

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1
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PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Subchapter 6 to read:

Subchapter 6. Elevator Safety Orders

Group I. Administrative Regulations

Group I regulations apply to conveyance elevator installations covered by Group II, and Group III, ~~Group IV regulations and to new conveyances covered by~~ and Group IV regulations.

Article 1. Application

Amend section 3000. As Follows:

* * * * *

§ 3000. Application.

(a) Where Applicable. The Elevator Safety Orders are applicable to elevators conveyances in the State of California except:

- (1) ~~Elevators-Conveyances~~ under the jurisdiction of the United States government.
- (2) ~~Elevators-Conveyances~~ located in a single-unit private home and not accessible to the public.
- (3) ~~Elevators-Conveyances~~ located in a multiunit residential building serving no more than two dwelling units and not accessible to the public.

EXCEPTION TO (a)(3): See section 3001.1~~(b)~~(5).

Note: Unless otherwise designated in this subchapter, the term “Division” refers to the current Division of Occupational Safety and Health or any of its predecessors including the former Division of Industrial Safety or the Division of Occupational Safety and Health Administration. Reference to the former Division of Industrial Safety or Division of Occupational Safety and Health Administration in these orders is meant to refer to their successor, the Division of Occupational Safety and Health, or any subsequent successor agency.

~~(Title 24, Part 7, Section 7 3000(a))~~

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(b) Use and Precedence of Orders.

(1) When ASME A17.1-1996, Safety Code for Elevators and Escalators, is cited or incorporated by reference in these Orders, it shall mean the 1996 edition of ASME A17.1 adopted by the Group as indicated in Table 1, and shall be referred to as ASME A17.1-1996, unless otherwise indicated.

(2) When ASME A18.1, Safety Standard for Platform Lifts and Stairway Chairlifts, is cited or incorporated by reference in these Orders, it shall mean the edition of ASME A18.1 adopted by the Group as indicated in Table 1, and shall be referred to as ASME A18.1, unless otherwise indicated.

(3) When ASME A90.1, Safety Standard for Belt Manlifts, is cited or incorporated by reference in these Orders, it shall mean the edition of ASME A90.1 adopted by the Group as indicated in Table 1, and shall be referred to as ASME A90.1, unless otherwise indicated.

(4) When ASME B20.1, Safety Standard for Conveyors and Related Equipment, is cited or incorporated by reference in these Orders, it shall mean the edition of ASME B20.1 adopted by the Group as indicated in Table 1, and shall be referred to as ASME B20.1, unless otherwise indicated.

(25) The Title 8, Chapter 4, Subchapter 6, Elevator Safety Orders shall apply if any difference exists between the Elevator Safety Orders and ASME A17.1-1996, ASME A18.1, ASME A90.1, ASME B20.1 or any other code, document or standard referenced by a Group in ~~ASME A17.1-1996~~ Table 1. Where a specific provision varies from a general provision, the specific most protective of the two provisions shall apply.

(36) If a section in the Title 8, Chapter 4, Subchapter 6, Elevator Safety Orders makes a cross-reference to a section, rule or table in ASME A17.1-1996, ASME A18.1, ASME A90.1 or ASME B20.1, such cross-referencing shall be that which is shown in ASME A17.1-1996, ASME A18.1, ASME A90.1 or ASME B20.1 unless the referenced section, rule or table has been amended, modified or not adopted in the Elevator Safety Orders.

(4-7) If a section, rule, or table in ASME A17.1-1996, ASME A18.1, ASME A90.1 or ASME B20.1 makes a cross-reference to another section, rule or table in ASME A17.1-1996, ASME A18.1, ASME A90.1 or ASME B20.1, such cross-referencing shall be that which is shown in ASME A17.1-1996, ASME A18.1, ASME A90.1 or ASME B20.1 unless the referenced section, rule or table has been amended, modified or not adopted in the Elevator Safety Orders.

(Title 24, Part 7, Section 7 3000(b))

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Table 1:

Group	Type of Conveyance (see 3000(c))	Applicable Regulations and Cited or Incorporated by Reference Standards as Modified by the Elevator Safety Orders.	Conveyances for which an installation or alteration contract was signed on or after the “effective” date, but before the “end” date.	
			Effective	End
II	<u>3000(c)(1),(2),(3),(4),(5),(6),(7),(8),(9),(10),(11),(12),(13),(14),(15)</u>	<u>Group II Elevator Safety Orders</u>	<u>See Note 1</u>	<u>10/25/98</u>
III	<u>3000(c)(1),(2),(3),(4),(5),(6),(7),(8),(9),(12),(15)</u>	<u>ASME A17.1-1996</u>	<u>10/25/98</u>	<u>5/1/08</u>
	<u>3000(c)(10),(11),(13),(14),(18)</u>	<u>Group II Elevator Safety Orders</u>		
IV	<u>3000(c)(1),(2),(5),(6),(8),(9),(16),(17),(18)</u>	<u>ASME A17.1-2004</u>		
	<u>3000(c)(10),(11),(13),(14)</u>	<u>Group II Elevator Safety Orders</u>	<u>5/1/08</u>	<u>TBD</u>
	<u>3000(c)(18)</u>	<u>ASME A18.1-2003</u>		

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	<u>3000(c)(1),(2),(5),(6),(8), (9),(16),(17),(18)</u>	<u>ASME A17.1-2013</u>		
<u>V</u>	<u>Was (10) and (13) 3000(c)(11) back in</u>	<u>ASME A90.1-2009</u>	<u>TBD</u>	<u>Current</u>
	<u>3000(c)(13)</u>	<u>ASME B20.1-2012</u>		
	<u>3000(c)(18)</u>	<u>ASME A18.1-2011</u>		

Note: This note was in Group II Introduction. Moved to here in Group I §3000

1) Italicized paragraphs, sentences, or phrases apply to all existing elevators while non-italicized apply to elevators installed after 1970 or after the date the regulation was adopted.

