming to Sections 2.27.3.3.3 and 2.27.3.3.4. If the key is moved to the “FIREMAN SERVICE” or “HOLD” position before the doors are fully

closed, Subsections 2.27.3.4(c) or (d) shall apply, and automatic power-operated doors shall open if in a leveling zone.

(d) Elevators on Phase II Emergency In-Car Operation with the key in the “FIREMAN SERVICE” position shall not move, except for leveling within a leveling zone, until a car call is entered. Automatic power-operated doors shall not move until a door open or close button is pressed; after which they shall conform to Subsections 2.27.3.3.1(d) and (e). After a car call is entered, the car shall be permitted to move only to the next floor in the direction of the recall level to reestablish absolute car position prior to answering car calls.

Delete and revise Section 2.27.3.5 to read as follows:

2.27.3.5 Multicompartment elevators. Multicompartment elevators shall also conform to Sections 2.27.3.5.1 through 2.27.3.5.10 and shall be designed to have a usable hoistway entrance for the lower compartment when the upper compartment is at the designated or alternate level.

When the upper compartment has been recalled to the designated or alternate level and Phase I Emergency Recall Operation is in effect, the car and hoistway doors for both compartments shall open.

Delete and revise Sections 2.27.3.5.1, 2.27.3.5.2, 2.27.3.5.3, 2.27.3.5.4 and add new Sections 2.27.3.5.5 through 2.27.3.5.10 to read as follows:

2.27.3.5.1 The “FIRE RECALL” switch (see Section 2.27.3.1) shall be located at the designated level served by the upper compartment. Where a sky lobby exists, a “FIRE RECALL” switch shall also be located at the floor served by the upper compartment that is immediately above the sky lobby level. This level above the sky lobby level shall be the sky lobby designated level.

2.27.3.5.2 The Phase II Emergency In-Car Operation switch (see Section 2.27.3.3) shall be located in the upper compartment.

2.27.3.5.3 A visual and audible signal (see Subsection 2.27.3.1.6(h)) shall be provided in the main car operating panel of both the upper and lower compartments.

2.27.3.5.4 A minimum 3” diagonal video display shall be installed in the car operating panel of the upper compartment so that the entire floor area in the lower compartment is visible. The display shall show the lower compartment when the upper deck is on Phase I Emergency Recall Operation and is at the designated level with the car doors open and shall remain on during Phase II Emergency In-Car Operation.

2.27.3.5.5 Moving the Phase II Emergency In-Car Operation key switch to the “FIREMAN SERVICE” position shall result in locking out the lower compartment.

(a) When placed in the “FIREMAN SERVICE” position, the control system shall:

(1) disable all door reopening devices in the lower compartment; and

(2) initiate closing of the lower compartment doors in accordance with Subsection 2.13.4.2.1(c).

(b) When the upper compartment is stopped at the designated level, the Phase II Emergency In-Car Operation key switch is in the “NORMAL” position and Phase I Emergency Recall Operation is in effect; the lower compartment doors shall be opened.

2.27.3.5.6 Two-way hands-free voice communication shall be established between the upper and lower compartments when the elevator is on Phase I Emergency Recall Operation, the upper compartment is at the designated or alternate level, and the car and hoistway doors are open. Voice communication between the two compartments shall be maintained until such time as the elevator is returned to normal service.

2.27.3.5.7 A switch labeled “LOWER COMPARTMENT RECOVERY” with two positions marked “OFF” and “ON” shall be located adjacent to the elevator at the designated level. The key shall only be removable when the switch is in the “OFF” position.

(a) When the switch is in the “ON” position, the doors of the upper and lower compartments shall close in accordance with Subsection 2.13.4.2.1(c), and the lower compartment shall move to the designated level.

(b) When the lower compartment arrives at the designated level, the doors of the lower compartment shall open and remain open until the switch is turned to the “OFF” position. The doors of the upper compartment shall remain closed.

(c) When the switch is turned to the “OFF” position, the doors of the lower compartment shall close and the upper compartment shall arrive at the designated level and open the doors.

(1) The doors of the upper compartment shall remain open until:

(i) the elevator is placed on Phase II Emergency In-Car Operation; or

(ii) the elevator is returned to normal operation.

(2) The doors of the lower compartment shall remain closed until such time as:

(i) the elevator is returned to normal operation;

(ii) the “LOWER COMPARTMENT RECOVERY” switch is operated and the lower compartment has returned to the designated level; or

(iii) the elevator is on “FIREMAN SERVICE” Phase I Emergency Recall Operation.

2.27.3.5.8 Activation of a fire alarm initiating device at either the designated level or the level below the designated level shall cause the elevator(s) to travel to the alternate level.

2.27.3.5.9 Activation of a fire alarm initiating device at the sky lobby or the level above the sky lobby (which is the sky lobby designated level) shall cause the elevator(s) to travel to the sky lobby alternate level.

2.27.3.5.10 Alternate levels shall be located in accordance with the following provisions:

- (a) Where no blind hoistway exists, the alternate level shall be three (3) levels above the designated level.
- (b) Where blind hoistways exist, the alternate level shall be the second level above the blind hoistway.
- (c) The sky lobby alternate level shall be three (3) levels above the sky lobby designated level.

Delete and revise Section 2.27.4 to read as follows:

2.27.4 Firefighters' Emergency Operation: Nonautomatic elevators.

- (a) Firefighters' Emergency Operation shall apply to all nonautomatic elevators except where the hoistway or a portion thereof is not required to be fire-resistive construction (see Section 2.1.1.1), the rise does not exceed 2 000 mm (80 in.), and the hoistway does not penetrate a floor.
- (b) Where Firefighters' Emergency Operation is provided voluntarily, the requirements of Section 2.27.4 shall also apply.
- (c) The following signage shall be provided:
 - (1) A sign stating "Manual Elevator" shall be provided on the inside of the entrance frame of all nonautomatic operated elevators at the designated landing.
 - (2) Single nonautomatic elevators, or a group of non-automatic elevators, shall be provided with signage indicating "Manual Elevator" on or adjacent to the Phase I Firemans' Emergency Operation key switch located at the designated landing.
 - (3) Lettering shall be in accordance with Subsection 2.27.3.1.1(b).

Delete and revise Section 2.27.4.1 to read as follows:

2.27.4.1 Phase I Emergency Recall Operation. A two-position key-operated switch shall be provided at the designated level for each single elevator or for each group of elevators. The two-position switch shall be labeled "FIRE RECALL" and its positions marked "NORMAL" and "FIREMAN SERVICE" (in that order), with the "NORMAL" position as the center position. The "FIRE RECALL" letters shall be a minimum of 5 mm (0.25 in.) high in red or a color contrasting with a red background. The two-position switch shall be located in the lobby within sight of the elevator or all elevators in that group and shall be readily accessible.

An additional “FIRE RECALL” switch with two positions, “NORMAL” and “FIREMAN SERVICE” (in that order), shall be permitted only at the fire command center.

The switch(es) shall be rotated clockwise to go from the “NORMAL” to the “FIREMAN SERVICE” positions. All keys shall be removable only in the “NORMAL” and “FIREMAN SERVICE” positions.

Only the “FIRE RECALL” switch(es) or fire alarm initiating devices located at floors that are served by the elevator, in the hoistway, or in an elevator machine room, a control space, or a control room (see Section 2.27.3.2) shall initiate Phase I Emergency Recall Operation.

All “FIRE RECALL” switches shall be provided with an illuminated visual signal to indicate when Phase I Emergency Recall Operation is in effect.

When all switches are in the “NORMAL” position, normal elevator service shall be in effect and the fire alarm initiating devices required by Section 2.27.4.2 shall be operative.

When a “FIRE RECALL” switch is in the “FIREMAN SERVICE” position, a visual and audible signal shall be provided to alert the attendant to return nonstop to the designated or alternate level. The visual signal shall read “FIRE RECALL — RETURN TO ” [insert level to which the car should be returned (the designated or alternate level)]. The signal system shall be activated when Phase I Emergency Recall Operation is in effect.

Where an additional “FIRE RECALL” switch is provided, any “FIRE RECALL” switch must be in the “FIREMAN SERVICE” position to recall the elevator to the designated level if the elevator was recalled to the alternate level.

Any “FIRE RECALL” switch shall not affect the visual signal if the designated level fire alarm initiating device (see Section 2.27.3.2.4) has been activated.

To extinguish the audible and visual signals, the “FIRE RECALL” switch shall be rotated to the “NORMAL” position, provided that:

- (a) the additional two-position “FIRE RECALL” switch, where provided, is in the “NORMAL” position
- (b) no fire alarm initiating device is activated (see also Section 2.27.3.2.4)

No device, that measures load, shall prevent operation of the elevator at or below the capacity and loading required in Section 2.16.

Delete and revise Section 2.27.4.2 to read as follows:

2.27.4.2 Phase I Emergency Recall Operation by fire alarm initiating devices.

- (a) Fire alarm initiating devices shall be installed, in the locations listed in Subsections 2.27.4.2(a)(1) through (3), in compliance with the requirements in NFPA 72 as follows:

- (1) at each elevator lobby served by the elevator
- (2) in the associated elevator machine room, machinery space containing a motor controller or driving machine, control space, or control room
- (3) in the elevator hoistway, when sprinklers are located in those hoistways
- (b) Phase I Emergency Recall Operation, conforming to Section 2.27.4.1, shall be initiated when any Phase I Emergency Recall Operation fire alarm initiating device specified in Subsection 2.27.4.2(a) is activated.
- (c) Phase I Emergency Recall Operation, when initiated by a Phase I Emergency Recall Operation fire alarm initiating device, shall be maintained until canceled by moving the “FIRE RECALL” switch to the “NORMAL” position.
- (d) When a fire alarm initiating device in a location specified by Subsections 2.27.4.2(a)(2) or (3) initiates Phase I Emergency Recall Operation as required by Sections 2.27.3.2.3 or 2.27.3.2.4, the visual signal [see 2.27.3.1.6(h) and Fig. 2.27.3.1.6(h)] shall illuminate intermittently only in a car(s) with equipment in that location.

2.27.5 Firefighters’ Emergency Operation: automatic elevators with designated-attendant operation.

Delete and revise Section 2.27.5.2 to read as follows:

2.27.5.2 When operated by a designated attendant in the car,

- (a) elevators parked at the recall level shall conform to Section 2.27.3 and when Occupant Evacuation Operation is provided shall also conform to Section 2.27.11.6 without delay; elevators parked at a floor other than the recall level shall conform to Subsection 2.27.3.1.6(h). At the completion of a time delay of not less than 10 seconds and not more than 30 seconds, elevators parked at a floor away from the recall level shall conform to Section 2.27.3 and when Occupant Evacuation Operation is provided shall also conform to Section 2.27.11.6.
- (b) a moving car shall conform to Section 2.27.3 and when Occupant Evacuation Operation is provided shall also conform to Section 2.27.11.6.

Exception. The provisions of Section 2.27.5.2 do not apply to hospital service.

Delete and revise Section 2.27.5.3 to read as follows:

2.27.5.3 When an elevator that is provided with Firefighters’ Emergency Operation or Occupant Evacuation Operation is on hospital service, a visual signal as shown in Fig. 2.27.3.1.6(h) shall illuminate and a continuous audible signal, audible within the car, shall sound when a “FIRE RECALL” switch (see Sections 2.27.3.1 and 2.27.11.1.2) is in the “FIREMEN SERVICE” position, or when a fire alarm initiating device (see Section 2.27.3.2) is activated to alert the

operator of an emergency. There may be a means located in the car for manually silencing the audible signal, after the signal has been active for at least 5 seconds.

The signal shall be automatically reactivated when the doors open. The car shall remain under control of the operator until removed from hospital service. An elevator on Firefighters' Emergency Operation or Occupant Evacuation Operation shall not be placed on hospital service.

Add new Sections 2.27.5.3.1 through 2.27.5.3.3 to read as follows:

2.27.5.3.1 Hospital Emergency Service Recall Operation (when provided). A two-position key-operated corridor call (Hospital Emergency Service) switch shall be provided at one or more landings to activate the special control function by authorized or designated personnel. The two-position switch shall be marked "NORMAL" and "HOSPITAL EMERGENCY SERVICE". Keys shall be removed only in the "NORMAL" position.

When the switch is in the "HOSPITAL EMERGENCY SERVICE" position:

(a) All patient elevator cars equipped with the special control function shall override normal automatic operating modes for immediate recall of the patient elevator(s) to the landing at which the call is registered.

(b) On patient elevator cars with two entrances, if both entrances can be opened at the designated level, the doors serving the corridor where the two-position Hospital Emergency Service switch is located shall open and remain open.

(c) A patient elevator car traveling away from the designated level shall reverse at or before the next available landing without opening its doors.

(d) A patient elevator car stopped at a landing other than the designated level, with the doors open and in-car emergency stop switch in the run position, shall close the doors without delay and proceed to the designated level.

(e) A visual and audible signal shall be activated within the patient elevator car to alert the passengers and/or attendant operator that the "Hospital Emergency Service" function has been activated.

(f) Upon arrival at the registered call landing, power operated doors shall open automatically and remain in the open position for a predetermined adjustable time period to allow the authorized personnel sufficient time to activate the "In- Car" special operation function.

(g) If the Phase I (Section 2.27.3.1) recall mode is initiated while the elevator is under "Hospital Emergency Service" recall mode and "In-Car" hospital emergency service is not activated, the elevator shall revert to Phase I (Section 2.27.3.1) operation.

(h) Hospital emergency service corridor recall shall not override fire emergency Phase I (Section 2.27.3.1) or Phase II (Section 2.27.3.3) operation in effect.

2.27.5.3.2 Hospital Emergency Service In-Car Operation: A two-position “NORMAL” and “HOSPITAL EMERGENCY SERVICE” key-operated switch shall be provided in an operating panel inside the patient elevator(s) to activate the “Hospital Emergency Service”, a special independent operating mode. The switch shall be rotated clockwise to go from the “NORMAL” to “HOSPITAL EMERGENCY SERVICE” position. It shall become effective only when the designated level corridor call “Hospital Emergency Service” switch is in the “HOSPITAL EMERGENCY SERVICE” position and the car has returned to the designated level by “Hospital Emergency Service” recall operation.

When the “In-Car” switch is in the “HOSPITAL EMERGENCY SERVICE” position, the patient elevator shall be on Hospital Emergency Service operation, and the patient elevator shall operate as follows:

(a) The patient elevator shall be operable only by a designated person in the car.

(b) Activation of the “In-Car” operating mode shall remove the patient elevator from normal automatic and/or attendant service.

(c) The patient elevator(s) shall not be recalled under Phase I (Section 2.27.3.1) operation after the activation of “In-Car” operation mode.

(d) Doors shall remain open until the authorized person registers the car call and initiates the door closing function.

(e) The patient elevator shall travel directly to the selected landing, overriding normal corridor call demand or Phase I (Section 2.27.3.1) recall and shall automatically open the doors upon the arrival at the selected landing, except when the smoke detector(s) are activated on the selected landing or the waterflow alarm is activated on that floor. In such case, before the patient elevator has reached the selected landing, the patient elevator shall stop at a floor two stories below the selected landing or in the absence of a stop at that floor, at the nearest landing below the selected landing.

(f) When the patient elevator reaches the selected floor and the smoke detector(s) are activated on that landing or the waterflow alarm is activated on that floor before the doors are open, the patient elevator, without opening the doors, shall travel to a floor two stories below the selected landing or in the absence of a stop at that floor, to the nearest landing below the selected landing.

(g) Doors shall remain open with the audible and visual signal functioning until the “in-Car” switch is turned to the “NORMAL” position or for a predetermined adjustable time period to allow the removal of patients from the car and the patient elevator is placed into automatic, attendant or Phase I (Section 2.27.3.1) if in effect, operating mode.

(h) Upon transfer from “HOSPITAL EMERGENCY SERVICE” back to normal operation during a fire emergency and Phase I (Section 2.27.3.1) is in effect, the patient elevator shall be automatically recalled to the designated level.

2.27.5.3.3 Hospital Emergency Service switches color. The color of the Hospital Emergency Service switches located in the corridor at the designated level and inside the patient elevator(s) operating panel shall be “BLUE”.

2.27.6 Firefighters’ Emergency Operation, Occupant Evacuation Operation: Inspection Operation.

Delete and revise Section 2.27.6 to read as follows:

2.27.6 Firefighters’ Emergency Operation, Occupant Evacuation Operation: Inspection Operation.

When an elevator that is provided with Firefighters’ Emergency Operation or Occupant Evacuation Operation is on inspection operation (see Sections 2.26.1.4 and 2.26.1.5) or when a hoistway access switch has been enabled (see Subsection 2.12.7.3.3(a)), a continuous audible signal, audible at the location where the inspection operation is activated, shall sound when a “FIRE RECALL” switch (see Sections 2.27.3.1 and 2.27.11.1.2) is in the “FIREMAN SERVICE” position or when the fire alarm initiating device (see Sections 2.27.3.2 and 2.27.11.5) is activated to alert the operator of an emergency. The car shall remain under the control of the operator until removed from inspection operation or hoistway access operation. Inspection operation or hoistway access operation shall take precedence over Phase I Emergency Recall Operation, Phase II Emergency In-Car Operation, and Occupant Evacuation Operation.

2.27.7 Firefighters’ Emergency Operation: Operating procedures.

Delete Section 2.27.7 in its entirety.

2.27.8 Switch keys.

Delete and revise Section 2.27.8 to read as follows:

2.27.8 Switch keys.

The switches required by Section 2.27.2 through Section 2.27.5 for all elevators in a building shall be operable both by a citywide standard (2642) key and the New York City Fire Department standard (1620) key.

The citywide standard key and Fire Department standard key shall be designed in accordance with the requirements of the Fire Department. The Fire Department standard key (1620) shall be obtained only through Fire Department authorization.

Citywide standard keys shall be kept on the premises by a person responsible for the maintenance and operation of the elevators in a location readily accessible to authorized persons in an emergency, but not where they are available to the public.

2.27.11 Occupant Evacuation Operation.

Delete and revise the Note to Section 2.27.11 to read as follows:

2.27.11 Occupant Evacuation Operation.

Where elevators are provided for occupant evacuation, Occupant Evacuation Operation (OEO) shall be provided to function prior to Firefighter's Emergency Operation and shall conform to 2.27.11.1 through 2.27.11.6.

NOTE: See also Nonmandatory Appendix V for additional information.

Delete and revise Sections 2.27.11.1, 2.27.11.2, and 2.27.11.3 to read as follows:

2.27.11.1 The requirements of Section 2.27.3.1 are modified as follows.

2.27.11.1.1 The two-position switch in the lobby (Section 2.27.3.1.1) and two-position switch in the fire command center (Section 2.27.3.1.2) shall be labeled "BANK FIRE RECALL" and indicate the elevator bank that they control.

2.27.11.1.2 An additional two-position key operated individual "CAR FIRE RECALL" switch per elevator, that will not change position without a deliberate action by the user, shall be located in the lobby at the designated level adjacent to the elevator it controls. Each switch shall be labeled "CAR FIRE RECALL" (with the car identification, as specified in Section 2.29.1, inserted), and its positions marked "NORMAL" and "FIREMEN SERVICE" (in that order) in letters a minimum of 5 mm (0.25 in.) high. Text shall be black on a yellow background. Each switch shall control the associated elevator in conformance with Section 2.27.3.1.6, but shall not control the other elevators controlled by the "BANK FIRE RECALL" switch (see Section 2.27.11.1.1).