(Title 24, Part 7, Section 7 3000(c))

(c) ~~Devices-Conveyances~~ Included. The ~~devices conveyances~~ covered by the regulations of the Elevator Safety Orders are included under the term “~~elevator conveyance~~” as used in the Labor Code. These orders apply to the following:

- (1) Power-cable driven passenger and freight elevators / ~~electric elevators covered by regulations of Articles 7, 8, 20, and 21.~~
- (2) Hydraulic passenger and freight elevators ~~covered by regulations of Articles 9 and 22.~~
- (3) Power and hand sidewalk elevators ~~covered by regulations of Articles 10 and 23.~~
- (4) Hand passenger and freight elevators ~~covered by regulations of Articles 11 and 24.~~
- (5) Power and hand dumbwaiters ~~covered by regulations of Articles 12 and 25.~~
- (6) Material lifts and dumbwaiters with automatic transfer devices ~~covered by regulations of Articles 12.1 and 31.~~
- (7) Inclined elevators ~~covered by regulations of Articles 12.2 and 34.~~
- (8) Escalators ~~covered by regulations of Articles 13 and 26.~~

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- (9) ~~Moving walks covered by regulations of Articles 14 and 27.~~
- (10) ~~Hand power man platforms covered by regulations of Article 16.~~
- (11) ~~Manlifts covered by regulations of Article 17.~~
- (12) ~~Screw- driven / column passenger and freight elevators covered by the regulations of Articles 12.6 and 35.~~
- (13) ~~Vertical or inclined reciprocating conveyors covered by regulations of Article 12.5.~~
- (14) ~~Special access lifts covered by regulations of Articles 15 and 36.~~
- (15) ~~Special-purpose personnel elevators / special-purpose elevators covered by regulations of Article 12.3.~~
- (16) ~~Special purpose elevators covered by regulations of Article 32.~~
- (16) Elevators with Other Types of Driving Machines.
- (17) Special Application Elevators.
- (18) Platform Lifts and Stairway Chairlifts.

(d) ~~Devices-Conveyances~~ Excluded. These orders do not apply to the following:

- (1) Belt, bucket, scoop, roller, or similar inclined or vertical conveyors, or other types of automated conveyor systems. See Section 3000(c)(13).
- (2) Tiering or piling machines, sometimes called stackers, used for loading or stacking material.
- (3) Equipment for feeding or positioning materials at machine tools, printing presses, etc.
- (4) Hoists for raising and lowering materials and which are provided with unguided hooks, slings, and similar means for attachments to the materials.
- (5) Skip or furnace hoists.
- (6) Wharf ramps.
- (7) Amusement devices.

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- (8) Stage and orchestra lifts.
- (9) Lift bridges.
- (10) Railroad car lifts or dumpers.
- (11) Construction elevators as defined in section 7200 of the Labor Code.
- (12) Mine hoists/elevators.
- (13) Freight platform hoists with a travel of not more than 5 feet (1.52m).
- (14) Wind Turbine Tower Elevators.
- (15) Outside Emergency Elevators.

~~(Title 24, Part 7, Section 7-3000(d))~~

(e) ~~Devices-Conveyances~~ Prohibited. The following type elevators are not allowed for new installations.

- (1) Hatchway type elevator.
- (2) Carriage type elevator.
- (3) Auxiliary power elevator.
- (4) Single belt elevator.
- (5) Double belt elevator.
- (6) Steam elevator.
- (7) Gravity elevator.
- (8) Platform elevator.

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~~(9) Private residence elevators and private residence inclined lifts as regulated in part V, ASME A17.1, except those allowed by article 15 and article 36 as permitted by 3000(a)(3) and 3001.1(a)(5).~~

~~(Title 24, part 7, Section 7-3000(e))~~

~~(f) Group III Installations. Devices listed in section 3000(c) that are:~~

~~(1) Erected from plans or contracts completed, and for which the notice of intention to install is filed with the Division, on or after October 25, 1998, but before May 1, 2008.~~

~~(2) Installations that have been operating previous to October 25, 1998 without the required inspection or permit to operate.~~

~~(3) Devices that are moved to a new location on or after October 25, 1998, but before May 1, 2008. Note: Regulations for Group III installations are in Group III.~~

~~(f) Determining the Applicable Group of Elevator Safety Orders for a Conveyance Installation.~~

~~(1) The Group of Elevator Safety Orders that are applicable to a 3000(c) conveyance installation or alteration shall be determined by the signed contract date between the purchaser and the Certified Qualified Conveyance Company (see Table 1).~~

~~(2) Any 3000(c) conveyance that has been installed and is operating without the required inspection or permit to operate shall be removed from service until such time as an authorized representative of the Division has inspected and permitted the conveyance in conformance with the current Elevator Safety Orders.~~

~~(g) Group II Installations. Devices listed in section 3000(e) that are:~~

~~(1) Devices which have been inspected by the Division and to which a serial number has been assigned.~~

~~(2) Devices for which erection was begun before October 25, 1998 and for which the notice of intent to install is not required.~~

~~(3) Devices erected from plans or contracts completed, and for which the notice of intent to install is filed with the Division, before October 25, 1998. Note: Regulations for Group II installations are in Group II.~~

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~~(hg) Alterations, Repairs, Replacements, and Maintenance, and Testing of Devices.~~
Maintenance, Repair, Replacement, Testing and Alterations of Conveyances.

- (1) ~~Alterations, repairs, replacements, and maintenance of devices listed in section 3000(c) shall comply with Part XII of ASME A17.1-1996; except for Rule 1200.1, Rule 1206.10, section 1214, section 1215, section 1216, and section 1217; which is hereby incorporated by reference. Maintenance, Repair, Replacement, and Testing of conveyances listed in section 3000(c) shall comply with Section 8.6 and 8.11 of ASME A17.1-2013, as amended or modified by the Elevator Safety Orders.~~

Periodic testing of Group II conveyances shall commence within three years from TBD.

- (2) ~~Alterations made after May 1, 2008 on Group II and Group III devices listed in section to conveyances listed in section 3000(c) shall comply with the applicable provisions of Section 3141.2 in Group IV 8.7 of ASME A17.1-2013, as amended by the Elevator Safety Orders. All altered or replaced components and systems shall meet the applicable requirements of Section 8.4 of ASME A17.1-2013.~~

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3, 7301, 7308 and 7317, Labor Code.

Article 2. ~~Permits to Operate~~

§ 3001.0 ~~Permits to Operate~~ Permit to Commence Work.

~~(a) Submittal of Plans and Notification of Intent to Install.~~

~~(1) The person or firm who intends to install a new elevator, dumbwaiter, escalator, moving walk, or manlift, shall submit the erection plans to the Division for review. In lieu of complete erection drawings and plans, the division will accept notification from a recognized elevator company that they intend to install a device covered by these regulations of a certain type at a definite address, and subsequent notification to the division that the installation is complete and ready for inspection.~~

~~(2) The Division may require drawings and details of construction of any portion of an installation when complete erection plans are not submitted.~~

~~(3) When an installation requires material, fabrication, or construction other than recognized standard types or has an offset car frame or is an observation type elevator installed in other than a fully enclosed hoistway, drawings and details shall be submitted to the Division prior to installation.~~

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~~(4) Alterations to existing passenger or freight elevators as defined in section 3000(h) shall be considered as new installations for submittal of plans or notice of intent to make the alteration and the subsequent notification that the work is complete and ready for inspection. The notice of intent shall include a complete description of the alteration.~~

~~(5) The person or firm doing the work of replacing door locking devices, safety devices, governors, or oil buffers on existing installations of passenger or freight elevators shall notify the Division when the work is complete and ready for inspection.~~

~~(6) The person or firm installing a new hand power man platform shall notify the Division when the installation is complete and ready for inspection.~~

~~(7) The person or firm responsible for special maintenance operations such as the cleaning of glass or the replacement of lamps that cannot be performed from inside the elevator car, shall submit a plan to the Division outlining a safe method that will be used to perform the maintenance.~~

~~(8) The person or firm installing a static control shall provide the Division with information showing that the control complies with the requirements of Group II, sections 3040(f)(4) and 3040(f)(7). This information shall be in the form of either:~~

~~(A) Electrical schematic diagrams or block diagrams of the control and safety circuits; or~~

~~(B) A written checkout procedure and demonstration of safety and speed control circuits required by sections 3040(f)(4) and 3040(f)(7) at the time of the inspection. EXCEPTION TO SECTION 3001(a)(8): Installation of static control for Group IV installations shall comply with Group IV, section 3141.3.~~

(a) Notification of Intent to Install and Submittal of Plans.

(1) On or after (date TBD by OAL), no conveyance may be erected, constructed, installed, or materially altered, unless a permit has been obtained from the Division before the work is commenced. A copy of the permit shall be kept at the construction site at all times while the work is in progress and shall be made available for inspection upon request.

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(2) The Certified Qualified Conveyance Company who intends to install or alter a conveyance listed in §3000(c) shall submit the following to the Division for review:

(A) A letter of intent to install.

(B) Two sets of accurately scaled and/or fully dimensioned layout drawings.

(C) Two sets of specifications.

(3) The layout drawings and specifications shall be sufficiently complete to illustrate all details of construction and design.

(b) Submittal Requirements.

(1) For elevators, dumbwaiters, material lifts, vertical and inclined platform lifts, inclined stairway chairlifts, vertical conveyors and other similar conveyances, a machine room and/or control room plan, a hoistway plan and a hoistway elevation shall be submitted to the Division for review.

(A) In addition to the layout drawing requirements specified by ASME A17.1, the layout drawings shall include all code required horizontal and vertical clearances, runbys for cars and counterweights, top of car and counterweight clearances, maintenance path to all components requiring maintenance and/or inspection, maintenance clearance to all components requiring maintenance and/or inspection, maximum reach distances to all components of driving machines, motors, brakes and governors installed in the hoistway (the distance shall be measured from the working surface of the car top, with the car top level with the top landing, and the locking means required by ASME A17.1 engaged), size and location of all access doors to workspaces, headroom in all workspaces, code required electrical clearances for all conveyance controller equipment and associated disconnecting means.

(B) The hoistway elevation shall include car and counterweight bracket spacing. The nominal weight of the guide rails, and the size and linear weight of any guide rail reinforcement (where provided), shall be indicated. When slotted brackets are provided, welding or bolt pinning specifications or details shall be provided.. **Text added since version 2.**

(C) The layout drawings shall provide a detail of all engineered seismic fastenings to the building structure for guide rail brackets, machines, control panels, motor-generator units, machine beams, support beams, sheaves, hydraulic tanks, hydraulic piping, etc.

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(D) The layout drawings shall include a listing of all devices and components that require an approval from the Division. Each device or component shall be identified by manufacturer, name of device or component, model number and the Division's approval number. Devices include: door locking devices, oil buffers, car and counterweight safeties, speed governors, plunger engaging safety devices, suspension means (excluding steel wire ropes) and suspension means residual strength monitoring devices.

(E) The layout drawings shall list the name of the manufacturer for all motor controllers, motion controllers and operation controllers. It shall also list the controller name as accepted by the Division. (Removed reference to the approval number.)

(2) For escalators and moving walks, a machine room and/or control room plan (if applicable), a wellway plan and a wellway elevation shall be submitted to the Division for review.

(A) The submittal shall include the calculations for structural design, machinery design, and brake design.

(B) Story drift:

(1) For new construction, the maximum design story drift provided by the California Licensed Structural Engineer of Record for the building, shall be indicated on the plan.

(2) For alterations, the maximum designed story drift shall be provided by a California Licensed Structural Engineer.

(C) Details of all supports, seismic restraints and beam seats shall be provided.

(D) The layout drawings shall list the name of the manufacturer for all motor controllers, motion controllers and operation controllers. It shall also list the controller name as accepted by the Division. Deleted reference to the approval number.

(c) Issuance of a Permit to Commence Work shall allow the Certified Qualified Conveyance Company to proceed with the installation of the conveyance(s). The Permit to Commence Work in no way relieves the Certified Qualified Conveyance Company from its responsibility to complete the installation in strict accordance with the Elevator Safety Orders.

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(d) Plan Check Fees.

The Division shall assess a fee for plan check services performed by Division safety engineers in accordance with Title 8, California Code of Regulations, section 344.30. The Division shall not issue a Permit to Commence Work until the assessed fee has been collected.