2.27.11.1.3 Each individual "CAR FIRE RECALL" switch shall terminate Occupant Evacuation Operation for the elevator it controls when placed in the "FIREMEN SERVICE" position. Each "BANK FIRE RECALL" switch shall terminate Occupant Evacuation Operation for the elevators it controls when placed in the "FIREMEN SERVICE" position.

2.27.11.1.4 Each individual "CAR FIRE RECALL" switch shall be provided with an illuminated visual signal to indicate when Phase I Emergency Recall Operation is in effect for that car (see Section 2.27.3.1.5).

2.27.11.1.5 To remove an individual elevator from Phase I Emergency Recall Operation, the individual "CAR FIRE RECALL" switch shall be rotated to the "NORMAL" position, provided that

(a) the "BANK FIRE RECALL SWITCH" and the additional two-position "GROUP FIRE RECALL" "BANK FIRE RECALL" switch, where provided, are in the "NORMAL" position; and

(b) no fire alarm initiating device is activated (see Section 2.27.3.2).

2.27.11.1.6 A car with its individual “CAR FIRE RECALL” switch in the “FIREMEN SERVICE” position shall not be removed from Phase I Emergency Recall Operation when the “BANK FIRE RECALL” switch is rotated to the “NORMAL” position.

2.27.11.1.7 At the elevator designated level, only the door(s) serving the lobby where the “BANK FIRE RECALL” switch is located shall open.

2.27.11.2 The sign required by Section 2.27.9 shall not be installed. A variable message sign, as defined in ANSI/ICC A117.1, shall be installed for each elevator bank on each landing served. It shall be located not less than 2 130 mm (84 in.) and not more than 3 000 mm (120 in.) above the floor and in a central visible location within the elevator lobby. Message text shall be a minimum of 50 mm (2 in.) high and conform to ANSI/ICC A117.1. The variable message signs shall be powered by the same power supply as the elevator, including emergency or standby power.

When the elevators are not on Occupant Evacuation Operation or Firefighters’ Emergency Operation, the variable message signs shall not display other elevator system status messages.

2.27.11.3 Where hoistway pressurization is provided, a car on Phase I Emergency Recall, after completing the requirements of Section 2.27.3.1.6, shall conform to the following:

- (a) A car shall close its doors after 15 seconds.
- (b) Door reopening devices, door force limiting devices, kinetic energy limiting devices, and the door open button shall remain active.
- (c) At least one operating device normally used to call a car to the landing (e.g., hall call button, keypad) shall be located in the elevator lobby at the elevator designated level. Actuating this device shall cause all recalled cars to open their doors for 30 seconds to 45 seconds, then reclose.

2.27.11.5 Fire alarm system interface.

Delete and revise Sections 2.27.11.5.1 and 2.27.11.5.2 to read as follows:

2.27.11.5.1 Upon activation of an automatic fire alarm initiating device in the building in any area that does not initiate Phase I recall in this bank, the fire alarm system shall provide signals to the elevator system in conformance with NFPA 72, as modified by Appendix Q of the New York City Building Code and any applicable rules, indicating the floors to be evacuated. The floors to be evacuated shall be a contiguous block of floors, consisting of at least the floor with an active alarm, one floor above and one floor below. The elevator system shall initiate Occupant Evacuation Operation in accordance with Section 2.27.11.6 for the indicated floors. If activation of an automatic fire alarm initiating device which does not initiate Phase I recall in this bank occurs on any additional floor at any time while Occupant Evacuation Operation in accordance with Section 2.27.11.6 is in effect, the evacuation zone shall be expanded to include all floors with an active alarm, all floors between the highest and lowest floor with an active alarm plus one floor above the highest floor with an active alarm and one floor below the lowest floor with an active alarm. If the active alarm is on the elevator designated level, automatic initiation of

Occupant Evacuation Operation in accordance with Section 2.27.11.6 shall not be permitted. Initiation by authorized or emergency personnel shall be provided through manual operation of the fire alarm system.

For the purposes of this section, an active alarm refers to the condition caused by the activation of an automatic fire alarm initiating device.

2.27.11.5.2 A means to initiate total building evacuation, labeled “ELEVATOR TOTAL BUILDING EVACUATION,” shall be provided at the fire command center location and installed in accordance with NFPA 72, as modified by Appendix Q of the New York City Building Code and any applicable rules. When this means is actuated, the fire alarm system shall provide a signal to the elevator system indicating that all floors are to be evacuated. The means to initiate total building evacuation shall be keyed as New York City standard #2642 and FDNY standard key.

Delete and revise Sections 2.27.11.6.1, 2.27.11.6.2, and 2.27.11.6.3 to read as follows:

2.27.11.6.1 The variable message signs required by Section 2.27.11.2 shall indicate one of the following messages:

(a) On all floors being evacuated, they shall indicate that the elevators are available for evacuation and the estimated time duration in minutes for the next elevator to arrive.

Text shall read: “Elevators and stairs available for evacuation. Next car in about “X” minutes.”

(b) On all floors not being evacuated, they shall indicate that elevator service is not available.

Text shall read: “Elevators temporarily dedicated to other floors.”

(c) On the elevator designated level, they shall indicate that the cars are in evacuation mode and that passengers should not use elevators.

Text shall read: “Elevators dedicated to evacuation. Do not enter elevator.”

(d) If no elevators are available for Occupant Evacuation Operation (fire service, inspection, shut off, etc.), they shall indicate that elevator service is not available.

On all floors being evacuated, they shall also indicate that occupants should use the stairs.

Text for floors being evacuated: “Elevators out of service. Use stairs to evacuate.”

Text for other floors: “Elevators out of service.”

2.27.11.6.2 Automatic visual signal or variable message sign, and voice notification in each car shall indicate that the car is being used to evacuate the building.

In the event that the car stops to pick up passengers at a floor other than the elevator designated level, the signals shall instruct the passengers to remain in the car.

Upon or prior to arrival at the elevator designated level, passengers shall be notified that they have arrived at the exit floor and to exit quickly. Message text shall be a minimum of 25 mm (1 in.) high and conform to ANSI/ICC A117.1. Voice notification shall be at least 10 dBA above ambient but not more than 80 dBA measured 1 525 mm (60 in.) above the floor, at the center of the car.

2.27.11.6.3 All landing calls outside of the contiguous block of floors being evacuated shall be canceled and disabled. Building security systems that limit service to these floors shall be overridden. Any landing call within the contiguous block of floors shall call an elevator or elevators to that landing. Landing calls entered at the floor with an active alarm shall be given higher priority than the calls at the floors above and below it. If a subsequent active alarm is received from a different floor, the evacuation priority shall be assigned in the sequence received. Once passengers have entered an elevator, it shall proceed only towards the elevator designated level. When total building evacuation is in effect and no calls are entered at an affected floor, priority shall be based on distance from the elevator designated level, with the furthest floor served getting highest priority.

Delete and revise Section 2.27.11.6.6 to read as follows:

2.27.11.6.6 Cars that are occupied when Occupant Evacuation Operation is actuated shall proceed without delay to the elevator designated level. Any reversal of travel direction that is needed shall be done at or before the next available floor without opening the doors. After opening and closing the doors at the elevator designated level, the cars shall proceed without delay to a floor that is being evacuated and park with their doors closed until a landing call is registered.

Delete and revise Section 2.27.11.6.9 to read as follows:

2.27.11.6.9 Once the block of floors being evacuated has been evacuated, as indicated by a 60 second period in which no landing calls are registered, one car shall park with its doors closed at the lowest floor of the block of floors ready to answer subsequent landing calls within the block of floors; the rest shall park with doors closed at the elevator designated level. A car parked at the elevator designated level shall replace the car at the lowest floor of the block that has answered a landing call.

SECTION 2.28
LAYOUT DRAWINGS

2.28.1 Information required on layout drawings.

Add new Subsection (k) to Section 2.28.1 to read as follows:

Elevator layout drawings shall, in addition to other data, indicate the following:

(k) any special operation of the elevator including, but not limited to, Occupancy Evacuation Operation (OEO) or Fire Service Access Elevator (FSAE)

SECTION 2.29
IDENTIFICATION

2.29.1 Identification of equipment.

Delete and revise Section 2.29.1 to read as follows:

2.29.1 Identification of Equipment

2.29.1.1 Each elevator shall be assigned a unique alpha-numeric or numerical identification, a minimum of 50 mm (2 in.) in height. The identification number shall be applied to the following locations:

(a) The driving machine;

(b) MG and/or Transformers set;

(c) Controller;

(d) Selector;

(e) Governor;

(f) Main line disconnect switch;

(g) The crosshead, or where there is no crosshead, the car frame, such that it is visible from the top of the car;

(h) The car operating panel, minimum of 13 mm (0.5 in.) in height;

(i) Adjacent to or on every elevator entrance at the designated level, minimum of 75 mm (3 in.) height; and

(j) Each bank of elevators shall be identified by an alphabetic letter.

Where an alpha-numeric designation is used for an elevator, the alpha portion shall represent the bank designation in which the elevator is located.

2.29.1.2 New York City Identification Number.

Each elevator shall be assigned a unique numerical identification, a minimum of 6 mm (¼ in.) in height. The City identification number shall be applied to the following locations:

(a) The driving machine;

(b) MG and/or Transformers set;

(c) Controller;

(d) Main line disconnect switch;

(e) The crosshead, or where there is no crosshead, the car frame, such that it is visible from the top of the car;

(f) The car operating panel (main panel only).

2.29.1.3 Where any of the following devices for more than one elevator are located in the same enclosure, such devices or a grouping of devices for one elevator with demarcation to establish that all devices within the demarcation belong to that identified elevator shall be identified with the unique alphabetical or numerical identification letter(s) or number(s) of its associated elevator as assigned in Section 2.29.1.1:

(a) means to trip the governor and/or means to reset the governor from outside the hoistway as permitted by Section 2.7.6.3.4

(b) display devices or their equivalent as required by Section 2.7.6.4.1

(c) means to move the car from outside the hoistway as required by Section 2.7.6.4.3

(d) stop switches as required by Section 2.7.6.5.2

(e) landing inspection operation transfer switches and operating devices as required by Section 2.7.6.5.2 (see also Section 2.26.1.4.4)

(f) “CAR DOOR BYPASS” and “HOISTWAY DOOR BYPASS” switches as required by Section 2.26.1.5

(g) means to manually reset the ascending car overspeed detection means as required by Section 2.19.1.2(a)(4)

(h) means to manually reset the unintended motion detection means as required by Section 2.19.2.2(a)(4)

(i) the earthquake reset button or switch as required by Section 8.4.10.1.1(a)(2)(b)

PART 3 **HYDRAULIC ELEVATORS**

SECTION 3.7 **MACHINERY SPACES, MACHINE ROOMS, CONTROL SPACES, AND CONTROL ROOMS**

Delete and revise the opening paragraph of Section 3.7.1 to read as follows:

3.7.1 Machinery spaces, machine rooms, control spaces, and control rooms shall conform to the requirements of Sections 2.7.1 through 2.7.7 and 2.7.9. Hydraulic machines and controllers are not permitted in the hoistway or pit.

SECTION 3.16
CAPACITY AND LOADING

Add new Section 3.16.10 to read as follows:

3.16.10 Detection of overload on passenger and freight elevators permitted to carry passengers.

Requirements of 2.16.10 shall not apply to direct acting hydraulic elevators.

SECTION 3.26
OPERATING DEVICES AND CONTROL EQUIPMENT

3.26.3 Anticreep and leveling operation.

Delete and revise Section 3.26.3.1.2 to read as follows:

3.26.3.1.2 The anticreep device shall maintain the car within 13 mm (1/2 in.) of the landing, irrespective of the position of the hoistway door.

PART 4
ELEVATORS WITH OTHER TYPES OF DRIVING MACHINES

SECTION 4.3
HAND ELEVATORS

Delete and revise Section 4.3 to read as follows:

RESERVED

PART 5
SPECIAL APPLICATION ELEVATORS

SECTION 5.2
LIMITED-USE/LIMITED-APPLICATION ELEVATORS

5.2.1 Electric limited-use/limited-application elevators.

Delete and revise Section 5.2.1.13 to read as follows:

5.2.1.13 Power operation of hoistway doors and car doors. When provided, power operation, power opening, and power closing of hoistway doors and car doors shall conform to Section 2.13, except as modified by Section 5.2.1.13.

(a) Requirement Section 2.13.1 does not apply. Both car and hoistway doors shall be of the horizontally sliding type with a power-operated horizontally sliding car door. Power operation of accordion or bifold type car doors shall be permitted.

(b) Vertically sliding doors and power operated swing doors shall not be permitted.

Delete and revise Section 5.2.1.16.1 to read as follows:

5.2.1.16.1 Rated load and platform area. The minimum rated load shall conform to Section 2.16.1, except as follows:

(a) The maximum rated load shall not exceed 635 kg (1,400 lb).

(b) The inside net platform area shall not exceed 1.67 m² (18 ft²) and shall comply with A117.1 Section 408.4.

(c) Requirements of Sections 2.16.1.2 and 2.16.1.3 do not apply.

SECTION 5.3
PRIVATE RESIDENCE ELEVATORS

5.3.1 Private residence electric elevators.

Delete and revise Section 5.3.1.6.1 to read as follows:

5.3.1.6.1 Suspension means passing through floors or stairs. Ropes passing through a floor or stairway outside the hoistway enclosure shall be enclosed with a solid or openwork enclosure. If of openwork, the enclosure shall reject a ball 13 mm (0.5 in.) in diameter. Means for inspection shall be provided. The floor openings shall not be larger than is necessary to clear the suspension means.

5.3.1.7 Protection of hoistway openings.

Delete and revise Sections 5.3.1.7.1 through 5.3.1.7.5 to read as follows:

5.3.1.7.1 Where required. Where a hoistway enclosure is required, landing openings shall be protected by swinging or horizontally sliding doors. Landing openings in solid hoistway enclosures shall be protected the full height by solid swinging or horizontally sliding doors. Their fire-protection rating shall be not less than required by the building code (see Section 1.3). The doors shall be designed to withstand a force of 670 N (150 lbf) applied horizontally over an area 100 mm x 100 mm (4 in. x 4 in.) in the center of the doors without permanent displacement or deformation. Gates shall not be permitted.

5.3.1.7.2 Clearance between hoistway doors and landing sills and car doors and gates. The clearance between the hoistway doors and the hoistway edge of the landing sill shall not exceed 19 mm (0.75 in.) for swinging doors and 57 mm (2.25 in) for sliding doors. The distance between the hoistway face of the landing door and the car door gate shall not exceed 100 mm (4 in.).

5.3.1.7.3 Projection of hoistway doors into the hoistway. The hoistway face of the hoistway door shall not project into the hoistway beyond the line of the landing sill. No hardware, except that required for door-locking and door-operating or signaling devices, shall project into the hoistway beyond the line of the landing sill.

5.3.1.7.4 Locking devices for hoistway doors. Hoistway doors shall be provided with locking devices. The locking device shall be an interlock and conform to the requirements of Sections 2.12.2 and 2.12.4.

5.3.1.7.5 Opening of hoistway doors. Hoistway doors shall be so arranged that it will not be necessary to reach behind any panel, jamb, or sash to operate them.

Delete and revise Sections 5.3.1.7.7 and 5.3.1.7.8 to read as follows:

5.3.1.7.7 Access to the hoistway for emergency purposes. Hoistway door unlocking devices shall be provided for all hoistway doors, conforming to Section 2.12.6.

5.3.1.7.8 Power operation of hoistway doors. Power opening shall be permitted for hoistway doors and shall conform to Sections 2.13.2.2.1 and 2.13.2.2.2. Power closing shall be permitted for hoistway doors and shall conform to Sections 2.13.3.2 through 2.13.4, and 2.13.6.

Delete and revise Section 5.3.1.8.2 to read as follows:

5.3.1.8.2 Car doors and gates. A car door or gate that, when closed, will guard the opening to a height of at least 1 675 mm (66 in.) shall be provided at each entrance to the car. Car doors shall be permitted to be of solid or openwork construction that will reject a ball 75 mm (3 in.) in diameter.

Collapsible car gates shall be of a design that, when fully closed (extended position), will reject a ball 75 mm (3 in.) in diameter.

(a) Power Operation of Car Doors and Gates. Power opening shall be permitted for car doors and shall conform to Sections 2.13.2.1 and 2.13.6. Power closing shall be permitted for car doors and shall conform to Sections 2.13.3 through 2.13.6. Power operation of gates is not permitted.

(b) Car Door or Gate Locking Devices. Where the hoistway enclosure is not continuous for the full travel of the car, the car door or gate shall be provided with a mechanical lock that will lock the car door or gate if the car is more than 150 mm (6 in.) away from a landing.

(c) Car Door or Gate Electric Contacts. Every car door or gate shall be provided with an electric contact conforming to Sections 2.14.4.2.3 and 2.14.4.2.5.

(d) Strength and Deflection of Doors, Gates, and Their Guides, Guide Shoes, Track, and Hangers.

(1) Horizontal sliding car doors and gates shall be designed and installed to withstand a force of 335 N (75 lbf) applied horizontally on an area 100 mm by 100 mm (4 in. by 4 in.) at right angles to and at any location on the car door without permanent deformation. The deflection shall not exceed 19 mm (0.75 in.) and shall not displace the door from its guides or tracks. The force shall be applied while the door is in the fully closed position.

(2) Folding car doors shall be designed and installed to withstand a force of 335 N (75 lbf) applied horizontally using a 100 mm (4 in.) diameter sphere at any location within the folds on the car door without permanent deformation. The deflection shall not exceed 19 mm (0.75 in.) and shall not displace the door from its guides or tracks. The force shall be applied while the door is in the fully closed position.

The design of the car door or gate electric contacts shall be such that for a sliding door or gate, the car cannot move unless the door or gate is within 50 mm (2 in.) of the closed position. If the door or gate swings outward to open, the car door or gate must be closed and locked before the car can move.

Delete and revise Section 5.3.1.10.3 to read as follows:

5.3.1.10.3 Rise. The rise shall not exceed 18 m (60 ft).

Delete and revise Section 5.3.1.11.2 to read as follows:

5.3.1.11.2 Operation of safeties. The safety shall be of the inertia, rack and pinion, or other type operated by the action of a speed governor. If of the speed-governor type, the governor shall operate the safety at a maximum tripping speed of 0.38 m/s (75 ft/min).

Delete and revise Subsection (a) of Section 5.3.1.12.1 to read as follows:

5.3.1.12.1 Types permitted.

(a) Suspension means shall be not less than two wire ropes.

Delete and revise Section 5.3.1.12.4 to read as follows:

5.3.1.12.4 Arc of contact of suspension means on sheaves and sprockets. The arc of contact of a wire rope on a traction sheave shall be sufficient to produce traction under all load conditions up to rated load.