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3, 7301.1, 7314, and 7317, Labor Code.

LC 7314 added

142.3. (a) (1) The board, by an affirmative vote of at least four members, may adopt, amend or repeal occupational safety and health standards and orders. The board shall be the only agency in the state authorized to adopt occupational safety and health standards.

LC 7314 - The division may fix and collect fees...references Gov't Code 6103 and APA Chapter 3.5

§ 3001.1 Permit to Operate.

(b) Inspections Required.

(1) Each new ~~device~~ conveyance shall be inspected by an authorized representative of the Division and a permit to operate issued before the ~~device~~ conveyance is placed in service.

(2) Each alteration of an existing ~~device~~ conveyance shall be inspected by an authorized representative of the Division and a new permit to operate issued before the ~~device~~ conveyance is placed back in service.

Exception: After the inspection of a new ~~device~~ conveyance or an alteration, the ~~device~~ conveyance may be placed in service while the permit to operate is being processed, provided, in the opinion of the inspecting representative of the Division, the ~~device~~ conveyance is safe to operate.

(3) The replacement of door locking devices, safety devices, governors, oil buffers, counterweights, car enclosures and car doors and gates, terminal stopping devices, operating devices and control equipment, controllers, and emergency and signaling devices, shall be inspected by an authorized representative of the Division before the elevator is placed back in service.

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(4) Reinspections of the ~~devices~~ conveyances covered by these regulations shall be as prescribed in Labor Code section 7304 which requires all elevators to be inspected at least once each year, but permits up to a two-year period if an elevator is in a safe condition for operation and is subject to a full maintenance service contract. Such reinspections may be done by certified inspectors as defined in section 3003.

FINAL DRAFT

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(5) Elevators in a multiunit residential building serving no more than two dwelling units and not accessible to the public shall be inspected by the Division upon completion of installation prior to being placed in service, or after alterations prior to being returned to service. The inspection shall be for safety and compliance with applicable provisions ~~in ANSI/ASME A17.1-1984, Parts V and XXI, which are hereby incorporated by reference.~~ Elevators installed after Sept. 28, 2001, shall be inspected for safety and compliance with applicable provisions in either ASME A17.1-1996, Part 5, which is hereby incorporated by reference; or ASME A18.1-1999, Sections 5, 6, and 7, which is hereby incorporated by reference of the Elevator Safety Orders.

~~(6) Special access elevators installed after Sept. 28, 2001 shall be inspected for safety and compliance with the applicable provisions of Article 15, Special Access Elevators and Special Access Lifts, sections 3093-3093.60 of the Elevator Safety Orders.~~

(eb) Permit to Operate Required. ~~No elevator 3000(c) conveyance~~ shall be operated without a valid, current permit issued by the Division.

(1) The permit to operate, or a copy thereof, ~~to operate a passenger elevator, freight elevator or incline elevator~~ shall be posted conspicuously and securely in the ~~elevator conveyance car enclosure~~. For other ~~devices~~ conveyances without car enclosures, the permit shall be available on the premises.

(2) Except as provided in subsection 3001.1(eb)(3), the permit shall not be issued for a period exceeding one year.

(3) If the Division's investigation and inspection indicate the ~~elevator conveyance~~ is in a safe condition and will be covered during the entire term of the permit by a full maintenance contract with an elevator service company possessing a C-11 license issued by the California Contractors' State License Board, the Division may issue a permit for a period not exceeding two years.

(4) Within 60 days of notification by the Division that an ~~elevator conveyance~~ may qualify for a two-year permit, the ~~elevator service company~~ Certified Qualified Conveyance Company shall submit to the Division the following information:

(A) A copy of the ~~elevator service e~~ Certified Qualified Conveyance Company's C-11 license issued by the California Contractors' State License Board;

(B) A copy of the full maintenance service contract.

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(5) A full maintenance service contract shall:

(A) Specify the responsibilities of the ~~elevator service e~~ Certified Qualified Conveyance Company in regard to all repairs and maintenance that may be necessary to keep the ~~elevator conveyance~~ in compliance with the Elevator Safety Orders, Title 8 of the California Code of Regulations; and

(B) Require the ~~elevator service e~~ Certified Qualified Conveyance Company to service the ~~elevator conveyance~~ as frequently as necessary to effect safe operation but not less often than monthly.

(6) The ~~elevator service e~~ Certified Qualified Conveyance Company shall notify the Division within 30 days if a full maintenance service contract is terminated or altered during the period the two-year permit is in effect.

(dc) Inspection Fees. ~~Was labeled as Fees in the previous edition (2). Deleted plan check from version 2~~

~~The Division shall assess a fees for plan check and inspections services performed by Division safety engineers in accordance with Title 8, California Code of Regulations, section 344.30. The Division shall not issue a permit to operate until the assessed fee has been collected.~~

Revised as follows:

~~The Division shall assess a fee for inspections performed by Division safety engineers in accordance with Title 8, California Code of Regulations, section 344.30. The Division shall not issue a pPermit to eOperate until the assessed fee has been collected.~~

~~(e) Application Processing Time for Renewal of Permit.~~

~~(1) Within 15 calendar days of receipt of an application for renewal of a permit to operate, the Division shall inform the applicant in writing that the application is either complete and accepted for filing or that it is deficient and what specific information and documentation is required to complete the application.~~

~~(2) Within 30 calendar days from the date of the filing of a completed application, the Division shall conduct an inspection of the device for which the permit is sought. If the inspection reveals violations of the safety orders, a preliminary order indicating such requirements as may in the opinion of the Division be necessary to comply with these regulations shall be issued.~~

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(3) After satisfactory compliance with the preliminary order, if one has been issued, and upon notification to the Division's elevator unit that the inspection fee has been paid, the Division shall issue the permit within 15 calendar days.

(4) The Division's median, minimum and maximum times for processing a permit from the receipt of the initial application to the final permit decision, based on the Division's actual performance during the two years immediately preceding the proposal of this regulation have been as follows:

Median time 60 days
Minimum time 30 days
Maximum time 1 year

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3, ~~7301.1~~7301, 7304(b), 7314 and 7317, Labor Code.

Changed LC 7301.1 to LC 7301 Permits and fees
LC 7214 added. Fix and collect fees...

Article 3. Variances

§ 3002. Variances.

(a) Any employer, person or firm having custody of ~~an elevator~~ a conveyance may apply to the Division for a temporary order granting a variance from an elevator safety order. Such temporary order shall be granted only if the employer, person or firm files an application which meets the requirements of section 6450 through 6457, inclusive, of the California Labor Code.

(b) Any employer, such as a person or firm having custody of ~~an elevator~~ a conveyance, may apply to the Occupational Safety and Health Standards Board for a permanent variance from an occupational safety and health standard, order, special order, or portion thereof upon a showing of an alternative program, method, practice, means, device, or process which will provide equal or superior safety. Such application shall conform to the requirements of the California Code of Regulations, ~~†Title 8, chapter 3.5 (Title 24, part 7, section 7-3002).~~

Note: Authority cited: Sections 142.3 and 143, Labor Code. Reference: Sections 142.3, 143, 143.2, 6450 and 6454, Labor Code; and ~~Section 18943(b), Health and Safety Code.~~

Article 4. Qualifications for Certification ~~Certified Inspectors~~

§ 3003.0 Qualifications for Certified Inspectors.

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(a) Employment. Applicants shall be employed by a licensed insurance company carrying insurance on elevators or by a municipality which maintains an elevator inspection organization operating under ordinances or rules at least equivalent to the Elevator Safety Orders of the ~~Division of Industrial Safety~~.

Applicants may be examined prior to their employment if sponsored by an insurance company or a municipality by an agreement to employ the candidate if he is successful in the examination. However, no certificate will be issued until the applicant is actually employed as an elevator inspector.

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(b) Experience. Applicants shall have had at least four years of experience in some mechanical or electrical endeavor at least one year of which shall have been in the design, construction, installation, repair or inspection of elevators.

The non-elevator, mechanical, or electrical experience shall be at the journeyman ~~man~~ person mechanic level or technical work and the work must have been comparable to work in the elevator industry.

Engineering education on a college level may be substituted on a year-for-year basis for the non-elevator qualifying experience.

The one year of required elevator experience may be on the basis of continuous employment for one year in which at least half of the applicant's time is devoted to elevator work.

(c) Training. Immediately prior to the examination, the candidate shall have completed at least 90 days of intensive training in elevator inspection in California under the direct supervision of a certified elevator inspector.

This training period may be waived prior to the written examination; provided, however, that no certificate shall be issued until the candidate has been employed and satisfactorily completed the prescribed training period.

(d) Performance of Duties. A candidate shall be of good character, free from disabling defects, and possessing sufficient agility to perform his duties safely and efficiently.

(e) Certificates. Certificates of competency may be revoked by the ~~the~~ Division, after a hearing, for failure to submit true reports concerning the condition of an elevator, or for conduct deemed by the ~~the~~ Division to be contrary to the best interests of elevator safety or of the ~~the~~ Division.

Certificates may also be revoked, after a hearing, when physical infirmities develop to a point where it appears that an inspector can no longer perform his duties in a thorough and safe manner.

Certificates may be suspended by the ~~the~~ Division, after a hearing, for periods up to six months for infractions not deemed serious enough to revoke the certificate.

(f) Frequency of Inspection. Certificates will be automatically suspended if, for a period of one year, an inspector does not make any elevator inspections as evidenced by reports submitted; however, such certificates may be reinstated without a written examination at the discretion of the ~~the~~ Division.

This provision does not apply to the supervising engineers or others whose regular duties include the review of the work of other certified inspectors.

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(g) Examination. The examination shall be conducted in two parts; the first consisting of a written examination and the second consisting of a field examination.

If the applicant fails to obtain a passing grade in either the written or field examination, he may apply for a re-examination and the waiting period between examinations shall be determined by the ~~the~~ Division as not less than 30 days or more than 6 months, depending on the judgment of the ~~the~~ Division regarding the necessity of additional study and training on the part of the applicant.

The field examination may be waived or postponed by the ~~the~~ Division and the certificate issued subject to field examination. This field examination may consist of a formal assignment related to elevator inspection or it may consist of an appraisal of work of the inspector during an indefinite probationary period.

- (1) Written examinations will be conducted by appointment at any time mutually agreeable to the candidate and to the ~~the~~ Division. ~~These examinations will be conducted in the office of the ~~the~~ Division, either in San Francisco or in Los Angeles.~~

Note: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; ~~and Section 18943(b), Health and Safety Code.~~

§ 3003.1. Certified Qualified Conveyance Companies.

(a) Qualifications.

At a minimum, the individual qualifying on behalf of a corporation, the owner on behalf of a sole ownership, or the partners on behalf of a partnership, shall meet either of the following requirements:

(1) Five years' work experience at a journeyman level in the conveyance industry in construction, installation, alteration, testing, maintenance, and service and repair of conveyances covered by the Elevator Safety Orders. This experience shall be verified by current and previously licensed elevator contractors or by current and previously Certified Qualified Conveyance Companies.

(2) Satisfactory completion of a written examination administered by the Division on the most recent applicable codes and standards.

(b) Application Requirements for Certification.

The following documents shall be submitted to the Division for review and approval:

(1) A completed New CQCC Application and applicable fees.

(2) A copy of an approved continuing education certificate.

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(3) A copy of a current and valid C-11 license.

(4) A copy of current Workers' Compensation insurance certificate.

(5) A copy of current Liability insurance certificate.

(c) Certification.

(1) A certificate issued by the Division to the Certified Qualified Conveyance Company shall have a term of two years.

(2) Prior to expiration of this two year term, the applicant shall submit a CQCC renewal application. The renewal of all certificates issued by the Division shall be conditioned upon the submission of a certificate of completion of a course designed to ensure the continuing education of certificate holder on new and existing provisions of the Elevator Safety Orders. The Division shall approve the continuing education providers and curriculum. The continuing education course shall consist of not less than eight hours of instruction that shall be attended and completed within one year immediately preceding any certificate renewal.