Delete and revise Subsection (b) of Section 5.3.1.16.1 to read as follows:

5.3.1.16.1 Overhead machinery beams and supports.

(b) Overhead Beams and Their Supports. Overhead beams and their supports shall be designed for not less than the sum of the following:

(1) the load resting on the beams and their supports, which shall include the complete weight of the machine, sheaves, controller, and any other equipment supported thereon

(2) the sum of the tension on all suspension ropes times 2

Delete and revise Subsection (a) of Section 5.3.1.16.2 to read as follows:

5.3.1.16.2 Driving machines: General requirements.

(a) Types of Driving Means. The driving means shall be one of the following types:

- (1) traction
- (2) winding drum (see Section 5.3.1.16.3)
- (3) direct plunger hydraulic (see Section 5.3.2)
- (4) roped-hydraulic (see Section 5.3.2)
- (5) screw machine (see Section 5.3.1.16.4)
- (6) rack-and-pinion, in jurisdictions enforcing NBCC

Delete and revise Section 5.3.1.16.4 to read as follows:

5.3.1.16.4 Screw machines. Screw machines, where used, shall conform to Sections 4.2.15 and 4.2.20, except that the rated speed shall not exceed 0.20 m/s (40 ft/min) and shall be provided with an overspeed governor.

Delete and revise Subsection (c) of Section 5.3.1.17.1 to read as follows:

5.3.1.17.1 Stopping devices required.

(c) If the driving machine is of the winding drum type

(1) a final terminal stopping device operated by the driving machine shall also be provided.

(2) driving-machine-operated final terminal stopping devices are not required when a lower final terminal stopping device is used in addition to the slack rope switch, and two independent upper final terminal stopping devices are provided. A separate device shall be used to operate the lower final terminal and one upper final terminal stopping devices. All final terminal stopping and slack-rope devices shall operate independently of one another. The power feed lines to the driving machine and brake shall be opened by one or both of the upper final terminal stopping devices and either the slack-rope switch or the lower terminal stopping device, or both.

(3) indirect connections between the final terminal stopping device and the driving machine shall be designed to prevent slippage.

Delete and revise Section 5.3.1.18.2.2 to read as follows:

5.3.1.18.2.2 Monitoring of the car door or gate switch electric contacts. The elevator controls shall be designed in such a manner that when the car stops at a floor and the landing door and its related electric contact are opened and closed and the car door or gate switch electric contact(s) fails to open, the car shall not be permitted to respond to a call. The car shall be permitted to answer a call only after the car door or gate switch electric contacts have cycled at least once.

Delete and revise Section 5.3.1.18.8 to read as follows:

5.3.1.18.8 Slack-rope devices for winding drum driving machines. Winding drum machines with rope suspension shall be provided with a slack-rope device of the manually reset type that will remove power from the motor and brake if the car is obstructed in its descent and the hoisting ropes slacken.

5.3.2 Private residence hydraulic elevators.

Delete and revise Section 5.3.2.2.1 to read as follows:

5.3.2.2.1 Direct-plunger and roped-hydraulic private residence elevator driving machines, sheaves, valves, supply piping, fittings, and tanks shall conform to Sections 3.18, 3.19, and 3.24, except as modified by 5.3.1.16.2 and 5.3.2.

Delete and revise Section 5.3.2.3 to read as follows:

5.3.2.3 Terminal stopping devices. Direct-plunger and roped-hydraulic private residence elevator terminal stopping devices shall conform to Section 3.25, except as modified in 3.25.2.

SECTION 5.4 **PRIVATE RESIDENCE INCLINED ELEVATORS**

5.4.2 Landing enclosures and gates (where required).

Delete and revise the header of 5.4.2 to read as follows:

5.4.2 Landing enclosures and doors (where required).

Delete and revise Sections 5.4.2.2, 5.4.2.3, and 5.4.2.4 to read as follows:

5.4.2.2 Landing doors. Landing doors shall comply with Section 5.3.1.7.

5.4.2.3 Construction of landing enclosures and doors. The landing enclosure shall either be of solid construction or of openwork rejecting a 25 mm (1 in.) ball. A force of 670 N (150 lbf) applied at any area 100 mm x 100 mm (4 in. X 4 in.) on the walls of the enclosure shall not reduce the running clearance below 19 mm (0.75 in.) nor cause a deflection exceeding 25 mm (1 in.).

5.4.2.4 Clearance between landing doors and landing sills and car doors or gates. Clearances shall conform to Section 5.3.1.7.2.

SECTION 5.5 **POWER SIDEWALK ELEVATORS**

5.5.1 Electric sidewalk elevators.

Delete and revise Section 5.5.1.17 to read as follows:

5.5.1.17 Car and counterweight safeties. Safeties shall conform to Section 2.17.

SECTION 5.12
OUTSIDE EMERGENCY ELEVATORS

Delete Section 5.12 in its entirety.

PART 6
ESCALATORS AND MOVINGS WALKS

SECTION 6.1
ESCALATORS

6.1.3 Construction requirements.

Delete and revise Section 6.1.3.3.5 to read as follows:

6.1.3.3.5 Skirt and step clearance.

6.1.3.3.5.1 Loaded gap between skirt and step. The clearance (loaded gap) between the step tread and the adjacent skirt panel shall be not more than 5 mm (0.2 in.) when 110 N (25 lbf) is laterally applied from the step to the adjacent skirt panel. The applied load shall not deviate from 110 N (25 lbf) by more than ± 11 N (2.5 lbf). The load shall be distributed over an area not less than 1 940 mm² (3 in.²) and not more than 3 870 mm² (6 in.²).

6.1.3.3.5.2 Clearance between skirt and step. The clearance on either side of the steps between the step and the adjacent skirt panel shall not be more than 4 mm (0.16 in.), and the sum of the clearances on both sides shall be not more than 7 mm (0.28 in.).

Delete and revise Subsection (c) of Section 6.1.3.3.6 to read as follows:

6.1.3.3.6 Skirt panels.

(c) The exposed surfaces of the skirt panels adjacent to the steps shall be smooth and made from a low friction material, or permanently treated with a friction-reducing material. Untreated surfaces, such as porcelain, enameled steel, bronze or stainless steel, are not acceptable.

Delete and revise the first paragraph of Section 6.1.3.3.10 to read as follows:

6.1.3.3.10 Skirt deflector devices. Deflector devices shall be required and shall extend from skirt panels parallel to the escalator path of travel. Means to secure such deflector devices are permitted to be on the exposed surface of the skirt. Any exposed fastener heads shall be of the tamper-resistant type and flush to within 1 mm (0.04 in.).

Add new Subsection 6.1.3.6.6 to read as follows:

6.1.3.6.6 Floor opening protection adjacent to escalator wellway. Floor openings adjacent to the entire length of the escalator wellway shall be provided with protection in accordance with the New York City Building Code (see Part 9).

6.1.6 Operating and safety devices.

Delete and revise Section 6.1.6.2 to read as follows:

6.1.6.2 Starting devices.

In every new and existing escalator, starting devices shall be provided with the combination of a starting switch and a starting button. The escalator shall be started only after the activation of both the switch and the button.

(a) Starting Switch. The starting switch shall be of continuous pressure spring return type and shall be operated by a cylinder type lock having five-pin, five-disc or five-tumbler combination. The starting switch shall be of three-position type and shall be clearly marked as follows:

NORMAL. A central position for the key entry and spring return position.

START-UP. A right side position for starting the escalator in the upward direction.

START-DOWN. A left side position for starting the escalator in the downward direction.

(b) Starting Button. The starting button shall be of the constant pressure type and located within six (6) inches from the starting switch. It shall be clearly marked “**Start**”.

(c) Cover Plate. The starting devices shall be protected by a locked, transparent cover plate that can be opened by the starting key and clearly marked “**For Start Only.**”

(d) Location of starting devices. Starting devices shall be located at top and bottom of the escalator on the right side-facing newel.

NOTE: The starting key shall be kept on the premises at all times and may only be accessible to persons authorized to start escalators. It shall also be made available to the Commissioner or his or her representative.

(e) The key shall be of Group 2 Security (see Section 8.1).

Delete and revise Subsection (a) of Section 6.1.6.3.1 to read as follows:

6.1.6.3.1 Emergency stop buttons.

(a) Location - A red stop button shall be visibly located at the top and bottom landings on the right side facing the escalator. Remote stop buttons are prohibited except that any

escalator connected to an automatic fire alarm system shall gradually stop the escalator at a rate not greater than 3 ft per sec² (0.91 m/s²) upon the activation of such system.

(1) On high deck balustrades, they shall be located on the curved newel deck in the upper quadrant, with the centerline of the button at a 45 deg angle from the horizontal.

(2) On low deck balustrades, they shall be located below the handrail height. The centerline of the button shall be located on a radial line 45 deg above the horizontal, such that no part of the button assembly is within 38 mm (1.5 in.) of the bottom of the handrail and the button is no more than 90 mm (3.5 in.) from the bottom of the handrail.

Delete and revise Section 6.1.6.3.6 to read as follows:

6.1.6.3.6 Skirt obstruction device. Means shall be provided to cause the electric power to be removed from the escalator driving machine motor and brake if an object becomes caught between the step and the skirt as the step approaches the upper combplate, intermediate device, or lower combplate. On units having a run of 6 096 mm (20 ft.) or more, intermediate devices shall be provided on both sides of the escalator with devices located at intervals of 3 048 mm (10 ft.) or less. The activation of an intermediate device shall gradually stop the escalator at a rate not greater than 3 ft per sec² (0.91 m/s²) in the direction of travel. The skirt obstruction devices shall be located so that the escalator will stop before that object reaches the combplate. The escalator shall stop before that object reaches the combplate with any load up to full brake rated load with escalator running. The device shall be of the manually reset type.

Delete and revise Section 6.1.6.3.9 to read as follows:

6.1.6.3.9 Step upthrust device. Means shall be provided in the passenger-carrying line of the track system to detect a step forced upward in the lower transition curve at or prior to the point of tangency of the horizontal and curved track. The means shall actuate when the riser end of the step is displaced upward more than 5 mm (0.20 in.) at the lower landing. Actuation of the means shall cause power to be removed from the driving-machine motor and brake. The escalator shall stop, before the detected step reaches the combplate with any load up to brake rated load with escalator running [see Subsections 6.1.3.9.3(a)(2) and (b)(2)]. The device shall be of the manual reset type.

Delete and revise Section 6.1.6.3.12 to read as follows:

6.1.6.3.12 Handrail entry device. A handrail entry device shall be provided at each newel. It shall be operative in the newels in which the handrail enters the balustrade. It shall cause the escalator to stop by removing power from the driving-machine motor and brake. It shall operate in either of two ways:

(a) if an object becomes caught between the handrail and the handrail guard.

(b) if an object approaches the area between the handrail and the handrail guard.

For those units that rely on an opening of the balustrade to prevent entrapment, all handrail entry devices shall be operative whenever the handrails are operating. The device shall be of the manual reset type.

Delete and revise Subsection (b) of Section 6.1.6.3.13 to read as follows:

6.1.6.3.13 Combplate impact devices. Devices shall be provided that will cause the opening of the power circuit to the escalator driving-machine motor and brake if either

(b) a resultant vertical force not greater than 268 N (60 lbf) in the upward direction is applied at the center of the front of the combplate.

These devices shall be of the manual-reset type.

Add new Sections 6.1.6.3.17 and 6.1.6.3.18 to read as follows:

6.1.6.3.17 Service ports. Service ports used for diagnostic purposes or for resetting faults shall be placed in a location accessible only to elevator personnel.

6.1.6.3.18 Phase protection of motors. Escalators having a polyphase AC power supply shall be provided with means to prevent the operation of the escalator drive motor if a reversal of phase rotation, or phase failure of the incoming polyphase AC power, will cause the escalator to operate in the wrong direction.

Delete and revise Section 6.1.6.4 to read as follows:

6.1.6.4 Handrail speed monitoring device. A handrail speed monitoring device shall be provided that will cause the activation of the alarm required by Subsection 6.1.6.3.1(b) without any intentional delay, whenever the speed of either handrail deviates from the step speed by 15% or more. The device shall also cause electric power to be removed from the driving-machine motor and brake when the speed deviation of 15% or more is continuous within a 2 s to 6 s range. The device shall be of the manual reset type.

Delete and revise Section 6.1.6.7 to read as follows:

6.1.6.7 Step demarcation lights. Green step demarcation lights shall be located below the step at both landings in an area not to exceed 400 mm (16 in.) from the combplate. The lamps shall be LED type and activated whenever the escalator is in operation.

Delete and revise Section 6.1.6.9.3 to read as follows:

6.1.6.9.3 Additional signs, video displays or graphics. Signs, video displays or graphics other than those specified in Sections 6.1.6.9.1 and 6.1.6.9.2 shall not be permitted adjacent to the escalator in such a manner that obstructs boarding passenger view of the signs required in Section 6.1.6.9.1, obstructs or reduces passenger access to the handrails, within the safety zone (see Section 6.1.3.6.4), nor on the escalator, except for signs, graphics, or markings required by this Code, manufacturer's identification, and owner's identification that are permitted on the

escalator. They shall not be distracting, create passenger flow hazards, or impair function of safety devices. Step, step riser, handrail and balustrade signs or graphics are not permitted.

6.1.7 Lighting, access, and electrical work.

Delete and revise Section 6.1.7.3.2 to read as follows:

6.1.7.3.2 Access plates at the top and bottom landings shall be securely fastened by a mechanical means. Access plate(s) shall be provided with electrical switches that will remove power to the driving machine and brake should the access plate be displaced or removed.

Add new Sections 6.1.9 and 6.1.10 to read as follows:

6.1.9 New York City identification number.

Each escalator shall be assigned a unique numerical identification a minimum of 6 mm (0.25 in) in height. The city identification number shall be applied on the right hand side, facing the newel, at the top and bottom of the escalator as well as the following locations:

- (a) The driving machine;
- (b) Controller;
- (c) Main line disconnect switch.

6.1.10 Building identification number.

Each escalator shall be assigned a unique alpha-numeric or numerical identification, a minimum of 6 mm (0.25 in) in height. The building identification number shall be applied on the exterior, clearly visible, at the top or bottom of the escalator.

SECTION 6.2 **MOVING WALKS**

6.2.6 Operating and safety devices.

Delete and revise Section 6.2.6.2 to read as follows:

6.2.6.2 Starting and inspection control switches.

In every new and existing moving walk, starting devices shall be provided with the combination of a starting switch and a starting button. The moving walk shall be started only after the activation of both the switch and the button.

- (a) Starting Switch. The starting switch shall be of continuous pressure spring return type and shall be operated by a cylinder type lock having a five-pin, five-disc or five-tumbler combination. The starting switch shall be of three-position type and shall be clearly marked as follows:

TOWARDS. A left side position for starting the moving walk in the towards direction.

RUN (NORMAL). A central position for the key entry and spring return position.

AWAY. A right side position for starting the moving walk in the away direction.

(b) Starting Button. The starting button shall be of the constant pressure type and located within six (6) inches from the starting switch. It shall be clearly marked "Start".

(c) Cover Plate. The starting devices shall be protected by a locked, transparent cover plate that can be opened by the starting key and clearly marked "For Start Only."

(d) Location of starting devices. Starting devices shall be located at top and bottom of the moving walk on the right side-facing newel.

NOTE: The starting key shall be kept on the premises at all times and may only be accessible to persons authorized to start escalators. It shall also be made available to the Commissioner or his or her representative.

Delete and revise 6.2.6.3.10 to read as follows:

6.2.6.3.10 Handrail entry device. A handrail entry device shall be provided at each newel. It shall be operative in the newels in which the handrail enters the balustrade. It shall cause the moving walk to stop by removing power from the driving-machine motor and brake. It shall operate in either of the following two ways:

(a) if an object becomes caught between the handrail and the handrail guard

(b) if an object approaches the area between the handrail and handrail guard

For those units that rely on an opening of the balustrade to prevent entrapment, all handrail entry devices shall be operative whenever the handrails are operating. The device shall be of the manual reset type.

Delete and revise Subsection (b) of 6.2.6.3.11 to read as follows:

6.2.6.3.11 Combplate impact devices. Devices shall be provided that will cause the opening of the power circuit to the moving walk driving-machine motor and brake if either

(b) a resultant vertical force not greater than 268 N (60 lbf) in the upward direction is applied at the center of the front of the combplate.

Add new Subsections 6.2.6.3.13 and 6.2.6.3.14 to read as follows:

6.2.6.3.13 Service ports. Service ports used for diagnostic purposes or for resetting faults shall be placed in a location accessible only to elevator personnel.

6.2.6.3.14 Phase protection of motors. A moving walk having a polyphase AC power supply shall be provided with means to prevent the operation of the moving walk drive motor if a reversal of phase rotation, or phase failure of the incoming polyphase AC power, will cause the moving walk to operate in the wrong direction.

Delete and revise Section 6.2.6.4 to read as follows:

6.2.6.4 Handrail speed monitoring device. A handrail speed monitoring device shall be provided that will cause the activation of the alarm required by Subsection 6.2.6.3.1(b) without any intentional delay whenever the speed of either handrail deviates from the treadway speed by 15% or more. The device shall also cause electric power to be removed from the driving-machine motor and brake when the speed deviation of 15% or more is continuous within a 2 s to 6 s range. The device shall be of the manual reset type.

Delete and revise Section 6.2.6.8.3 to read as follows:

6.2.6.8.3 Additional signs, video displays or graphics. Signs, video displays or graphics other than those specified in Sections 6.2.6.8.1 and 6.2.6.8.2 shall not be permitted adjacent to the walk in such a manner that obstructs boarding passenger view of the signs required in Section 6.2.6.9.1, obstructs or reduces passenger access to the handrails, within the safety zone, nor on the moving walk, except for signs, graphics, or markings required by this Code, manufacturer's identification, and owner's identification that are permitted on the moving walk. They shall not be distracting, create passenger flow hazards, or impair function of safety devices. Pallet, handrail and balustrade signs or graphics are not permitted.

6.2.7 Lighting, access, and electrical work.

Delete and revise Section 6.2.7.3.2 to read as follows:

6.2.7.3.2 Access plates at the top and bottom landings shall be securely fastened by a mechanical means. Access plate(s) shall be provided with electrical switches that will remove power to the driving machine and brake should the access plate be displaced or removed.

Add new Sections 6.2.9 and 6.2.10 to read as follows:

6.2.9 New York City identification number.

Each moving walk shall be assigned a unique numerical identification a minimum of 6 mm (0.25 in) in height. The city identification number shall be applied on the right hand side, facing the newel, at the entrance and exit of the moving walk as well as the following locations:

- (a) The driving machine;
- (b) Controller;
- (c) Main line disconnect switch.

6.2.10 Building identification number.

Each moving walk shall be assigned a unique alpha-numeric or numerical identification, a minimum of 6 mm (0.25 in) in height. The building identification number shall be applied on the exterior, clearly visible, at the entrance and exit of the moving walk.

PART 7
DUMBWAITERS AND MATERIAL LIFTS

SECTION 7.1
POWER AND HAND DUMBWAITERS WITHOUT AUTOMATIC TRANSFER DEVICES

7.1.4 Vertical car clearances and runbys for car and counterweights.

Delete and revise Section 7.1.4.3.1 to read as follows:

7.1.4.3.1 Horizontal unobstructed area on the car top of not less than 0.370 m² (570 in.²) and measured not less than 500 mm (20 in.) on one side.

SECTION 7.4
MATERIAL LIFTS WITHOUT AUTOMATIC TRANSFER DEVICES

7.4.2 Classification.

Delete and revise Sections 7.4.2.1 and 7.4.2.2 to read as follows:

7.4.2.1 Type A Material Lifts shall conform to ASME B20.1.

7.4.2.2 Type B Material Lifts are not permitted.

7.4.3 Construction of Hoistways and hoistway enclosures.

Delete Section 7.4.3 in its entirety.

7.4.4 Pits.

Delete Section 7.4.4 in its entirety.

7.4.5 Location and guarding of counterweights.

Delete Section 7.4.5 in its entirety.

7.4.6 Vertical clearances and runbys for cars and counterweights.

Delete Section 7.4.6 in its entirety.

7.4.7 Horizontal car and counterweight clearances.

Delete Section 7.4.7 in its entirety.

7.4.8 Protection of spaces below hoistways.

Delete Section 7.4.8 in its entirety.

7.4.9 Machinery spaces, machine rooms, control spaces, and control rooms.

Delete Section 7.4.9 in its entirety.

7.4.10 Equipment in hoistways and machine rooms.

Delete Section 7.4.10 in its entirety.

7.4.11 Machinery and sheave beams, supports, and foundations.

Delete Section 7.4.11 in its entirety.

7.4.12 Guarding of equipment and standard railing.

Delete Section 7.4.12 in its entirety.

7.4.13 Protection of hoistway landing openings.

Delete Section 7.4.13 in its entirety.

7.4.14 Hoistway door locking devices and electric contracts, and hoistway access switches.

Delete Section 7.4.14 in its entirety.

7.4.15 Power operation of hoistway doors and car doors and gates.

Delete Section 7.4.15 in its entirety.

7.4.16 Identification of equipment.

Delete Section 7.4.16 in its entirety.

SECTION 7.5

ELECTRIC MATERIAL LIFTS WITHOUT AUTOMATIC TRANSFER DEVICES

Delete Section 7.5 in its entirety.

SECTION 7.6

HYDRAULIC MATERIAL LIFTS WITHOUT AUTOMATIC TRANSFER DEVICES

Delete Section 7.6 in its entirety.

SECTION 7.7
AUTOMATIC TRANSFER DEVICES

Delete Section 7.7 in its entirety.

SECTION 7.9
ELECTRIC MATERIAL LIFTS WITH AUTOMATIC TRANSFER DEVICES

Delete Section 7.9 in its entirety.

SECTION 7.10
HYDRAULIC MATERIAL LIFTS WITH AUTOMATIC TRANSFER DEVICES

Delete Section 7.10 in its entirety.

SECTION 7.11
MATERIAL LIFTS WITH OBSCURED TRANSFER DEVICES

Delete Section 7.11 in its entirety.

PART 8
GENERAL REQUIREMENTS

SECTION 8.1
SECURITY

8.1.4 Group 3: Emergency Operation.

Add new subsection (e) to the Note of Section 8.1.4 to read as follows:

NOTE: See the following:

(e) Firefighters Emergency Operation Phase I and Phase II and Occupant Evacuation Operation shall be by New York City standard key 2642 and FDNY standard key 1620.

SECTION 8.5
ESCALATOR AND MOVING WALK SAFETY REQUIREMENT FOR SEISMIC RISK
ZONE 2 OR GREATER

Delete and revise the title of Section 8.5 to read as follows:

SECTION 8.5
ESCALATOR AND MOVING WALK SEISMIC REQUIREMENTS

Delete and revise the first paragraph of Section 8.5 to read as follows:

(a) Section 8.5 applies to all escalators and moving walks where such equipment is installed in buildings assigned to one of the following:

(1) Seismic Design Category C with Component Importance Factor, I_p , equal to 1.5 as defined by the *New York City Building Code*

(2) Seismic Design Category D or greater as defined by the *New York City Building Code*

(3) Design Spectral Response Acceleration for a 0.2 s time period [$S_d(0.2)$] greater than 0.12 and building designated as *post-disaster building*

(4) Seismic Performance Category C with Seismic Hazard Exposure Group II or higher as defined by earlier model building codes (see Note)

(5) Seismic Risk Zone 2 or greater as defined by earlier building codes (see Note)

NOTE [8.5(a)(4) and (a)(5)]: For example, SBC 1982, SBC 1994, etc.

(b) The appropriate Escalator Seismic Force Level is determined by the applicable building code.

(1) Where the applicable building code references Seismic Design Categories or Design Spectral Response Acceleration [$S_d(0.2)$], force levels as referenced by Section 8.4.14 shall be used (see the *New York City Building Code*).

(2) Where the applicable building code makes reference to ground motion parameters (such as A_v or Z_v), Section 8.4.13 shall be used.

(3) Where the applicable building code makes reference to Seismic Risk Zones or to Seismic Risk Zones and component force level equations, force levels for the appropriate zone, as listed throughout Section 8.5, or the calculated component force level, whichever is greater, shall be used.

(c) The escalator and moving walk safety requirements contained in Section 8.5 shall be used considering the requirements in the other parts of the code. These requirements are to be applied as well as those in Sections 6.1 and 6.2 but are not additive. Where multiple requirements are applicable to the same component, the most stringent requirement shall control.

8.5.1 Balustrade Construction.

Delete and revise Section 8.5.1 to read as follows:

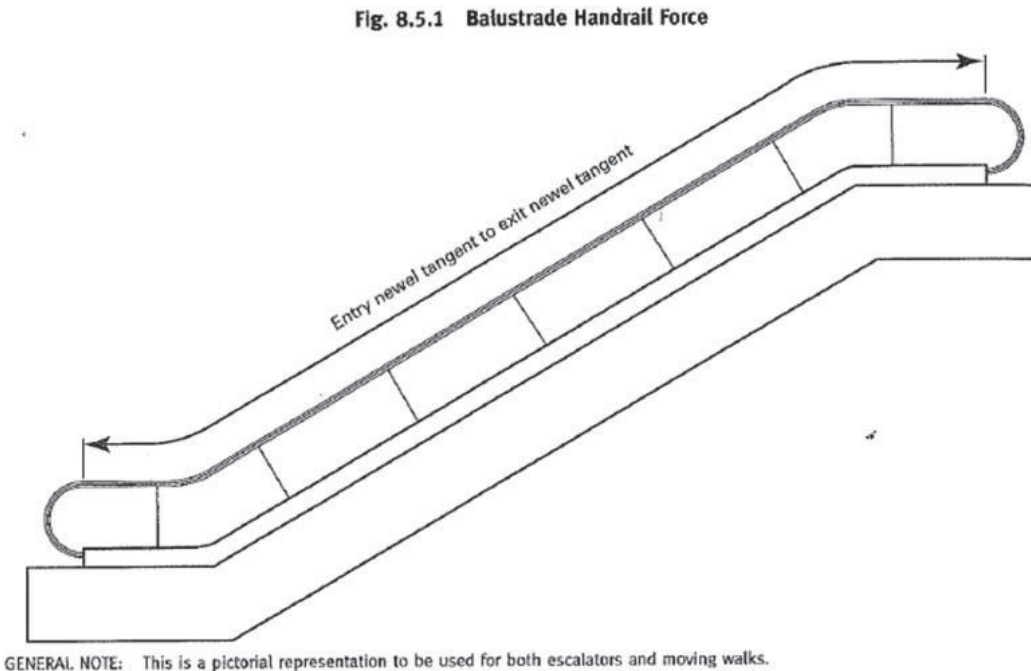
8.5.1 Balustrades shall be designed to withstand the vertical inertial force due to the weight of the balustrade and the horizontal seismic forces as follows:

(a) The component operating weight, W_p , is the sum of the balustrade dead load, decking weight if supported by the balustrade, and 70% of the machinery rated load (see Section 6.1.3.9.2) and the seismic force computed as defined in Sections 8.4.13 and 8.4.14.

(b) The seismic forces resulting from the machinery rated load shall be distributed along the exposed length of the handrail from entry newel tangent to exit newel tangent as depicted in Fig. 8.5.1.

Figure 8.5.1 Balustrade Handrail Force.

Add Figure 8.5.1 to read as follows:



8.5.2 Truss Members.

Delete and revise Section 8.5.2 to read as follows:

8.5.2 Structural items not covered in Table 8.5.5 shall be capable of withstanding the inertia effect of the applicable masses without permanent deformation.

(a) For jurisdictions enforcing seismic zones or an equivalent ground motion parameter (see 8.4.13), the horizontal (see Section 8.5.2.1) and vertical (see Section 8.5.2.2) seismic forces shall be applied separately (not simultaneously).

(b) Earthquake forces shall be applied simultaneously as defined by Section 8.4.14, except $W_p = W_t + W_r$ where

$W_r = 25\%$ of the structural rated load calculated per Section 6.1.3.9.1

$W_t =$ total dead load of the escalator, including all components supported by the truss.

Delete and revise Section 8.5.2.1 to read as follows:

8521 For jurisdictions enforcing seismic zones or an equivalent ground motion parameter, horizontal seismic forces shall be based on the total dead load of the escalator, including all components supported by the truss, plus 25% of the structural rated load in accordance with Section 6.1.3.9.1. The horizontal seismic force shall be computed as follows:

$$F_p = ZIC_p(W_t + W_r)$$

where

C_p = horizontal seismic force factor

F_p = total horizontal seismic force

I = importance factor

Z = seismic zone factor

= 0.25 for seismic zone 2

= 0.5 for seismic zone 3 or greater

Where the applicable building code does not make reference to seismic risk zones, the ground motion parameters shown in Section 8.4.13 shall be used.

Revise the first sentence of section Section 8.5.2.1.2 to read as follows:

The escalator or moving walk is not considered a structural component of the building.

Revise the NOTE following Section 8.5.2.1.3 to read as follows:

NOTE: When any portion of the escalator is more than six stories above grade, other values of C_p may apply and should be determined based upon the fundamental period of the building.

Delete and revise Section 8.5.2.2 to read as follows:

8522 For jurisdictions enforcing seismic zones or an equivalent ground motion parameter, vertical forces shall be structurally allocated among all the supports. The total vertical force shall be defined by the following table:

<u>Zone</u>	<u>Total Vertical Force, F_{iv}</u>
<u>2</u>	<u>$(1 \pm 0.25)(W_t + W_r)$</u>
<u>3 or greater</u>	<u>$(1 \pm 0.50)(W_t + W_r)$</u>

8.5.3 Supporting Connections Between the Truss and the Building.

Delete and revise Section 8.5.3.1 to read as follows:

8.5.3.1 The truss end supports shall provide motion restraint in the principle horizontal directions capable of withstanding the seismic forces acting upon the escalator or moving walk. The clearance in the transverse direction between the escalator truss and the seismic restraint shall not exceed 6.5 mm (0.25 in.) on each side. Motion restraint in the longitudinal direction at either or both end supports shall accommodate the design story drift (see Section 8.5.3.2.2). Vertical restraint is required when the resultant vertical seismic force exceeds $W_t + W_r$ (see Section 8.5.2.2). Where one end of the truss uses an unfastened restraint, forces resulting from movement of building structure members are not considered as being applied to the truss.

Delete and revise Section 8.5.3.2 to read as follows:

8.5.3.2 Truss end supports shall accommodate the design story drift (see Section 8.5.3.2.2) in the longitudinal direction such that

(a) clearance between the truss and the building is sufficient to prevent truss compression damage.

(b) seat depth (the longitudinal overlap and bearing surface between the building support and the truss support) is sufficient to prevent disengagement of the truss end with the building support.

Delete and revise Section 8.5.3.2.1 to read as follows:

8.5.3.2.1 When one end of the escalator truss is not designed to accommodate story drift, the design shall account for the forces developed by building movement in a manner that restricts transfer of these forces to the truss. The other truss end support shall be free to slide in the longitudinal direction to accommodate the design story drift. When both ends are designed to accommodate story drift

(a) means shall be provided to prevent any truss end from disengaging from its building support seat.

(b) the end supports shall be permitted to be free to slide in the longitudinal direction such that the sum of the motions accommodates the total design story drift.

Delete and revise Section 8.5.3.2.2 to read as follows:

8.5.3.2.2 At the sliding end(s), the depth of the beam seat shall be capable of accommodating the design story drift. The design story drift shall have a minimum value of 1.5 times the building story drift, as obtained from either of the following:

(a) the structural engineer or record.

(b) the maximum story drift value as per ASCE/SEI-7, Table 12.2.-1.

NOTE [8.5.3.2.2(b)]: ASCE/SEI-7, Table 12.2-1 specifies a maximum story drift of $0.025 h_{sx}$ where h_{sx} is the building story height.

Add new Section 8.5.3.3 to read as follows:

8.5.3.3 Intermediate support(s) for escalators and moving walks, when used, shall be of sufficient size to accommodate design story drift movement in both the longitudinal and transverse directions. Any motion restraint provided shall not reduce the story drift capacity of the support.

8.5.4 Earthquake Protective Devices.

Delete and revise Section 8.5.4 to read as follows:

8.5.4 Earthquake protective devices shall be of the failsafe type. A minimum of one seismic detection device shall be provided in each escalator (nontandem operation or non-side-by-side arrangement) or moving walk. For escalators or moving walks in a tandem operation (see Section 6.1.6.6) or side-by-side arrangement, a minimum of one seismic detection device is required. The seismic detection device shall be mounted in the machine space or adjacent to the escalator or moving walk. Where possible, a seismic detection device shall be mounted adjacent to a vertical load-bearing building structural member when installed at an elevation above ground level, or any structural member if mounted at or below ground level, or any other location approved by the structural engineer of record.

(a) The seismic detection device shall conform to Sections 8.4.10.1.2(a) and (b).

(b) Actuation of the seismic detection device shall cause removal of power from the escalator and moving walk driving-machine motor(s) and brake(s) on all units controlled by the seismic detection device.

(c) Where a seismic detection device is used exclusively to control the escalator or moving walk, it shall be located in a machine room or machinery space and, where possible, shall be mounted adjacent to a vertical load-bearing member. Should no vertical load-bearing member be in close proximity, it shall be permitted to locate the seismic detection device at the nearest accessible vertical load-bearing member at approximately the same horizontal level as the upper machinery space or machine room.

Add new Section 8.5.5 to read as follows:

8.5.5 Allowable Stresses Applicable to Seismic Design. The allowable stress limits to be used in the design of all escalator and moving walk components are listed in Table 8.5.5. An escalator or moving walk subjected to seismic loading shall be capable of withstanding the specified seismic forces in combination with the dynamic or static loads occurring during normal operation.

Add Table 8.5.5 to read as follows:

TABLE 8.5.5 Component-Based Allowable Design Stresses			
<u>Component</u>	<u>Allowable Design Parameter</u>		
	<u>Seismic Zones Criteria</u> <u>[Note(1)]</u>	<u>Building Code</u>	
		<u>IBC, ASCE/SEI-7</u>	<u>NBCC 2005 or Later</u>
<u>Structural, steel</u>	<u>$0.88F_y$</u>	<u>$0.6F_y$</u>	<u>$0.6F_y$</u>
<u>Structural, other materials</u>	<u>Follow allowable limits as recommended by design specifications for material of use</u>	<u>Follow allowable limits as recommended by design specifications for material of use</u>	<u>Follow allowable limits as recommended by design specifications for material of use</u>
<u>Balustrades</u>	<u>$\leq F_y$</u>	<u>$0.6F_y$</u>	<u>$0.6F_y$</u>
<u>Structural glass in balustrades</u>	<u>Minimum factor of safety = 2 based on the modulus of rupture</u>	<u>Minimum factor of safety = 2 based on the modulus of rupture</u>	<u>Minimum factor of safety = 2 based on the modulus of rupture</u>
<u>Structural fastenings and/or connections</u>	<u>See 8.4.2.3.3</u>	<u>Per 8.4.2.3</u>	<u>Per 8.4.2.3</u>

GENERAL NOTE: F_y = yield strength.

NOTE:

(1) See Section 8.5.2(a).

SECTION 8.6
MAINTENANCE, REPAIR, REPLACEMENT, AND TESTING

8.6.1 General requirements.

Delete and revise Subsection (d) of Section 8.6.1.4.1 to read as follows:

8.6.1.4.1 On-site maintenance records.

(d) Permanent Record. A permanent record of the results of all acceptance tests as required by Sections 8.10.1.1.4 and 8.10.1.1.5 shall be kept with the on-site records. Test tags, complying with Section 2.16.3.3 for marking plates permanently attached to or adjacent to the controller, shall meet this requirement.

NOTE: This requirement does not apply to equipment installed under ASME A17.1-2010 and earlier editions.

Add new Note to Section 8.6.1.7.2 to read as follows:

8.6.1.7.2 Periodic test record.

NOTE: See Section 8.11.1.6 for test tag requirements.

8.6.3 Replacements.

Delete Section 8.6.3.2.2 in its entirety.

8.6.4 Maintenance and testing of electric elevators.

Delete and revise section 8.6.4.1.3 to read as follows:

8.6.4.1.3 Equal tension shall be maintained between individual suspension members in each set. Suspension members are considered to be equally tensioned when the smallest tension measured is within 10% of the highest tension measured. When suspension member tension is checked or adjusted, an anti-rotation device conforming to the requirements of Section 2.20.9.8 shall be required.

Delete and revise Section 8.6.4.6 to read as follows:

8.6.4.6.1 The driving-machine brake and emergency brake, where provided, shall be maintained annually to ensure proper operations, including, but not limited to the following:

- (a) residual pads (antimagnetic pads)
- (b) lining and running
- (c) springs
- (d) sleeves and guide bushings
- (e) discs and drums
- (f) brake coil and plunger
- (g) brake monitoring device, where provided

8.6.4.6.1.1 Brake maintenance shall be entered into the maintenance records.

8.6.4.6.1.2 A metal tag indicating the elevator maintenance company and date of service shall be attached to the elevator controller.

8.6.4.6.2 If any part of the driving-machine brake is changed or adjusted that can affect the holding capacity or decelerating capacity of the brake when required (see Section 2.24.8.3), it shall be adjusted and checked by means that will verify its proper function and holding capacity. A test complying with Section 8.6.4.20.4 shall be performed. When springs or brake pads are replaced, a brake load test shall be performed per Subsection 8.10.2.2.2(v).

8.6.4.6.3 If any part of the emergency brake is changed or adjusted that can affect the holding capacity or decelerating capacity of the emergency brake when required (see Section 2.19.3), it

shall be adjusted and checked by means that will verify its proper function and holding capacity. When springs or brake pads are replaced, a brake load test shall be performed.

Delete and revise Section 8.6.4.8.3 to read as follows:

8.6.4.8.3 Flammable and combustible liquids shall not be stored in machine rooms and spaces unless they are in compliance with NFPA 13, as modified by New York City Fire Code and New York City Building Code.

Delete and revise Section 8.6.4.10.1 to read as follows:

8.6.4.10.1 General.

(1) The hoisting ropes of elevators having winding-drum driving-machines with 1:1 roping, if of the babbitted rope socket type, shall be resocketed at intervals no longer than:

(a) 1 year, for machines located over the hoistway;

(b) 2 years, for machines located below or at the side of the hoistway;

(c) 4 years, for all counterweight cable ends of drum machines;

(2) In addition to the foregoing requirements, rope fastenings shall be resocketed when an inspection reveals any evidence of failure at the shackle regardless of the period of time since last re-shackling.

(3) Where auxiliary rope-fastening devices conforming to the requirements of Section 2.20.10 or where car hoist ropes with additional approved type emergency clamping devices are installed, refastening at the period specified is not required provided that, where such devices are installed, all hoisting ropes shall be refastened on the failure or indication of failure of any rope fastening. Wedge clamp shackles shall not be used on drum machines.