(3) The Division may revoke or suspend, at any time, upon good cause being shown therefor, and after hearing, if requested, any certification issued by it to a Certified Qualified Conveyance Company.

(4) If, upon investigation by the Division, a Certified Qualified Conveyance Company is found to have unsupervised, non-certified, elevator mechanic(s) in its employ, the Division may suspend the Certified Qualified Conveyance Company's certification for up to 90 days.

(5) The Division shall suspend or revoke a Certified Qualified Conveyance Company certification for the following reasons:

(A) Gross negligence, gross incompetency, a pattern of incompetence.

(B) Willful or deliberate disregard of any conveyance safety standard or misrepresentation of documentation to the Division.

(C) Misrepresentation of a material fact in applying for, or obtaining, certification under this section.

(D) Upon a showing of good cause.

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(d) Fee.

The Division shall assess a certification fee in accordance with Title 8, California Code of Regulations, section 344.30. **Elevator Inspection fee schedule last modified in 2004 (See History of LC 344.30)**

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3, 7311.1, and 7311.3 Labor Code.

LC 142.3. (a) (1) The board, by an affirmative vote of at least four members, may adopt, amend or repeal occupational safety and health standards and orders. The board shall be the only agency in the state authorized to adopt occupational safety and health standards

§ 3003.2 Certified Competent Conveyance Mechanics.

(a) Qualifications.

At a minimum, a Certified Competent Conveyance Mechanic applicant shall meet both of the following requirements:

(1) Three years' work experience in the conveyance industry in construction, maintenance, and service and repair of conveyances covered by the Elevator Safety Orders. This experience shall be verified by current and previously licensed elevator contractors or by current and previously Certified Qualified Conveyance Companies, as required by the Division.

(2) One of the following:

(A) Satisfactory completion of a written examination administered by the Division on the most recent applicable codes and standards.

(B) A certificate of completion and successfully passing the mechanic examination of a nationally recognized training program for the conveyance industry, such as the National Elevator Industry Educational Program or its equivalent.

(C) A certificate of completion of an apprenticeship program for elevator mechanic, having standards substantially equal to those of this chapter, and which program shall be registered with the Bureau of Apprenticeship and Training of the United States Department of Labor or a state apprenticeship council.

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(D) A certificate or license from another state having standards substantially equal to or more comprehensive than those contained in the Elevator Safety Orders.

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(b) Application Requirements for Certification.

The following documents shall be submitted to the Division for review and approval:

- (1) A completed New CCCM Application, verified and signed by current and previously licensed elevator contractors or by current and previously Certified Qualified Conveyance Companies.
- (2) Proof of employment by a Certified Qualified Conveyance Company.
- (3) One of the requirements listed in 3003.2(a)(2).

(c) Certification.

(1) A certificate issued by the Division to the Certified Competent Conveyance Mechanic shall have a term of two years.

(2) Prior to expiration of this two year term, the applicant shall submit a CCCM renewal application. The renewal of all certificates issued by the Division shall be conditioned upon the submission of a certificate of completion of a course designed to ensure the continuing education of certificate holder on new and existing provisions of the Elevator Safety Orders. If the Division determines that a person has performed work on a conveyance without supervision, and without the certification required by this section, he or she shall be prohibited from working as a Certified Competent Conveyance Mechanic for a period of ninety (90) days. After this ninety (90) day period, the person may apply or re-apply for certification.

(3) The Division may revoke, at any time, upon good cause being shown therefor, and after hearing, if requested, any certification issued by it to a Certified Competent Conveyance Mechanic.

The Division may suspend for up to 90 days, at any time, upon good cause being shown therefor, and after hearing, if requested, any certification issued by it to a Certified Competent Conveyance Mechanic.

The Division shall suspend or revoke a Certified Competent Conveyance Mechanic certification for the following reasons:

- (A) Gross negligence, gross incompetency, a pattern of incompetence.
- (B) Willful or deliberate disregard of any conveyance safety standard.
- (C) Misrepresentation of a material fact in applying for, or obtaining, certification under this section.

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(D) Upon a showing of good cause.

(d) Fee.

The Division shall assess a certification fee in accordance with Title 8, California Code of Regulations, section 344.30.

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3, 7311.2, and 7311.3 Labor Code.

* * * * *

Article 6. Definitions.

Amend section 3009(b) to add the following definitions:

Maintenance, Non-mechanical - Non-mechanical maintenance performed by Authorized Personnel from within the elevator car enclosure, such as cleaning panels, changing of lamps, ballasts or drivers used for lighting, and the cosmetic repair of damaged finish materials including sections of tile and the replacement of carpet. (The removal of panels or subflooring of the elevator is not considered non-mechanical maintenance.) Any materials used for replacement must have the same properties and characteristics as the existing materials, including weight and design. All products used in non-mechanical maintenance, including replacement materials, adhesives, and sealants, must comply with all requirements of Title 8, including the flame spread, smoke development and critical radiant flux.

Supervision – The actions of an onsite Certified Competent Conveyance Mechanic (CCCM), in the employ of a Certified Qualified Conveyance Company (CQCC), who oversees any person, craft or trade that erects, constructs, installs, alters, tests, maintains, services, repairs, removes, or dismantles any conveyance to ensure that the work is conducted in a safe manner, and that the resultant work is in strict accordance with the Elevator Safety Orders.

* * * * *

Group IV. Conveyance Installations for Which the Installation Contract Was Signed on or After May 1, 2008, but before (date TBD by OAL).

Article 40. Application

change as follows: Removed from version 3. Added back here by reviewer

Article 40. Application Reserved.

§ 3140. Application.