(4) Where the elevator is equipped with a drum counterweight, the fastenings shall be examined for fatigue or damage at the socket. Where fatigue or damage is detected, the ropes shall be refastened in conformance with Section 8.6.4.10.2.

Delete and revise Section 8.6.4.10.3 to read as follows:

8.6.4.10.3 Tags. A legible metal tag shall be securely attached through one of the tapered rope sockets during each resocketing (as shown in the diagram below), and shall bear the following information:

(a) The name of the person or firm who performed the resocketing; and

(b) The date on which the rope was resocketed.

The material and marking of the tags shall conform to Section 2.16.3.3, except that the height of the letters and figures shall be not less than 1.5 mm (0.0625 in.).

Delete and revise Section 8.6.4.19.6 to read as follows:

8.6.4.19.6 Firefighters' Emergency Operation. Firefighters' Emergency Operation (Phase I and II) shall be tested to determine conformance with the applicable requirements. Phase I recall shall be tested by individually activating fire alarm initiating device inputs to the elevator control, the key switch at the designated landing and, where provided, the switch at the building fire control station (Part 6).

Delete and revise Section 8.6.4.19.14 to read as follows:

8.6.4.19.14 Occupant Evacuation Operation. See Section 8.6.11.13.

Delete and revise Section 8.6.4.20.1 to read as follows:

8.6.4.20.1 Car and counterweight safeties. Types A, B, and C car and counterweight safeties shall be tested in accordance with Subsection 8.6.4.20.1(a)

(a) Rated Load and Rated Speed Test. Car safeties, except those operating on wood guide rails, and their governors, shall be tested with rated load in the car. Counterweight safety tests shall be made with no load in the car. Tests shall be made by tripping the governor by hand at the rated speed. The following operational conditions shall be checked (Item 2.29.2):

(1) Type B safeties shall stop the car with the rated load within the required range of stopping distances for which the governor is tripped (Item 2.29.2) and the level of the platform checked for conformance to Section 2.17.9.2.

(2) For Type A safeties and Type A safety parts of Type C safeties, there shall be sufficient travel of the safety rollers or dogs remaining after the test to bring the car and its rated load to rest on safety application at governor tripping speed. The level of the platform shall be checked for conformance to Section 2.17.9.2.

Delete and revise Section 8.6.4.20.3 to read as follows:

8.6.4.20.3 Oil buffers.

(a) Car oil buffers shall be tested to determine conformance with the applicable requirements by running the car onto the buffer with rated load at rated speed.

(b) For reduced stroke buffers, this test shall be made at the reduced striking speed permitted (Item 5.9.2.1).

(c) This test is not required where a Type C safety is used (see Section 8.6.4.20.1).

(d) In making these tests, the normal and emergency terminal stopping devices shall be made temporarily inoperative. The final terminal stopping devices shall remain operative and be temporarily relocated, if necessary, to permit compression of the buffer during the test.

(e) After completion of the test, a metal tag, indicating the date of the test, together with the name of the person or firm who performed the test, shall be attached to the buffer [Item 5.3.2(b)].

(f) Counterweight oil buffers shall be tested by running the counterweight onto its buffer at rated speed with no load in the car, except as specified in Subsections 8.6.4.20.3(b) and (c) (Item 5.9.2.1), or at reduced speed if the requirements of Section 8.6.11.10 are met.

(g) A test tag as required in Section 8.6.1.7.2 shall be provided.

Delete Subsection (b) of Section 8.6.4.20.4 in its entirety.

Delete Subsection (b) of Section 8.6.4.20.10 in its entirety.

8.6.8 Maintenance and testing of escalators and moving walks.

Delete and revise Section 8.6.8.2 to read as follows:

8.6.8.2 Step-to-skirt clearance. Clearances shall be maintained in compliance with the applicable codes, and the clearance on either side of the steps and between the steps and the adjacent skirt guard shall not exceed 4 mm (0.16 in.), and the sum of the clearances on both sides shall not exceed 7 mm (0.28 in.).

Delete Section 8.6.8.3 in its entirety.

Delete Section 8.6.8.15.19 in its entirety.

8.6.11 Special provisions.

Delete Section 8.6.11.10 in its entirety.

Delete and revise Section 8.6.11.13 to read as follows:

8.6.11.13 Occupant Evacuation Operation. All elevators provided with Occupant Evacuation Operation shall be subjected, by authorized personnel, to a check of the operation in conjunction with the fire alarm system testing in accordance with the requirements of NFPA 72, as modified by Appendix Q of the New York City Building Code and any applicable rules. Deficiencies shall be corrected. A record of findings shall be available to elevator personnel and the commissioner. These tests and inspections are not part of the Category 1 or Category 5 tests or inspections.

8.7.2 Alterations to electric elevators.

Add new Section 8.7.2.10.6 to read as follows:

8.7.2.10.6 Intermediate hoistway entrances placed out of service. Where permitted by the *New York City Building Code*, an intermediate hoistway entrance placed out of service shall comply with the following:

(a) Interlocks shall remain in the safety circuit with door panel(s) separately secured in closed position on the hoistway side.

(b) Eliminate the capability of automatic elevators from opening the car doors at the floor placed out of service.

(c) Egress, Accessibility and Firefighters' Emergency Operation.

(d) Associated labeling and signaling shall be removed.

Delete and revise Subsection (c) of Section 8.7.2.13 to read as follows:

8.7.2.13 Door reopening device. Where a reopening device for power-operated car doors or gates is added or is part of an alteration to the door system, the following requirements shall apply:

(c) when firefighters' emergency operation is provided, door reopening devices and door closing on Phase I and Phase II shall comply with the requirements of Subsection 2.27.3.1.6(e).

Delete and revise Section 8.7.2.14.1 to read as follows:

872141 Where an alteration consists of the installation of a new car, the installation shall conform to Sections 2.12.6, 2.14, 2.15, and 2.17 (see also 8.7.2.15.1).

Delete and revise Subsection (e) of Section 8.7.2.14.2 to read as follows:

872142 The following requirements shall be conformed to where alterations are made to existing cars:

(e) All side emergency exits shall be permanently fixed in the closed position. The corresponding side emergency exit on an adjacent car shall also be fixed in the closed position. The installation shall comply with Section 2.12.6.

Delete and revise Subsection (b) of Section 8.7.2.14.3 to read as follows:

872143 Where any alteration is made to the car enclosure, other than as specified in 8.7.2.14.2, the installation shall conform to the following:

(b) Where an existing enclosure other than as specified in Subsection 8.7.2.14.3(a) is retained and new material is installed, the new material and adhesive shall conform to the following requirements, based on the tests conducted in accordance with the requirements of ASTM E84, ANSI/UL 723, or CAN/ULC-S102:

(1) flame spread rating of 0 to 50

(2) smoke development of 0 to 100

If the material or combination of materials installed exceeds 6.4 mm (0.25 in.) in thickness, the car enclosure shall conform to Section 2.14.2.1.1.

Add new Section 8.7.2.15.2.1 to read as follows:

8.7.2.15.2.1 When weight is added or removed from a counterweighted elevator, the counterbalance prior to the alteration shall be maintained.

Add new Items (4) and (5) to Subsection (c) of Section 8.7.2.17.1 to read as follows:

8.7.2.17.1 Increase or decrease in rise. Where an alteration involves an increase or decrease in the rise, the following requirements shall be conformed to:

(c) The bottom and top clearances and runbys for cars and counterweights shall conform to Section 2.4, except as follows:

(4) Where the only hoistway alteration is the decrease in travel at the upper end of the travel, the installation shall be modified as follows:

(i) Terminal stopping devices shall be provided based on the new top terminal landing location and the final limit switch shall be of the manual reset type.

(ii) A key controlled switch shall be provided in accordance with Section 8.1.5 (i.e. Group 4) requirements to by-pass the new top terminal stopping devices, when the elevator transfer switch is placed in the Top-of-Car Inspection Operation position, for access to the hoistway above the terminal landing.

The switch shall be manually operated, be labeled “Terminal By-Pass”, and shall have two positions; By-Pass and Normal.

The switch shall be located in the hoistway in the vicinity of the terminal limits and shall be accessible to a person standing on the car top. The car transfer switch shall not be removed from the Top-of-Car Inspection Operation position until the terminal limit By-Pass switch is placed in the Normal position.

(iii) Existing terminal stopping devices shall remain functional. The hoistway door electro-mechanical safety interlocks shall remain in the safety circuit and locked with door panel(s) separately secured in closed position on the hoistway side.

(iv) Associated floor labeling and signaling shall be removed.

(5) For manually operated elevators, as an exception to Item 4, the hoist ropes shall be extended and the upper limit switches shall be lowered to the new top terminal landing. Access for maintenance and inspection of the equipment at the top of the hoistway shall be provided.

Add new Subsections (b)(5) and (c)(10) to Section 8.7.2.27.4 to read as follows:

8.7.2.27.4 Controllers.

(b) Where an operation controller is installed, and the type of operation control, if automatic remains automatic, or, if nonautomatic remains continuous pressure, car switch, or other type of operation where the movement or stopping of the car is under the manual control of the operator (non-automatic), and the existing motion control equipment is retained, the installation shall conform to the following:

(5) Requirement 2.22

(c) Where both a motion controller and an operation controller are installed without any change in the type of motion control as described in 8.7.2.27.4(a) and without any change in the type of operation control as described in 8.7.2.27.4(b), the installation shall conform to the following:

(10) Requirement 2.22

Delete and revise Subsection (j) of Section 8.7.2.27.5 to read as follows:

8.7.2.27.5 Change in type of motion control. Where there is a change in the type of motion control (the method of controlling acceleration, speed, retardation, and stopping), the installation shall conform to the following:

(j) Car overspeed protection and unintended movement protection shall conform to Section 2.19 to the extent that the existing installation is approved by a design professional.

Delete and revise Subsection (l) of Section 8.7.2.27.6 to read as follows:

8.7.2.27.6 Change in type of operation control.

(l) Ascending car overspeed and unintended car movement protection shall conform to Section 2.19 to the extent the existing installation permits.

Delete Section 8.7.2.27.7 in its entirety.

Delete and revise Section 8.7.2.27.9 to read as follows:

8.7.2.27.9 Door monitoring system. Where there is an alteration to or addition of a system to monitor and prevent automatic operation of the elevator with faulty door contact circuits while the car is in the landing zone, the alteration shall conform to the requirements in Section 2.26.5.

8.7.3 Alterations to hydraulic elevators.

Add new Subsection (f) to 8.7.3.22.1 to read as follows:

8.7.3.22.1 Increase or decrease in rise. Where an alteration involves an increase or decrease in the rise without any change in the location of the driving machine, it shall conform to the following:

(f) Where the decrease is at the upper end of the rise, the installation shall conform to Section 8.7.2.17.1(4).

Delete and revise Section 8.7.3.31.10 to read as follows:

8.7.3.31.10 In-car stop switch. On passenger and freight elevators, a stop switch shall be provided in accordance with Section 2.26.2.5.

SECTION 8.8
WELDING

8.8.1 Qualification of welders.

Delete and revise Section 8.8.1 to read as follows:

8.8.1 Qualification of welders.

Where required elsewhere in the New York City Building Code, welding of parts, except for tack welds later incorporated into finished welds, shall be undertaken

(a) by welders qualified in accordance with the requirements of Section 4 of ANSI/AWS D1.1, whereby the welders shall be qualified by the manufacturer or contractor; a registered design professional; or a recognized testing laboratory; or

(b) as per department rules.

SECTION 8.10
ACCEPTANCE INSPECTIONS AND TESTS

Delete and revise the header of Section 8.10 to read as follows:

Requirement 8.10 covers acceptance inspections and tests of new or altered installations.

NOTE:

(1) Compliance with certain requirements is verifiable through review of design documents, engineering, or type tests.

8.10.1 General requirements for acceptance inspections and tests.

Delete and revise section 8.10.1.1.3 to read as follows:

8.10.1.1.3 RESERVED.

Delete and revise Section 8.10.1.1.4 to read as follows:

8.10.1.1.4 Acceptance test tags. A metal tag with the date (month and year) the acceptance test was satisfactorily performed, and the name of the applicant of record, shall be installed to be readily visible and shall be permanently attached to the controller of each unit.

Delete Section 8.10.1.1.5 in its entirety.

Delete Section 8.10.1.2 in its entirety.

8.10.2 Acceptance inspection and tests of electric elevators

Add new Subsection (v) to Section 8.10.2.2.1 to read as follows:

8.10.2.2.1 Inside car.

(v) Elevator mirrors. (3001.6)

Delete and revise Section 8.10.2.2.9 to read as follows:

8.10.2.2.9 Occupant Evacuation Operation. Verify conformance with Section 2.27.11. Tests shall be performed jointly by the fire alarm installer and the elevator system installer in conjunction with NFPA 72, as modified by Appendix Q of the New York City Building Code and any applicable rules.

SECTION 8.11

PERIODIC INSPECTIONS AND WITNESSING OF TESTS

8.11.1 General requirements for periodic inspections and witnessing of tests.

Delete and revise Section 8.11.1.1 to read as follows:

8.11.1.1 Persons authorized to make periodic inspections and witness tests. Refer to Article 304 of the *New York City Administrative Code*.

Delete and revise Sections 8.11.1.3 and 8.11.1.4 to read as follows:

8.11.13 Periodic inspection and test frequency. See Chapter 3 of Title 28 of the *Administrative Code*.

NOTE: Required intervals for periodic inspections and tests can be found in Table N1 as modified by this appendix.

8.11.14 Installation placed out of service. An installation placed out of service permanently or temporarily so that it cannot be operated for a definite period shall comply with the following requirements:

8.11.1.4.1 Elevators not in use but available for service. Elevators not in use but available for service are those elevators whose power feed line has been disconnected by opening the

main line switch. All required tests shall be regularly performed and a periodic inspection shall be made, and fees shall be paid pursuant to the New York City Building Code. An elevator inspector shall verify that these tests and inspections are being performed, and that the power was interrupted.

8.11.1.4.1.1 Elevators placed out of service (dismantled). Elevators that are dismantled shall have power feed lines disconnected from the main line disconnect switch and shall meet the requirements of subsections (a) or (b), below:

(a) An electric elevator, dumbwaiter, sidewalk elevator or material lift whose suspension ropes have been removed, whose car and counterweight rest at the bottom of the hoistway, and whose hoistway doors have been permanently barricaded or sealed in the closed position on the hoistway side; or

(b) A hydraulic elevator, dumbwaiter, sidewalk elevator or material lift whose car rests at the bottom of the hoistway; whose pressure piping has been disassembled and removed from the premises; whose hoistway doors have been permanently barricaded or sealed in the closed position.

In addition, an application to dismantle the elevator shall be filed with the department and an inspection fee charged. Thereafter, one (1) additional inspection per year shall be made to verify that the status is unchanged and fees shall be paid for such inspection. Before the installation is put back in service, an application to restore service shall be filed with the department. For access to the bottom of the hoistway, the requirements of Section 8.11.1.4.1.2(b)(4) shall apply.

8.11.1.4.1.2 Elevators removed and permanently discontinued – One elevator shaftway. When a single elevator with one elevator shaftway is removed and permanently discontinued, an application shall be filed with the department and inspection fees charged. Such process shall meet the following requirements:

(a) If it is proposed to extend the floor at every story of the building, the new construction shall be the same or of similar construction as the existing adjacent floor and of equivalent or better fire resistive rating. All hoistway equipment shall be completely removed; rails may remain.

(b) If the hoistway shaft is to remain open:

(1) All hoistway equipment shall be completely removed; rails may remain. Except as provided in item 4, all door and window assemblies opening onto masonry shaftway and masonry enclosed associated machine rooms shall be completely removed and the open space so created shall be filled with the same or similar material of equal thickness and of equivalent or better fire restive rating as the adjacent masonry.

(2) Except as provided in item 3, all door and window assemblies opening onto the hoistway shaft that were originally enclosed with an open wire screen and subsequently enclosed with other than masonry units (i.e. metal lath and plaster or

transit boards) shall remain. Such door and window assemblies shall be fastened in a closed position and shall be adequately welded or bolted shut. The assembly shall be enclosed in material of equal or similar thickness of equivalent or better fire resistive rating as the adjacent enclosure.

(3) The sidewalk elevator door at the street level shall be fastened in a closed position and shall be adequately welded shut. The underside of such door shall be properly reinforced and supported by steel beams and columns to support the same loading as the sidewalk.

(4) Firefighter access to the bottom of the hoistway (elevator pit) shall be provided through the door assembly of the pit door and shall meet the following requirements:

(i) If the machine room is located at or near the level of the bottom of the shaftway and is so located that access to the bottom of the shaftway is readily available through the machine room, the door to the machine room shall be kept closed with a heavy-duty dead bolt locking device.

(ii) If the machine room is located other than at or near the level of the bottom of the shaftway or the bottom of the shaftway is not otherwise readily accessible through the machine room, the lowermost door opening onto the shaftway shall be kept closed with a heavy-duty dead bolt locking device. A conspicuous sign of 25 mm (1 in.) block letters with contrasting background shall be permanently affixed to the door and shall read “HOISTWAY.”

(iii) The key to the locking device required in items (i) and (ii) above shall be kept by the building superintendent and shall be readily available to the commissioner or the commissioner’s representative and to firefighters.

(c) The ventilation opening (smoke hole) in the flooring provided at the top of the hoistway immediately below the sheaves or at the level of the top of the machine room floor beams and the ventilation opening at the exterior portion of the machine room shall be maintained.

(d) All electric service to the elevator hoistway and machine room shall be disconnected outside the confines of the elevator hoistway and machine room.

8.11.1.4.1.3 Elevators removed and permanently discontinued – Multi-elevator shaftway.

When a single elevator in a multi-elevator shaftway is removed and permanently discontinued, an application shall be filed with the department and inspection fees charged. Such process shall meet the following requirements:

(a) If it is proposed to extend the floor at every story of the building, the new construction shall be the same or of similar construction as the existing adjacent floor and of equivalent or better fire resistive rating. All hoistway equipment for the discontinued elevator shall be completely removed; rails may remain. The shaft enclosure shall be rearranged so that the remaining operating elevators are properly enclosed to maintain the integrity of the shaftway.

(b) If the hoistway shaft is to remain open:

(1) All hoistway equipment for the discontinued elevator shall be completely removed; rails may remain. All door assemblies serving the discontinued elevator, openings onto the masonry shaftway shall be completely removed and the open space so created shall be filled with the same or similar material of equal thickness of equivalent or better fire resistive rating as the adjacent masonry.

(2) All door assemblies serving the discontinued elevator, opening onto the hoistway shaft that were originally enclosed with an open wire screen and subsequently enclosed with other than masonry units (i.e. metal lath and plaster or transite boards), shall remain. Such door assemblies shall be fastened in a closed position and shall be adequately welded shut. The assembly shall be enclosed in material of equivalent or better fire resistive rating as the adjacent enclosure.

8.11.1.4.2 Escalator installation placed out of service.

8.11.1.4.2.1 Escalators not in use but available for service. Escalators not in use but available for service are those escalators whose power feed lines have been disconnected from the main line disconnect switch and whose entrances have been barricaded. All required tests shall be regularly performed and a periodic inspection shall be made, and fees shall be paid pursuant to the New York City Building Code. An elevator inspector shall verify that these tests and inspections are being performed, and that the power was interrupted.

8.11.1.4.2.2 Escalators discontinued or placed out of service. Escalators discontinued or placed out of service shall comply with Section 8.11.1.4.2.1. An application shall be filed with the department and an inspection fee charged. Thereafter, one (1) additional inspection per year shall be made to verify that the status is unchanged and fees shall be paid for such inspection. Before the installation is put back in service, it shall be subject to all of the routine and periodic inspections and tests required by the New York City Building Code.

8.11.1.4.2.3 Escalators removed and permanently discontinued. An application shall be filed with the department and inspection fees charged. The escalator steps, newels, rails, all wire cables, and other equipment and machinery shall be completely removed. An opening created by the removal of the escalator shall be filled with new construction of the same or similar construction as the existing adjacent floor and of equivalent or better fire resistive rating.

8.11.1.4.3 Moving walk installation placed out of service.

8.11.1.4.3.1 Moving walks not in use but available for service. Moving walks not in use but available for service are those moving walks whose power feed lines have been disconnected from the main line disconnect switch and whose entrances have been barricaded. All required tests shall be regularly performed and a periodic inspection shall be made and fees charged. An elevator inspector shall verify that these tests and inspections are being performed, and that the power was interrupted.

8.11.1.4.3.2 Moving walk discontinued or placed out of service. Moving walks discontinued or placed out of service shall meet the requirements of Section 8.11.1.4.3.1 except for periodic inspection. An application shall be filed with the department and inspection fees charged. Thereafter, one (1) additional inspection per year shall be made to verify that the status is unchanged and fees shall be paid for such inspection. Before the installation is placed back in service, it shall be subject to all of the routine and periodic inspections and tests required by the New York City Building Code.

8.11.1.4.3.3 Moving walk removed and permanently discontinued. An application shall be filed with the department and inspection fees charged. The moving walk treadways, newels, rails, all wire cables, and other equipment and machinery shall be completely removed. The truss may remain. An opening created by the removal of the moving walk shall be covered by new construction of the same or similar construction as the existing adjacent floor and of equivalent or better fire resistive rating.

Add new Section 8.11.1.6 to read as follows:

8.11.1.6 Test and maintenance data tags. A tag conforming to the requirements of Section 2.16.3.3 for data plates with the test date, the category number of the test, and the name of the agency performing the test shall be installed at the following locations:

(a) Category 1 on the controller for elevators, escalators and moving walks and also on the lower starting station of escalators and moving walks.

(b) Category 5 on the elevator controller, governor(s), release carrier(s) and oil buffer(s).

(c) Brake maintenance tag on the controller for elevators, escalators and moving walks and also on the lower starting station of escalators and moving walks.

8.11.2 Periodic inspection of electric elevators.

Delete and revise the Note to Section 8.11.2.1 to read as follows:

8.11.2.1 Periodic inspection requirements. Inspectors shall include the following when identifying components or systems, or both, that shall be inspected.

NOTES:

(1) For inspection frequency, see Section 8.11.1.3.

(2) Refer to Article 304 of the *New York City Administrative Code*.

8.11.3 Periodic inspection of hydraulic elevators.

Delete and revise the Note to Section 8.11.3.1 to read as follows:

8.11.3.1 Periodic inspection requirements. Inspectors shall include the following when identifying components or systems, or both, that shall be inspected.

NOTES:

(1) For inspection frequency, see Section 8.11.1.3.

(2) Refer to Article 304 of the New York City Administrative Code.

8.11.4 Periodic inspection of escalators and moving walks.

Delete and revise the Note to Section 8.11.4.1 to read as follows:

8.11.4.1 Periodic inspection and test requirements. Inspectors shall include the following when identifying components or systems, or both, that shall be inspected:

NOTES:

(1) For inspection frequency, see Section 8.11.1.3.

(2) Refer to Article 304 of the New York City Administrative Code.

Add new Table N1 to read as follows:

**TABLE N1
REQUIRED INSPECTION AND TEST INTERVALS IN "MONTHS" (1)**

Reference Code	Equipment Type (5)	Periodic Inspections on Behalf of Owner By an Approved Agency (2)						Category Tests (3) on Behalf of Owner By an Approved Agency (4)							
		Requirement	Interval	Notifications	Filing	Approved agency (Inspecting)	Approved Agency (Witnessing)	Category 1		Category 5		Notifications	Filing	Approved agency (Performing)	Approved Agency (Witnessing)
								Requirement	Interval	Requirement	Interval				
ASME A17.1	Electric Elevators	8.11.2.1	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19	1-1 to 12-31	8.6.4.20	60	Yes (Cat. 5)	Yes	Yes	Yes
ASME A17.1	Hydraulic Elevators	8.11.3.1	1-1 to 12-31	No	Yes	Yes	No	8.6.5.14	1-1 to 12-31	Roped 8.6.5.16	60	Yes (Cat. 5)	Yes	Yes	Yes
ASME A17.1	Escalators & Moving Walks	8.11.4.1	1-1 to 12-31	No	Yes	Yes	No	8.6.8.15	1-1 to 12-31	N/A	N/A	Yes (Cat. 1)	Yes	Yes	Yes
ASME A17.1	Sidewalk Elevators	8.11.5.1	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	Yes (Cat. 5)	Yes	Yes	Yes
ASME A17.1	Dumbwaiters	8.11.5.4	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	No
ASME A17.1	Material Lifts	8.11.5.5	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	No
ASME A17.1	Special Purpose Personnel Elevators	8.11.5.6	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	No
ASME A17.1	Inclined Elevators	8.11.5.7	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	No
ASME A17.1	Shipboard Elevators	8.11.5.8	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	No
ASME A17.1	Screw-Column Elevators	8.11.5.9	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	No
ASME A17.1	Rooftop Elevators	8.11.5.10	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	No
ASME A17.1	Rack and Pinion Elevators	8.11.5.11	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	No

**TABLE N1
REQUIRED INSPECTION AND TEST INTERVALS IN "MONTHS" (1)**

Reference Code	Equipment Type (5)	Periodic Inspections on Behalf of Owner By an Approved Agency (2)						Category Tests (3) on Behalf of Owner By an Approved Agency (4)							
		Requirement	Interval	Notifications	Filing	Approved agency (Inspecting)	Approved Agency (Witnessing)	Category 1		Category 5		Notifications	Filing	Approved agency (Performing)	Approved Agency (Witnessing)
ASME A17.1	Limited Use-Limited Application Elevators (Commercial Bldgs. Only)	8.11.5.12	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	Yes (Cat. 5)	Yes	Yes	Yes
ASME A17.1	Elevators Used for Construction	8.11.5.13	1-1 to 12-31	No	Yes	Yes	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	Yes
ASME A18.1	Platform/Stairway Chair Lifts	10.2	1-1 to 12-31	No	Yes	Yes	No	10.3.1	1-1 to 12-31	10.3.3	60	No	Yes	Yes	No
ASME B20.1	Vertical and Inclined Reciprocating Conveyors (VRC) and Tow Conveyors	No	No	No	No	No	No	Appendix K2	Appendix K2	Appendix K2	Appendix K2	No	Yes	Yes	No
ASME A90.1	ManLifts	8.2	1-1 to 12-31	No	Yes	Yes	No	8.1	1-1 to 12-31	N/A	N/A	No	Yes	Yes	Yes
ASME A17.1	PR Elevators	8.11.5.2	1-1 to 12-31	No	No	Yes (6)	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	Yes	Yes	Yes
ASME A17.1	PR Dumb-waiters	No	No	No	No	No	No	8.6.4.19, 8.6.5.14	1-1 to 12-31	8.6.4.20, 8.6.5.16	60	No	No	No	No
ASME A18.1	PR Platform/Stairway Chair Lifts	No	No	No	No	No	No	10.3.1	1-1 to 12-31	10.3.3	60	No	No	No	No

Notes:
(1) See Article 304.6 of the *New York City Administrative Code*.
(2) Periodic inspections, in accordance with Section 28-304.6.1 of the *New York City Administrative Code*, do not require the presence of a witnessing agency.
(3) Water-hydraulic elevators shall be tested in accordance with section 8.6.5.15.

(4) Where filing with the Department is not required, the owner shall perform category testing and maintain a log of each test performed as required by the *New York City Building Code*. Such log shall be made available to the Department upon request.

(5) Dismantled devices do not require Category 1 or 5 tests but do require periodic inspections.

(6) For private residence elevators, periodic inspection and category testing may be performed on the same date.

CHAPTER K2
MODIFICATIONS TO ASME B20.1/2015,
SAFETY STANDARD FOR CONVEYORS AND RELATED EQUIPMENT

K201.1 General. As referenced in Section 3001.2 of this code, the provisions of ASME B20.1-2015 shall be modified in accordance with this appendix. The section numbers correlate to those in the referenced ASME standard. Refer to the rules of the department for any subsequent additions, modifications or deletions that may have been made to this standard in accordance with Section 28-103.19 of the *Administrative Code*.

4 DEFINITIONS

Delete and revise the definition “Conveyor, vertical reciprocating” in Section 4 to read as follows:

CONVEYOR, VERTICAL RECIPROCATING. A permanent reciprocating power or gravity-actuated unit (not designed to carry passengers or an operator) that receives objects on a carrier and transmits these objects vertically between two or more levels.

6 SPECIFIC SAFETY STANDARDS
SECTION 6.1

BELT CONVEYORS: FIXED IN PLACE

Delete Section 6.1 in its entirety.

SECTION 6.2
GUARDING OF BUCKET CONVEYORS

Delete Section 6.2 in its entirety.

SECTION 6.3
SAFETY CONSIDERATIONS FOR CHAIN CONVEYORS

Delete Section 6.3 in its entirety.

SECTION 6.4
EN MASSE CONVEYORS

Delete Section 6.4 in its entirety.

SECTION 6.5
FLIGHT AND APRON CONVEYORS: BULK MATERIAL

Delete Section 6.5 in its entirety.

SECTION 6.6
INCLINED RECIPROCATING CONVEYORS

Delete Section 6.6 in its entirety.

SECTION 6.7
LIVE ROLLER CONVEYORS: BELT OR CHAIN DRIVEN

Delete Section 6.7 in its entirety.

SECTION 6.8
MOBILE CONVEYORS

Delete Section 6.8 in its entirety.

SECTION 6.9
**SAFETY CONSIDERATIONS FOR PORTABLE CONVEYORS, EXTENDABLE
BELT CONVEYORS, AND CAR UNLOADERS**

Delete Section 6.9 in its entirety.

SECTION 6.10
SAFETY CONSIDERATIONS FOR PUSHER BAR CONVEYORS

Delete Section 6.10 in its entirety.

SECTION 6.11
6.11 ROLLER AND WHEEL CONVEYORS

Delete Section 6.11 in its entirety.

SECTION 6.12
6.12 SAFETY CONSIDERATIONS FOR SCREW CONVEYORS

Delete Section 6.12 in its entirety.

SECTION 6.13
**SAFETY CONSIDERATIONS FOR SHUTTLE CONVEYERS, BELT TRIPPERS,
AND TRANSFER CARS**

Delete Section 6.13 in its entirety.

SECTION 6.14
SKIP HOISTS: BULK MATERIAL

Delete Section 6.14 in its entirety.

SECTION 6.15
SLAT CONVEYORS AND ROLLER SLAT CONVEYORS

Delete Section 6.15 in its entirety.

SECTION 6.16
SUSPENDED VERTICAL TRAY CONVEYORS

Delete Section 6.16 in its entirety.

SECTION 6.17
TOW CONVEYORS

Delete and revise the title of Section 6.17 to read as follows:

SECTION 6.17
TOW CONVEYORS (SHOPPING CAR CONVEYORS)

6.17.2 Tow Conveyors: Public use intended.

Delete and revise Section 6.17.2.2 and add new Section 6.17.2.3 to Section 6.17.2 read as follows:

6.17.2.2 Guarding. Where a parted chain, cable, belt, tow pin, or other linkage would permit a runaway condition on an incline or decline, anti-runway/backstop devices shall be provided.

6.17.2.3 Periodic inspections and tests. Tow conveyors shall be subject to periodic inspections and tests including acceptance, category 1 and category 5.

SECTION 6.18
TROLLEY CONVEYORS AND POWER AND FREE CONVEYORS

Delete Section 6.18 in its entirety.

SECTION 6.19
VERTICAL ARTICULATED CONVEYORS

Delete Section 6.19 in its entirety.

SECTION 6.20
VERTICAL CHAIN-OPPOSED SHELF TYPE CONVEYORS

Delete Section 6.20 in its entirety.

SECTION 6.21
VERTICAL RECIPROCATING CONVEYORS

6.21.1 Safety considerations.

Add new Subsections (d), (e), (f), (g), (h), (i), (j) and (k) to Section 6.21.1 to read as follows:

(d) Travel distance shall be limited to less than 22 860 mm (75 ft) with a maximum of four landings served.

(e) Where fire-resistant construction is required by the Building Code, conveyor(s) shall be enclosed in a fire-rated hoistway.

(f) Access at landings shall be a restricted area for authorized personnel with no public access.

(g) Where there is accessible space under the hoistway, the conveyor and counterweight shall be equipped with a safety device designed to stop and hold the conveyor and counterweight independent of the hoisting or driving mechanism and shall comply with A17.1 rules 2.6 and 2.1.2.3.

(h) The operating device shall not be located inside the conveyor enclosure and must be external to the hoistway at each landing served.

(i) The system shall incorporate a position indicator at each floor landing to register the location of the conveyor.

(j) The rated-load capacity shall not be less than 239 kg/m² (49 lbs. per sq ft).

(k) The rated speed shall not exceed 406 mm/sec (80 FPM).

6.21.2 Guarding.

6.21.2 Delete and revise Subsections (b), (c) and (d) of Section 6.21.2 to read as follows:

(b) The conveyor housing shall be equipped with doors or an equivalent means at each manual landing and unloading station, arranged so that they can be opened only when the carrier is present and stopped at that level and such that the carrier cannot be actuated until they are closed. This requirement is typically satisfied by use of a mechanical locking device, which is actuated by the motion of the carrier, and an electrical switch indicating that the door is closed and locked.

(1) The unlocking mechanism must be mounted on the carrier.

(2) This requirement shall be satisfied by the use of an interlock as required by ASME A17.1, Section 2.12.2.

(c) Vertical reciprocating conveyors designed to automatically receive and discharge material shall have interlocked doors as in (b) or, as an alternative,

be guarded by a suitable enclosure extending from the path of the moving carrier.

(d) Where the application requires that personnel walk onto the carrier to load or unload material, the carriers shall be provided with a conveyor enclosure securely fastened to the conveyor platform. The enclosure walls shall be of solid, grille or perforated construction; and shall be of such strength and support that when subjected to a leaning or falling rated load on the conveyor, the enclosure walls will not deflect or deform in a way that reduces running clearances to less than 13 mm (0.5 in.). Enclosure entrance(s) shall be provided with solid doors or gates; and shall guard the full width opening with a minimum height of 2030 mm (80 in.). Grille or perforated portions of conveyor enclosures and entrance gates shall reject a ball 38 mm (1.5 in.) in diameter.

Add new Section 6.21.3 to read as follows:

6.21.3 Periodic testing.

(a) All conveyors shall be inspected and tested as per Table N1 of ASME A17.1 as modified by Chapter K1 of this appendix.

(b) All safety devices shall be tested on all tests. A static full load shall be performed every five years to ensure that the conveyor holds the load.

SECTION 6.22
MATERIAL ENCAPSULATING CONVEYORS

Delete Section 6.22 in its entirety.

Delete and revise the title of “Mandatory Appendix I” to read as follows:

NON-MANDATORY APPENDIX I
SPECIFICATIONS FOR DESIGN, INSTALLATION
COMMISSIONING, AND PERIODIC INSPECTION OF VERTICAL
RECIPROCATING CONVEYORS

CHAPTER K3
MODIFICATIONS TO ASME A17.3-2015,
SAFETY CODE FOR EXISTING ELEVATORS AND ESCALATORS

K301.1 Retroactive requirements for existing elevators and escalators. As referenced in Section 3001.2 of this code, the provisions of ASME A17.3-2015 shall be modified in accordance with this appendix and are applicable to all existing elevators and escalators. The section numbers correlate to those in the referenced ASME standard. Refer to the rules of the department for any subsequent additions, modifications or deletions that may have been made to this standard in accordance with Section 28-103.19 of the *Administrative Code*.

PART I
INTRODUCTION

SECTION 1.1
SCOPE

1.1.2 Equipment not covered by this code.

Delete and revise subsection (ee) to read as follows:

Equipment not covered by this code. Equipment not covered by this code includes, but is not limited to, the following:

- (ee) limited-use/limited-application elevators within the scope of ASME A17.1, except for section 3.10.12 of this code, where such limited-use/limited-application elevators shall achieve compliance by January 1, 2027

SECTION 1.5
ALTERATIONS, MAINTENANCE, AND INSPECTIONS AND TESTS

1.5 Delete and revise Section 1.5 to read as follows:

Existing installations shall conform to the following requirements of ASME A17.1–2013:

- (a) Requirements 8.10, Acceptance Inspections and Tests; and 8.11, Periodic Inspections and Tests
- (b) Requirements 8.6, Maintenance, Repair, and Replacement; and 8.7, Alterations

In addition, existing installations shall conform to Sections 1007.4, 1607.8.1, 3001.2, 3001.4, 3002.5, and 3003.2 of the *New York City Building Code*.

PART II
HOISTWAYS AND RELATED CONSTRUCTION FOR ELECTRIC
ELEVATORS

SECTION 2.1
HOISTWAYS

2.1.1 Hoistway construction.

Delete Section 2.1.1 in its entirety.

2.1.2 Windows in hoistway enclosures.

Delete and revise Section 2.1.2 to read as follows:

2.1.2 Windows in hoistway enclosures. Every hoistway-window opening ten (10) stories or fewer above a thoroughfare, and every such window opening three (3) stories or fewer above the roof of an adjacent building, shall be guarded by one of the following:

(a) Vertical bars at least 5/8 inch (16 mm) in diameter or equivalent, spaced not more than 10 inches (254 mm) apart, permanently and securely fastened in place; or

(b) Metal-sash windows having solid-section steel muntins of not less than 1/8 inch (3.2 mm) thickness, spaced not more than 8 inch (203 mm) apart.

Exterior hoistway-windows shall be marked with the word “SHAFTWAY” in red letters at least 6 inches (152 mm) high on a white background.

2.1.4 Pipes, air ducts, and wiring.

Delete Section 2.1.4 in its entirety.

2.1.5 Counterweight guards.

Delete Section 2.1.5 in its entirety.

SECTION 2.2
MACHINE ROOMS AND MACHINERY SPACES

2.2.5 Pipes, air ducts, and wiring.

Delete Section 2.2.5 in its entirety.

SECTION 2.4
CLEARANCES AND RUNWAYS

Delete Section 2.4 in its entirety.

SECTION 2.5
PROTECTION OF SPACES BELOW HOISTWAYS

Delete and revise Section 2.5 to read as follows:

Where the space below the hoistway is not permanently secured against access, the following requirements shall be conformed to:

(a) The cars and counterweights shall be provided with spring or oil buffers.