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~~(a) Group IV governs the design, erection, construction, installation, service, and operation of conveyances as defined in Section 7300.1 of the Labor Code, for which the installation contract was signed on or after May 1, 2008.~~

~~(b) Use and Precedence of Orders.~~

~~(1) The reference to ASME A17.1 2004, Safety Code for Elevators and Escalators, developed by the American Society of Mechanical Engineers, shall mean the 2004 edition, and shall be referred to as ASME A17.1 2004, unless otherwise indicated.~~

~~(2) The reference to ASME A18.1 2003, Safety Standard for Platform Lifts and Stairway Chairlifts, developed by the American Society of Mechanical Engineers, shall mean the 2003 edition, and shall be referred to as ASME A18.1 2003, unless otherwise indicated.~~

~~(3) The reference to ASCE 21, Automatic People Movers, developed by the American Society of Civil Engineers, shall mean ASCE 21, Part 1, 1996 edition; Part 2, 1998 edition; and Part 3, 2000 edition; and shall be referred to as ASCE 21, Parts 1, 2, and 3, unless otherwise indicated.~~

~~(4) The Elevator Safety Orders shall apply if any difference exists between the Elevator Safety Orders and ASME A17.1 2004; ASME A18.1 2003; and ASCE 21, Part 1, 1996 edition, Part 2, 1998 edition, and Part 3, 2000 edition; or any other code, document or standard referenced in ASME A17.1 2004; ASME A18.1 2003; and ASCE 21, Part 1, 1996 edition, Part 2, 1998 edition, and Part 3, 2000 edition.~~

* * * * *

Add new Article 47 as follows:

To Here on 7/1/15 @ 3:50

Group V Conveyance installations for Which the installation contract was signed on or after (date TBD by OAL).

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Article 47.0000 Conveyances installed under Group V

§ 3147.1000 General Requirements.

Conveyances shall comply with the following general requirements:

(a) Except as modified herein, all electrical equipment and wiring shall comply with CCR, Title 24, Part 3, California Electrical Code in effect at the time of installation or alteration. Access and working space shall be provided and maintained about all electrical equipment to permit ready and safe operation and maintenance of such equipment;

(1) The clear working space about motor controllers, motion controllers, operational controllers, and other electrical equipment likely to require examination, adjustment, servicing, or maintenance while energized shall comply with the California Electric Code – 2013, section 110.26(A).

(2) All live parts of electrical apparatus in the hoistways, at the landings, in or on the cars of elevators and dumbwaiters, in the wellways or the landings of escalators or moving walks, or in the runways and machinery spaces of platform lifts and stairway chairlifts shall be enclosed to protect against accidental contact. This enclosure shall not be removed until lockout/tagout procedures have been implemented, and an electrically safe work condition has been achieved.

~~(C) Fire detecting systems for hoistways and the necessary wiring may be installed in hoistways, provided that the system is arranged to be serviced and repaired from outside the hoistway. This was deleted from version 3.~~

~~Added back by reviewer.~~

(3) Fire alarm initiating devices in the hoistway shall comply with the following:

(A) Means shall be provided for testing and servicing fire alarm initiating devices without having to enter the hoistway.

(B) Hoistway penetrations and access panels utilized for the installation, testing and servicing of fire alarm initiating devices or their sensing elements shall have a fire resistance rating conforming to the requirements of the Building Code.

(C) Access panels shall be fire resistance rated and listed for the application for which they are installed and shall be of maximum width of 400 mm (16in) and a maximum height of 400 mm (16in).

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(D) Access panels which house the detections device(s) and project into the hoistway shall be furnished with protective guards (cages) that will prevent accidental contact with moving equipment within the hoistway.

(E) Access panels shall be self closing and self locking. The key shall be Group2 security.

(b) All Conveyances shall comply with Title 24, Part 2 California Building Code in effect at the time of installation or alteration.

(c) Door locking devices, oil buffers, car and counterweight safety devices, speed governors, plunger engaging safety devices (plunger gripper) and suspension means requiring engineering testing per ASME A17.1-2013, section 2.20.11 shall be approved by the Division based on the criteria contained in ASME A17.1-2013, sections 2.12, 2.17, 2.18, 2.22.4, and 3.17.3; ASME A17.1-2013 section 2.20; and California Title 8, sections 3105(b), 3106(b), 3106.1(b), 3108(f), 3110(a) and 3147.1000(a)(10).

(4) Where counterweights are located between conveyances in a hoistway having more than one conveyance, the counterweights shall be guarded for the entire height of the hoistway. The guard shall extend at least 6 inches horizontally beyond each counterweight rail. The guard shall be of noncombustible material. The guard, if of openwork material, shall reject a ball 25 mm (1 in.) in diameter and be made from material equal to or stronger than 1.110 mm (0.0437 in.) diameter wire. The guard shall be so supported that when subjected to a force of 450 N (100 lbf) applied over an area of 100 mm x 100 mm (4 in. x 4 in.) at any location, the deflection shall not reduce the clearance between the guard and the counterweight below 25 mm (1 in.).

This section removed from version 3. Added back by reviewer

(d) Scissor type collapsible gates are prohibited.

(e) Looped pull straps are prohibited.

(f) Aramid Fiber suspension ropes are prohibited.

(g) Hoistway door unlocking devices described in ASME A17.1-2013, section 2.12.6, are prohibited on all conveyances.

(h) Permanent ink markers shall not be used as a means for recording information on required data tags.

(i) Data required for suspension Approval;

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- (1) Two complete sets of assembly and detail drawings of the suspension member and related equipment shall be submitted to the Division and shall show the following:
- (A) Material, construction, dimensions, Manufacturer's part number(s), and Manufacturer's marking(s) for identification of the suspension member.
 - (B) Values of the data as marked on the suspension member data tag, required by ASME A17.1-2013, section 2.20.2.2.
 - (C) Values of the data as marked on the crosshead data plate required by ASME A17.1-2013, section 2.20.2.1.
 - (D) Technical criteria, data, diagrams and documentation used in the determination of essential safety requirements and parameters of the suspension member, including but not limited to:
 - (1) Factor of safety.
 - (2) Residual strength monitoring.
 - (3) Broken suspension member detection.
 - (4) Inspection and replacement criteria.
 - (5) Selection criteria, certification and installation of suspension member connections.
 - (6) Limitations of suspension member speed if, any.
 - (7) Minimum sheave and drum diameters.
 - (8) Sheave material criteria.
 - (9) Limitations of weather exposure or other ambient conditions.
 - (10) Considerations regarding the use of the suspension member under emergency conditions(i.e. fire, earthquake, etc.).
- (2) The results of tests performed on the suspension member in accordance with ASME A17.1-2013, section 2.20.11.
- (3) The results of performance testing of the suspension member under elevator operating conditions for its range of application, as required by ASME A17.1-2013, section 2.20.3.
- (j) Data required for controller Acceptance;
- (1) Any manufacturer who intends to install a motor, motion and/or operational controller for conveyances covered by ASME A17.1 and ASME A18.1 shall provide the Division with verification that the motor, motion and operational controllers have been properly tested and certified in accordance with the requirements of ASME A17.1, ASME A18.1, and the Elevator Safety Orders. This information shall be in the form of:
 - (A) A list with the name of the manufacturer for all motor controllers, motion controllers and operation controllers. It shall also list the controller name, type, model number and applicable file or listing number(s) assigned by the accredited testing laboratory that listed/certified the controller to be labeled/marked in conformance with CSA B44.1/ASME A17.5.