(b) Car and counterweight buffer supports shall be of sufficient strength to withstand without permanent deformation the impact resulting from buffer engagement of the car plus the rated load or the counterweight with an empty car at the following speeds:

(1) Governor tripping speed where the safety is governor operated;

(2) One hundred and twenty-five (125) percent of the rated speed where the safety is not governor operated.

SECTION 2.6 **HOISTWAY ENTRANCES**

2.6.3 Hoistway-door vision panels.

Delete and revise Section 2.6.3 to read as follows:

2.6.3 Hoistway-door vision panels. Hoistway-door vision panels must be protected by protective grills made of number sixteen (16) gage stainless or galvanized steel in accordance with the following specifications:

(a) Grills shall be sized to fit within or over the vision panel frame and completely cover the vision panel opening in the elevator, car doors and hoistway doors.

(b) Grills and vision panel frames shall be secured by means of non-reversible screws or other tamper proof fasteners.

(c) Grills shall contain openings that shall reject a ball 0.75 inch (19 mm) in diameter.

(d) All cut edges shall be deburred.

(e) The provisions of this section shall apply to both new and existing passenger cars. Requirements for such grills may be waived if certification is submitted that such elevator is operated manually or twenty-four (24) hour doorman service is provided. A security guard shall not be considered doorman service.

(f) For the purpose of this subparagraph, a vandal resistant 0.25 inch (6 mm) polycarbonate sheet, such as Lexan, in two (2) layers, one (1) on each side of the required wire glass, may be used in lieu of the metal protective.

2.6.4 Door hangers.

Delete Section 2.6.4 in its entirety.

2.6.7 Bottom guides.

Delete and revise Section 2.6.7 to read as follows:

2.6.7 Bottom guides. Existing elevators in occupancy groups R-1, R-2 and E shall comply with the following requirements:

(a) The bottom of each horizontally sliding hoistway elevator door panel shall be equipped with bottom guiding members and bottom safety retainers.

(1) The bottom of each horizontally sliding hoistway door panel shall be guided by two or more members as described in ASME A17.1 Section 2.11.11.6.

(2) Safety Retainers - The bottom of each horizontally sliding hoistway elevator door panel shall be provided with a means of retaining the door panel in position if the primary guiding means fail, and preventing displacement of the bottom of the door panel by not more than 0.75 inch (19 mm) into the hoistway. Such retainers shall be installed on the bottom, shaft-side of each door panel, shall be fabricated of at least twelve (12) gage stainless or galvanized steel, and shall engage the corresponding sill member by not less than 0.375 inch (9.5 mm).

Exception: New elevator doors installed under the 1996/1997 or later editions of ASME A17.1 as modified by Chapter K1 of this Appendix.

(b) The door panels shall be structurally sound and in such condition that the guide(s) and retainer(s) may be securely attached.

(1) At least one (1) bottom guide shall be installed near each end of every door panel.

(2) A safety retainer(s) totaling at least 8 inches (203 mm) in length shall be installed between the two (2) outermost guides.

(3) On smaller sized door panels, where due to the width of the door panel, the space between the two (2) outermost bottom guides would be less than 8 inches (203 mm), then either:

(i) The length of the retainer may be reduced to a minimum of 4 inches (102 mm); or

(ii) When only one (1) bottom guide is provided near the center of the door, a 4 inches (102 mm) retainer shall be installed on each side of the bottom guide. If the space between the bottom guide and the edge of the door is less than four inches, the length of the retainer may be reduced to the amount of the space between the bottom guide and the edge of the door.

Exception: New elevator entrance frames and doors installed under the 1996/1997 or later editions of ASME A17.1 as modified by Chapter K1 of this appendix.

SECTION 2.7

HOISTWAY-DOOR LOCKING DEVICES, PARKING DEVICES, AND ACCESS

2.7.4 Access to hoistway.

Delete Section 2.7.4 in its entirety.

2.7.5 Restricted opening of hoistway doors and/or car doors on passenger elevators.

Delete and revise the title of Section 2.7.5 to read as follows:

2.7.5 Restricted opening of hoistway doors and/or car doors on automatic passenger elevators. Automatic passenger elevators shall comply by January 1, 2027.

Add new Section 2.7.7 to read as follows:

2.7.7 Locks on elevators and elevator hoistway doors. All elevators shall comply by January 1, 2027.

In all buildings, no switch, lock or device of any kind shall be installed on any floor on or above the street floor on any passenger elevator car or hoistway sliding door. Freight elevators, and passenger elevators with swing-type hoistway doors, are permitted to have locks provided that they are openable by the city-wide standard key 2642 and the New York City Fire Department Standard 1620 key.

SECTION 2.8
POWER OPERATION OF DOORS AND GATES

2.8.1 Kinetic energy and force limitations for power-operated horizontally sliding doors.

Add new Subsection (3) to Section 2.8.1(a):

(3) See Nonmandatory Appendix G of A17.2-204 for door closing time guidelines.

PART III
MACHINERY AND EQUIPMENT FOR ELECTRIC ELEVATORS

SECTION 3.3
CAR FRAMES AND PLATFORMS

3.3.1 Car platforms.

Delete Section 3.3.1 in its entirety.

SECTION 3.4
CAR ENCLOSURES

3.4.1 Car enclosures.

Delete Section 3.4.1 in its entirety.

3.4.2 Car doors and gates.

Delete and revise Section 3.4.2 to read as follows:

3.4.2 Car doors and gates. Passenger and loft elevators shall comply with subsections (a) and (b) of this section.

(a) Doors, gates, and electric contacts. Cars shall have a car door or gate provided at each entrance equipped with a car door or gate electric contact. Car doors and/or gates shall conform to the following requirements:

- (1) Be positively opened by a lever or other device attached to and operated by the door or gate.
- (2) Be maintained in the open position by the action of gravity or by a restrained compression spring, or both, or by positive mechanical means.
- (3) Not be readily accessible.

(b) Car-door interlock. A car-door interlock shall be required for

- (1) Car doors of elevators where the clearance between the loading side of the car platform and hoistway enclosure exceeds the maximum specified in 2.4.1.
- (2) Car doors of elevators that face an unenclosed portion of the hoistway during the travel of the car.

(c) Closed position of car doors or gates. Car doors or gates shall be considered to be in the closed position under the following conditions:

- (1) For horizontally sliding doors or gates, when the clear open space between the leading edge of the door or gate and the nearest face of the jamb does not exceed 2 in. (51mm) except where car doors are provided with a car-door interlock(s), 0.375 in. (10 mm)
- (2) For vertically sliding counterweighted doors or gates, when the clear open space between the leading edge of the door or gate and the car platform sill does not exceed 2 in. (51 mm)
- (3) For horizontally sliding center-opening doors, or vertically sliding biparting counterbalanced doors, when the door panels are within 2 in. (51 mm) of contact with each other, except where horizontally sliding center-opening car doors are provided with a car-door interlock(s), 0.375 in. (10 mm)

(d) Collapsible gates. Collapsible car gates shall conform to the following requirements:

- (1) Collapsible car gates shall not be power opened to a distance exceeding one-third (1/3) of the clear gate opening, and in no case more than 10 inches (254 mm).

- (2) When fully closed (extended position), gates shall reject a ball 3 inches (76 mm) in diameter for passenger elevators and 4.5 inches (114 mm) for freight elevators.
- (3) Gates shall have at least every fourth vertical member guided at the top and every second vertical member guided at the bottom.
- (4) Handles of manually operated collapsible gates nearest the car operating device on elevators operated from the car only shall be so located that the nearest handle is not more than 48 inches (1.22 m) from the car operating device when the gate is closed (extended position), and not more than 48 inches (1.22 m) above the car floor. Gate handles shall be provided with finger guards.

3.4.4 Emergency exits.

Delete Section 3.4.4 in its entirety.

3.4.5 Car illumination.

Delete and revise Section 3.4.5 to read as follows:

3.4.5 Car illumination.

- (a) Interiors of cars shall be provided with an electric light or lights. Not less than two (2) lamps shall be provided.
- (b) The minimum illumination at the car threshold, with the door closed, shall not be less than:
- (1) For passenger elevators: 5 fc (54 lux).
- (2) For freight elevators: 2½ fc (27 lux).
- (c) Light control switches are not required, but if provided they shall be located in or adjacent to the operating device in the car. In elevators having automatic operation, they shall be of the key-operated type or located in a fixture with a locked cover.
- (d) Top of car light fixtures shall be provided with a non-key-operated switch in or adjacent to the fixture.

SECTION 3.5 **SAFETIES**

3.5.1 Car safeties.

Delete Section 3.5.1 in its entirety.

3.5.2 Counterweight safeties.

Delete Section 3.5.2 in its entirety.

3.5.3 Safeties to stop ascending cars or counterweights prohibited.

Delete Section 3.5.3 in its entirety.

3.5.4 Application and release of safeties.

Delete Section 3.5.4 in its entirety.

3.5.5 Maximum permissible movement of governor rope to operate the safety mechanism.

Delete Section 3.5.5 in its entirety.

3.5.6 Rail lubricants and lubrication plate.

Delete and revise Section 3.5.6 to read as follows:

3.5.6 Rail lubricants. Rail lubricants or coatings that will reduce the holding power of the safety or prevent its functioning as required shall not be used.

SECTION 3.6 **SPEED GOVERNORS**

Delete Section 3.6 in its entirety.

SECTION 3.8 **DRIVING MACHINES AND SHEAVES**

3.8.1 General requirement.

Delete Section 3.8.1 in its entirety.

3.8.2 Winding drum machines.

Delete and revise Subsection (b) of Section 3.8.2 to read as follows:

(b) Final terminal stopping devices for winding drum machines shall consist of a stopping switch located on the driving machine (machine final) and a stopping switch located in the hoistway and operated by cams attached to the car.

(1) Stopping switches, located on and operated by the driving machine, shall not be driven by chains, ropes, or belts. The opening of these contacts shall occur before or concurrent with the opening of the final terminal stopping switch.

(2) Driving machines equipped with an alternating current motor and alternating current brake or a direct current motor and direct-current brake shall have the final terminal stopping and machine stop device contacts installed in the operating

circuits. The occurrence of a single ground or the failure of any single magnetically operated switch, contactor, or relay shall not render any final terminal stopping device ineffective.

Add new Subsection 3.8.4.1 to read as follows:

3.8.4.1 Single plunger brakes.

(a) All existing traction elevators with single plunger brakes must comply with either of the following by January 1, 2027:

(1) Alteration of single plunger assemblies to dual-plunger type, or

(2) Compliance with Unintended Car Movement Protection as specified by Section 2.19.2 of ASME A17.1.

(b) Notwithstanding any inconsistent provision of chapter 1 of title 28 of the Administrative Code, the work required to comply with this section may not be performed without a permit from the department.

SECTION 3.9
TERMINAL STOPPING DEVICES

3.9.1 Normal terminal stopping devices.

Delete Section 3.9.1 in its entirety.

3.9.2 Final terminal stopping devices.

Delete and revise Section 3.9.2 to read as follows:

392 Final terminal stopping devices. Upper and lower final terminal electro-mechanical stopping devices shall be provided and arranged to prevent movement of the car by the normal operating devices in either direction of travel after the car has passed a terminal landing. Final terminal stopping devices shall be located as follows:

(a) Winding drum driving machines. Elevators having winding drum machines shall have stopping switches on the machines and also installed in the hoistway and operated by cams attached to the car. Final limit switches and brackets shall be permanently secured and pinned.

(b) Traction driving machines. Elevators having traction driving machines shall have stopping switches installed in the hoistway and operated by cams attached to the car. Final limit switches and brackets shall be permanently secured and pinned.

SECTION 3.10
OPERATING DEVICES AND CONTROL EQUIPMENT

3.10.1 Types of operating devices.

Delete Section 3.10.1 in its entirety.

3.10.3 Top-of-car operating devices.

Delete Section 3.10.3 in its entirety.

3.10.4 Electrical protective devices.

Delete and revise Section 3.10.4 to read as follows:

3.10.4 Electrical protective devices.

Electrical protective devices shall be provided in accordance with the following:

- (a) Slack-rope switch. Winding drum machines shall be provided with a slack-rope device equipped with a slack-rope switch of the enclosed manually reset type that shall cause the electric power to be removed from the elevator driving machine motor and brake if the suspension ropes become slack.
- (b) Compensating rope sheave switch. Compensating rope sheaves shall be provided with a compensating rope sheave switch or switches mechanically opened by the compensating rope sheave before the sheave reaches its upper or lower limit of travel to cause the electric power to be removed from the elevator driving machine motor and brake.
- (c) Broken rope, tape, or chain switches used in connection with machine room normal terminal stopping switches. Broken rope, tape, or chain switches conforming to the requirements of Section 3.6.1 shall be provided in connection with normal terminal stopping devices located in machine rooms of traction elevators. Such switches shall be opened by a failure of the rope, tape or chain.
- (d) Car-safety mechanism switch. A switch shall be required where a car safety is provided.
- (e) Final terminal stopping devices. Final terminal stopping devices shall be provided for every elevator.
- (f) Emergency terminal speed limiting device. Where reduced stroke oil buffers are provided, emergency terminal speed limiting devices are required.
- (g) Motor generator overspeed protection. Means shall be provided to cause the electric power to be removed automatically from the elevator driving machine

motor and brake should a motor generator set, driven by a direct current motor, overspeed excessively.

(h) Motor field sensing means. Where direct current is supplied to an armature and shunt field of an elevator driving machine motor, a motor field current sensing means shall be provided, which shall cause the electric power to be removed from the motor armature and brake unless current is flowing in the shunt field of the motor.

A motor field current sensing means is not required for static control elevators provided with a device to detect an overspeed condition prior to, and independent of, the operation of the governor overspeed switch. This device shall cause power to be removed from the elevator driving machine motor armature and machine brake.

(i) Buffer switches for oil buffers used with type C car safeties. Oil level and compression switches shall be provided for all oil buffers used with Type C safeties.

(j) Hoistway door interlocks or hoistway door electric contacts. Hoistway door interlocks or hoistway door electric contacts shall be provided for all elevators.

(k) Car door or gate electric contacts. Car door or gate electric contacts shall be provided for all elevators with car doors or gates.

(l) Normal terminal stopping devices. Normal terminal stopping devices shall be provided for every elevator.

(m) Car side emergency exit electric contact. An electric contact shall be provided on every car side emergency exit door.

(n) Electric contacts for hinged car platform sills. Hinged car platform sills, where provided, shall be equipped with electric contacts.

(o) Emergency stop switch. On all elevators, an emergency stop switch shall be provided in the car, and located in or adjacent to each car operating panel. When open (i.e. the "stop position"), this switch shall cause the electric power to be removed from the elevator driving-machine motor and brake. Emergency stop switches shall:

(1) Be of the manual open and close type;

(2) Have a red operating handle or buttons;

(3) Be conspicuously and permanently marked "STOP" and indicate the "STOP" and "RUN" positions; and

(4) When open, cause an audible signaling device to sound.

(p) Stop switch in pit. A stop switch, conforming to the following requirements shall be provided in the pit of every elevator. The switch shall be located adjacent to the normal pit access. The switch shall cause the electric power to be removed from the elevator driving machine motor and brake and shall:

(1) Be of the manual open and close type;

(2) Have a red operating handle or buttons;

(3) Be conspicuously and permanently marked “STOP” and indicate the “STOP” and “RUN” positions; and

(4) Be positively opened mechanically and its opening shall not be solely dependent on a spring.

(q) Buffer switches for gas spring return oil buffers. A buffer switch shall be provided for gas spring return oil buffers that will cause electric power to be removed from the elevator driving machine motor and brake if the plunger is not within 0.5 inch (13 mm) of the fully extended position.

3.10.5 Power supply line disconnecting means.

Delete Section 3.10.5 in its entirety.

3.10.11 Reserved for Future Use.

Delete and revise Section 3.10.11 to read as follows:

3.10.11 Signal System on Car Switch Elevators.

3.10.11 Signal systems on car switch elevators. Elevators with car switch operations shall be provided with a signal system by means of which signals can be given from any landing whenever the elevator is desired at the landing.

3.10.12 System to Monitor and Prevent Automatic Operation of the Elevator With Faulty Door Contact Circuits.

Delete and revise Section 3.10.12 to read as follows:

3.10.12 System to monitor and prevent automatic operation of passenger and freight elevators with faulty door contact circuits.

All automatic passenger and freight elevators shall comply with this section by January 1, 2020. Means shall be provided to monitor the position of power-operated car doors that are mechanically coupled with the landing doors or power-operated car doors with manually operated swing-type hall doors, while the car is in the landing zone, in order

(a) to prevent the operation of the car if the car door is not closed (see Section 3.4.2(c) of ASME A17.3), regardless whether the portion of the circuits incorporating the car-door contact or the interlock contact of the landing door coupled with car door, or both, are closed or open, except as permitted under any of the following conditions:

(1) by a car-leveling or truck-leveling device;

(2) when a hoistway access switch is operated;

(3) when the top-of-car inspection operation utilizing a car door by-pass or hoistway-door bypass switch is activated;

(4) when on any mode of inspection operation; and

(b) to prevent, except as permitted by inspection operation, the power closing of the doors if the car door is fully open and any of the following conditions exist:

(1) the car-door contact is closed or the portion of the circuit, incorporating this contact is bypassed;

(2) the interlock contact of the landing door that is coupled to the opened car door is closed or the portion of the circuit, incorporating this contact is bypassed, except when operating during Firefighters' Service Phase II;

Exception: For swing-type door operation, the locking (secondary) contacts shall be monitored.

(3) the car-door contact and the interlock contact of the door that is coupled to the opened car door are closed, or the portions of the circuits incorporating these contacts are bypassed.

SECTION 3.11 **EMERGENCY OPERATION AND SIGNALING DEVICES**

3.11.1 Car emergency signaling devices.

Delete and revise Section 3.11.1 to read as follows:

3.11.1 Car emergency signaling devices. In all buildings, the elevator(s) shall be provided with the following:

(a) If installed, altered, or both under ASME A17.1–2003 or earlier edition, as modified by Chapter K, Appendix K1

(1) An audible signaling device, operable from the emergency stop switch, when provided, and from a switch marked "ALARM" that 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 shall be permitted to be used for a group of elevators.

(2) If the audible signaling device, or the means of two-way communication, 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 communication for at least 4 hours.

(3) In buildings in which a building attendant (building employee, watchman, etc.) is not continuously available to take action when the required emergency signal is operated, the elevators shall be provided with a means within the car for communicating with or signaling to a service that is capable of taking appropriate action when a building attendant is not available.

(4) An emergency power system shall be provided conforming to the requirements of (a)(3) of this section.

(b) If installed, altered, or both under ASME A17.1–2013 or later editions as modified by Chapter K, Appendix K1, the emergency communications system shall comply with Section 2.27 of the ASME A17.1 Code under which it was installed or altered.

3.11.3 Firefighters' service.

Delete and revise Section 3.11.3 to read as follows:

3.11.3 Firefighters' service operation in existing elevators. Firefighters' service operation shall be installed in accordance with the *New York City Building Code* in all existing elevators serving any of the following:

(a) High rise buildings or buildings classified in Occupancy Group M except existing R-2.

(b) All buildings or buildings classified in Occupancy Group A, B, E, I, or R-1 (except for "residential hotels," as such term is defined by the commissioner pursuant to rules and regulations).

SECTION 3.12 **SUSPENSION MEANS AND THEIR CONNECTIONS**

3.12.1 Suspension means.

Delete Section 3.12.1 in its entirety.

PART IV
HYDRAULIC ELEVATORS

SECTION 4.2
MECHANICAL EQUIPMENT

Delete Section 4.2 in its entirety.

SECTION 4.3
DRIVING MACHINES

4.3.2 Plunger stops.

Delete and revise Section 4.3.2 to read as follows:

4.3.2 Plunger stops. Plungers shall be provided with solid metal stops and/or other means to prevent the plunger from traveling beyond the limits of the cylinder. Stops shall be so designed and constructed as to stop the plunger from maximum speed in the up direction under full pressure without damage to the connection to the driving machine, plunger, plunger connection, couplings, plunger joints, cylinder, cylinder connecting couplings or any other parts of the hydraulic system.

4.3.3 Hydraulic elevators.

Delete and revise Section 4.3.3 to read as follows:

4.3.3 Hydraulic elevators. Hydraulic elevators that have any portion of the cylinder buried in the ground and that do not have a double cylinder or a cylinder with a safety bulkhead shall:

- (a) Have the cylinder replaced with a double cylinder or a cylinder with a safety bulkhead protected from corrosion by one or more of the following methods:
 - (1) Monitored cathodic protection;
 - (2) A coating to protect the cylinder from corrosion that will withstand the installation process;
 - (3) By a protective plastic casing immune to galvanic or electrolytic action, salt water, and other known underground conditions; or
- (b) Be provided with a device meeting the requirements of Section 3.5 or a device arranged to operate in the down direction at an overspeed not exceeding one hundred twenty-five (125) percent of rated speed. The device shall mechanically act to limit the maximum car speed to the buffer striking speed, or stop the elevator car with rated load with a deceleration not to exceed 32.2 ft/s² (9.8 m/s²), and shall not automatically reset. Actuation of the device shall cause power to be removed from the pump motor and control valves until manually reset; or

(c) Have other means acceptable to the department to protect against unintended movement of the car as a result of uncontrolled fluid loss.

SECTION 4.5
TANKS

4.5.2 Pressure tanks.

Delete Section 4.5.2 in its entirety.

SECTION 4.7
OPERATING DEVICES AND CONTROL EQUIPMENT

4.7.2 Top-of-car operating devices.

Delete Section 4.7.2 in its entirety.

4.7.3 Anticreep leveling devices.

Delete Section 4.7.3 in its entirety.

4.7.4 Electrical protective devices.

Delete and revise Section 4.7.4 to read as follows:

4.7.4 Electrical protective devices. Electrical protective devices conforming to the requirements of Section 3.10.4, where they apply to hydraulic elevators, shall be provided and operate as follows:

(a) The following devices shall prevent operation of the elevator by the normal operating device and also the movement of the car in response to the anticreep leveling device:

(1) stop switches in the pit

(2) stop switches on top of the car

(3) car side emergency exit door electric contacts, where such doors are provided

(b) The following devices shall prevent the operation of the elevator by the normal operating device, but the anticreep leveling device where provided, shall remain operative:

(1) emergency stop switches in the car

(2) broken rope, tape, or chain switches on normal terminal stopping devices when such devices are located in the machine room or overhead space

(3) hoistway-door interlocks or hoistway-door electric contacts

(4) car door or gate electric contacts

(5) hinged car platform sill electric contacts

(6) in-car stop switch, where permitted by subsection 3.10.4(t)

4.7.5 Power supply line disconnecting means.

Delete Section 4.7.5 in its entirety.

4.7.7 Control and operating circuit requirements.

Delete and revise Section 4.7.7 to read as follows:

4.7.7 Control and operating circuit requirements. Control and operating circuits shall conform to the requirements of Sections 3.10.9 and 3.10.12.

SECTION 4.8
ADDITIONAL REQUIREMENTS FOR COUNTERWEIGHTED
HYDRAULIC ELEVATORS

Delete Section 4.8 in its entirety.

SECTION 4.9
ADDITIONAL REQUIREMENTS FOR ROPED HYDRAULIC ELEVATORS

Delete Section 4.9 in its entirety.

PART V
ESCALATORS

SECTION 5.1
CONSTRUCTION

5.1.4 Antislid e device.

Delete and revise Section 5.1.4 to read as follows:

5.1.4 Antislid e device.

On high deck balustrades, antislid e devices shall be provided on decks or combination of decks when the outer edge of the deck is greater than 12 inches (305 mm) from the centerline of the handrail or on adjacent escalators when the distance between centerline of the handrails is greater than 16 inches (406 mm).

These devices shall consist of raised objects fastened to the decks, not closer than 4 inches (102 mm) to the handrail and spaced not greater than 78 inches (2000 mm) apart. The height shall be not less than .75 inches (19 mm). There shall be no sharp corners or edges.

5.1.7 Step risers.

Delete Section 5.1.7 in its entirety.

5.1.8 Slotting of step treads.

Delete Section 5.1.8 in its entirety.

5.1.11 Step/skirt performance index.

Delete Section 5.1.11 in its entirety.

SECTION 5.3
OPERATING AND SAFETY DEVICES

5.3.1 Starting switches.

Delete and revise Section 5.3.1 to read as follows:

5.3.1 Starting devices. In every new and existing escalator, starting devices shall be provided with the combination of a starting switch and a starting button. The escalator shall be started only after the activation of both the switch and the button.

(a) Starting switch. Starting switches shall be of continuous pressure spring return type and shall be operated by a cylinder-type lock having five-pin, five-disc or five-tumbler combination. Starting switches shall be of three-position type and shall be clearly marked as follows:

NORMAL. A central position for the key entry and spring return position.

START-UP. A right side position for starting the escalator in the upward direction.

START-DOWN. A left side position for starting the escalator in the downward direction.

(b) Starting Button. Starting buttons shall be of the constant pressure type and located within 6 inches (152 mm) from the starting switch. They shall be clearly marked **“Starting Button”**.

(c) Cover Plate. A locked, transparent cover plate that can be opened by the starting key and clearly marked **“For Start Only”** shall protect the starting devices.

(d) Location of starting devices. Starting devices shall be located at the top and bottom of the escalator on the right side-facing newel.

NOTE: The starting key shall be kept on the premises at all times and shall only be accessible to persons authorized to start escalators. It shall also be made available to the commissioner or the commissioner’s representatives.

5.3.2 Emergency stop buttons.

Delete and revise Section 5.3.2 to read as follows:

5.3.2 Emergency stop buttons location. A red stop button shall be visibly located at the top and bottom landings on the right side-facing the escalator. Remote stop buttons are prohibited, except that any escalator connected to an automatic fire alarm system shall gradually stop the escalator at a rate not greater than 3 ft per sec² (0.91 m/s²) upon the activation of such system.

5.3.7 Skirt obstruction device.

Delete and revise the title of Section 5.3.7 to read as follows:

5.3.7 Skirt obstruction and deflector devices.

Add new Section 5.3.7.1 to read as follows:

537.1 Means shall be provided to cause the electric power to be removed from the escalator driving machine motor and brake if an object becomes caught between the step and the skirt as the step approaches the upper combplate, intermediate device or lower combplate. On units having a run of 20 feet (6.1 m) or more, intermediate devices shall be provided on both sides of the escalator with devices located at intervals of 10 feet (3.05 m) or less. The activation of intermediate devices shall stop the escalator at a rate not greater than 3 ft per sec² (0.91 m/s²) in the direction of travel. The upper and lower skirt obstruction device shall be located so that the escalator will stop before that object reaches the combplate. The activation of any skirt device shall stop the escalator with any load up to full brake rated load with the escalator running.

Add new Section 5.3.7.2 to read as follows:

537.2 Skirt deflector devices, in accordance with 6.1.3.3.10 of A17.1, 2013, shall be provided no later than January 1, 2025.

Add new Section 5.3.13 to read as follows:

5.3.13 Comb-step stop device. A device shall be provided that will cause the opening of the power circuit to the escalator driving machine motor and brake where a resultant vertical force not greater than 60 lbf (268 N) in the upward direction is applied at the center of the front of the comb-plate.

PART VI **DUMBWAITERS**

Delete Part VI in its entirety.

PART VII
HAND ELEVATORS

Add new Section 7.0 to read as follows:

SECTION 7.0
EXISTING HAND POWERED FREIGHT ELEVATORS

Existing hand powered freight elevators shall not be subject to the provisions of this section. However, adequate protection of landing openings shall be provided by hinged or sliding doors which shall remain locked at all times except when the freight elevator is in use. Auxiliary gates not less than 36 inches (914 mm) in height, substantially constructed and secured in place, of wood or metal, or equivalent metal chains shall be installed. Such gates or chains may be arranged to lift vertically, to slide horizontally, or to swing. No part of any gate or chain shall project into the freight elevator shaft. Gates may be operated automatically or manually.

SECTION 7.1
HOISTWAY, HOISTWAY ENCLOSURES, AND RELATED CONSTRUCTION

Delete Section 7.1 in its entirety.

SECTION 7.2
MACHINERY AND EQUIPMENT

Delete Section 7.2 in its entirety.

PART VIII
SIDEWALK ELEVATORS

SECTION 8.1
HOISTWAY, HOISTWAY ENCLOSURES, AND MACHINE ROOMS

Delete Section 8.1 in its entirety.

SECTION 8.2
MACHINERY AND EQUIPMENT

8.2.2 Buffers and bumpers.

Delete Section 8.2.2 in its entirety.

8.2.3 Counterweights.

Delete Section 8.2.3 in its entirety.

8.2.4 Car frames and platforms.

Delete Section 8.2.4 in its entirety.

8.2.5 Bow-irons and stanchions.

Delete Section 8.2.5 in its entirety.

8.2.6 Car enclosures and car doors and gates.

Delete Section 8.2.6 in its entirety.

8.2.7 Car and counterweight safeties and governors.

Delete Section 8.2.7 in its entirety.

8.2.8 Capacity and loading.

Delete Section 8.2.8 in its entirety.

8.2.9 Driving machines and sheaves.

Delete Section 8.2.9 in its entirety.

8.2.10 Terminal stopping devices.

Delete Section 8.2.10 in its entirety.

8.2.11 Locking devices for hinged swinging doors or vertically lifting covers in sidewalks or other areas exterior to the building.

Delete Section 8.2.11 in its entirety.

8.2.12 Requirements for electrical wiring and electrical equipment.

Delete Section 8.2.12 in its entirety.

8.2.13 Clearance between loading side of car platforms and hoistway enclosures.

Delete Section 8.2.13 in its entirety.

8.2.14 Operating devices and control equipment of sidewalk elevator.

Delete and revise Section 8.2.14 to read as follows:

8.2.14 Operating devices and control equipment of sidewalk elevator. The operation of power sidewalk elevators through openings in the sidewalk, or through openings in other exterior areas that are accessible to the public, and that are protected by hinged doors or vertically lifting covers, shall conform to the following:

- (a) The elevator shall be operated in both the up and down directions through the opening, only from the sidewalk or other exterior area. The operation shall be by means of:
- (1) Key-operated continuous-pressure type up and down switches;
or
- (2) Continuous-pressure-type up-and-down operating buttons on the free end of a detachable, flexible cord 5 feet (1.52 m) or less in length.
- (b) Key-operated switches shall be of continuous pressure spring return type, and shall be operated by a cylinder-type lock having not less than a five-pin or five-disk combination with the key removable only when the switch is in the "OFF" position.
- (c) Key-operated switches and plug receptacles for flexible cords shall be mounted in weatherproof boxes with covers installed above the sidewalk or other area on the side of the building wall, located 18 inches (457 mm) or less horizontally from one side of the opening.
- (d) Operating buttons may be provided in the elevator car and at any landing below the top landing, provided that such buttons shall operate the car only when the bow-iron or stanchions are not in contact with the doors or covers in the sidewalk of other exterior area.
- (e) When the bow-iron or stanchions are in contact with the doors or covers at the sidewalk or other exterior area, it shall be possible to operate the car only by means of either the key switches or the continuous-pressure type up-and-down buttons on the free end of the flexible cord specified in Section 8.2.14(a)(1).
- (f) Flexible cords and operating keys shall not be left where they are accessible to unauthorized persons for operation of the elevator.

PART IX
MOVING WALKS

SECTION 9.2
PROTECTION OF SUPPORTS AND MACHINE SPACES AGAINST FIRE

Delete and revise the title of Section 9.2.2 to read as follows:

9.2.1 Protection required.

SECTION 9.3
CONSTRUCTION REQUIREMENTS

Delete and revise subsection (a) of Section 9.3.3.4 to read as follows:

9.3.3.4 Skirt panels. Where skirt panels are provided

(a) the clearance between each side of the treadway and the adjacent skirt panel shall be not more than 0.188 inches (4.8 mm).

SECTION 9.6
OPERATING AND SAFETY DEVICES

9.6.2 Starting switch.

Delete and revise Section 9.6.2 to read as follows:

9.6.2 Starting devices. In every new and existing moving walk, starting devices shall be provided with the combination of a starting switch and a starting button. The moving walk shall be started only after the activation of both the switch and the button.

(a) **Starting Switch.** Starting switches shall be of continuous pressure spring return type and shall be operated by a cylinder-type lock having five-pin, five-disc or five-tumbler combination. Starting switches shall be of three-position type and shall be clearly marked as follows:

NORMAL. A central position for the key entry and spring return position.

START-UP. A right-side position for starting the moving walks in the upward direction.

START-DOWN. A left-side position for starting the moving walks in the downward direction.

(b) **Starting Button.** Starting buttons shall be of the constant pressure type and located within 6 inches (152 mm) from the starting switch. They shall be clearly marked "Starting Button".

(c) **Cover Plate.** A locked, transparent cover plate that can be opened by the starting key and clearly marked "For Start Only" shall protect the starting devices.

(d) **Location of starting devices.** Starting devices shall be located at top and bottom of the moving walk on the right-side facing newel.

NOTE: The starting key shall be kept on the premises at all times and shall only be accessible to persons authorized to start moving walks. It shall also be made available to the commissioner or the commissioner's representatives.

9.6.3 Emergency stop buttons.

Delete and revise Section 9.6.3 to read as follows:

9.6.3 Emergency stop buttons location. A red stop button shall be visibly located at the top and bottom landings on the right side facing the moving walk. Remote stop buttons are prohibited, except that any moving walk connected to an automatic fire alarm system shall gradually stop the moving walk at a rate not greater than 3 ft/sec² (0.91 m/s²) upon the activation of such system.

Add new Section 9.6.14 to read as follows:

9.6.14 Comb-plate stop device. A device shall be provided that will cause the opening of the power circuit to the moving walk driving-machine motor and brake when a resultant vertical force not greater than 60 lbf (268 N) in the upward direction is applied at the center of the front of the comb-plate.

PART X **PRIVATE RESIDENCE ELEVATORS**

Delete and revise Part X Scope to read as follows:

SCOPE

This Part applies to power elevators that are limited in size, capacity, rise, and speed and are installed in or at a private residence. This Part also applies to similar elevators installed in buildings as a means of access to private residences within such buildings provided the elevators are so installed that they are not accessible to the general public or to other occupants in the building.

NOTE: This Part has been developed to provide a minimum standard of safety for private residence elevators. These elevators are installed for the convenience of those persons who are unable to use stairways. Private residence elevators, while they are usually installed in single-family dwellings, may be installed within a separate apartment in a multiple dwelling where they are not accessible to the general public or to other occupants of the building. It is frequently necessary to install such elevators in open stairwells, as the construction of the building may not provide space for an enclosed hoistway.

Since the size, speed, load, rise, and use are limited, it is possible to provide an adequate level of safety without requiring the equipment to meet the standards in other parts of the Code. Equipment installed for use by the general public is subjected to much more severe and frequent service.

Although private residences are usually exempt from routine inspections, this Code will provide a basis for evaluation of existing equipment during resale or exchange of property. It will also be useful when an “installation placed out of service” is returned to use.

It should be noted that the rules of this Part of the Code do not apply to all power elevators installed in private residences, but only to those that meet the definition for “private residence elevator.” All other elevators in private residences are required to comply with all the rules of the other parts of this Code.

All residential elevators shall comply with the following by January 1, 2021.

SECTION 10.1 **HOISTWAY, HOISTWAY ENCLOSURES, AND RELATED CONSTRUCTION**

Section 10.1.1 Hoistway enclosure construction.

Delete Section 10.1.1 in its entirety.

Section 10.1.2 Pits.

Delete Section 10.1.2 in its entirety.

Section 10.1.3 Top car clearance.

Delete Section 10.1.3 in its entirety.

Section 10.1.4.4 Locking devices for hoistway doors and gates.

Delete Section 10.1.4.4 in its entirety.

Section 10.1.4.5 Opening of hoistway doors or gates.

Delete Section 10.1.4.5 in its entirety.

Section 10.1.4.6 Hangers and stops for hoistway sliding doors.

Delete Section 10.1.4.6 in its entirety.

Section 10.1.4.7 Access to the hoistway for emergency purposes.

Delete Section 10.1.4.7 in its entirety.

Section 10.1.5 Pipes in hoistways.

Delete Section 10.1.5 in its entirety.

Section 10.1.6 Horizontal car clearances.

Delete Section 10.1.6 in its entirety.

Section 10.1.7 Guarding of suspension means.

Delete Section 10.1.7 in its entirety.

SECTION 10.2
CARS

Delete Section 10.2 in its entirety.

SECTION 10.3
COUNTERWEIGHTS

Delete Section 10.3 in its entirety.

SECTION 10.4
SAFTETIES AND GOVERNORS

Delete Section 10.4 in its entirety.

SECTION 10.5
CAR AND COUNTERWEIGHT GUIDE RAILS AND FASTENINGS

Delete Section 10.5 in its entirety.

SECTION 10.6
CAR AND COUNTERWEIGHT BUFFERS

Delete Section 10.6 in its entirety.

SECTION 10.7
DRIVING MACHINES, SHEAVES, AND THEIR SUPPORTS

Delete Section 10.7 in its entirety.

SECTION 10.8
TERMINAL STOPPING DEVICES

Delete Section 10.8 in its entirety.

SECTION 10.9
OPERATING DEVICES AND CONTROL EQUIPMENT

10.9.1 Type of Operation.

Delete Section 10.9.1 in its entirety.

10.9.2 Control and Operating Circuit Requirements.

Delete Section 10.9.2 in its entirety.

10.9.3 Key Operated Switches.

Delete Section 10.9.3 in its entirety.

10.9.5 Phase Reversal and Failure Protection.

Delete Section 10.9.5 in its entirety.

10.9.7 Slack Rope and Slack Chain Devices for Winding Drum and Roller Chain Type Driving Machines.

Delete Section 10.9.7 in its entirety.

SECTION 10.10
EMERGENCY SIGNAL DEVICES

Delete and revise Section 10.10 to read as follows:

10.10.1 Emergency signal. A telephone connected to a central telephone exchange shall be permanently installed in the car and an emergency signaling device operable from inside the car and audible outside the hoistway shall be provided. The telephone must have the capability of calling outside to contact emergency personnel.

SECTION 10.11
LIMITATION OF LOAD, SPEED, AND RISE

Delete Section 10.11 in its entirety.

SECTION 10.12
MARKING PLATES

Delete Section 10.12 in its entirety.

SECTION 10.13
SUSPENSION MEANS

Delete Section 10.13 in its entirety.

§61. Appendix M of the New York city building code is REPEALED and a new appendix M is added to read as follows:

END