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- (B) Certificates and test reports from third party accrediting agencies that have inspected the controller for compliance with ASME A17.5.
 - (C) The results and test reports of the Electromagnetic Interference (EMI) and voltage dip testing.
 - (D) Certificates and test reports from third party accrediting agencies for any SIL rated control and operating circuits.
 - (E) Wiring diagrams detailing circuits of all electrical protective devices and critical operating circuits, including an explanation of code compliance for each circuit.
 - (F) Code required check out procedures for testing and inspecting all safety and speed control circuits.
 - (G) Special procedures or unique methods required for testing and inspecting SIL rated electrical protective devices and circuits.
- (2) Motor, motion and/or operational controllers shall not be installed until a written acceptance of the controller has been granted by the Division. A permit to operate will not be granted for a conveyance installation without this written acceptance.

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§ 3147.2000 Conveyances Covered by ASME A17.1-2013

Group V conveyances covered by ASME A17.1 shall comply with ASME A17.1-2013 which is hereby incorporated by reference, except as modified herein:

§ 3147.2100 General

§ 3147.2101 RESERVED

§ 3147.2102 PURPOSE AND EXCEPTIONS.

Conveyances covered by ASME A17.1-2013 shall comply with section 1.2 except as modified herein:

- (a) Subsections 1.2.1(b) and 1.2.1(c) are not adopted.

§ 3147.2103 RESERVED(deleted) This section removed from Version 3. Added back by reviewer

§ 3147.2200 Electric Elevators

§ 3147.2201 CONSTRUCTION OF HOISTWAYS AND HOISTWAY ENCLOSURES.

Construction of hoistways and hoistway enclosures shall comply with Section 2.1 except as modified herein:

- (a) Modify subsection 2.1.6 to read as follows:

“Projections, Recesses, and Setbacks in Hoistway Enclosures

Hoistway enclosures shall have flush surfaces on the hoistway side, subject to the requirements of 2.1.6.1 and 2.1.6.2.

NOTE: The phrase “flush surfaces” does not include unnecessary horizontal surfaces or surface projections such as reinforcing rods, snap-ties, screws, etc., which may cause injury”

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(b) Modify subsection 2.1.6.2 to read as follows:

“On sides not used for loading and unloading

(a) where beams, floor slabs, or other building construction making an angle less than 75 deg with the horizontal project more than 50 mm (2 in.) inside the hoistway enclosure:

unless (deleted “unless”)

(1) the top surface of the projection shall be beveled at an angle not less than 75 deg with the horizontal.

or

(2) the top and bottom surface of the projection shall be beveled at an angle not less than 75 deg with the horizontal where the horizontal distance between a projection and the standard railing on a car enclosure top is less than 300mm (12 in.) (see 2.14.1.7.2).

(b) separator beams between adjacent elevators are not required to have bevels

(c) where recesses or setbacks exceeding 50 mm (2 in.) occur in the enclosure wall

(1) the top of the recess or setback shall be beveled at an angle of not less than 75 deg with the horizontal

or

(2) the top and bottom surface of the recess shall be beveled at an angle not less than 75 deg with the horizontal where the horizontal distance between the hoistway wall and the standard railing on a car enclosure top is less than 300mm (12 in.) (see 2.14.1.7.2).

(d) bevels are not required if the projections, recesses, and setbacks are covered with material conforming to the following:

(1) it shall be equal to or stronger than 1.110 mm (0.0437 in.) wire

(2) it shall have openings not exceeding 25 mm (1 in.)

(3) it shall be supported and braced such that it will not deflect more than 25 mm (1 in.) when subjected to a force of 4.79 kPa (100 lbf/ft²) applied horizontally at any point”

§ 3147.2202 PITS.

Pits shall comply with Section 2.2 except as modified herein:

(a) Subsections 2.2.3.2, 2.2.4.2.7 and 2.2.4.2.8 are not adopted

New language: Subsections 2.2.3.2, 2.2.4.2.7, and 2.2.4.2.8 are not adopted

(b) Modify subsection 2.2.3.1 to read as follows:

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“Guards shall be provided between adjacent pits. The guard shall be not less than 79 in (2000mm) high. Where openings are provided in the guard, they shall not exceed 2 in. (51mm). Where a ladder is installed adjacent to on a guard, the guard shall extend not less than 79 in (2000mm) above the top rung of the ladder and not less than 12 in. (305 mm) on each side of the ladder sill of the access door. If multiple rungs/handgrips are provided above the access door sill rung the guards shall extend 79 in (2000 mm) above the last rung/handgrip. The screen shall extend not less than 12 in. (305mm) horizontally on each side of the ladder.”

Exception:

The guard may be omitted if the clearance between the underside of the car sling when resting on a fully compressed buffer and the bottom of the pit is not less than 7 ft. (2.13m).”

(c) Modify subsection 2.2.4.2 to read as follows:

“There shall be installed in the pit of each elevator, where the pit extends more than 900mm(35 in.) below the sill of the pit access door (lowest hoistway door or separate pit access door), a fixed vertical ladder of noncombustible material, located within reach of the access door. Ladders shall conform to 2.2.4.2.1 through 2.2.4.2.6. Retractable pit ladders are prohibited.” **New section (c) following renumbered**

(d) Modify subsection 2.2.4.2.2 to read as follows: Was (c) in version 2

“The ladder rungs, cleats, or steps shall be a minimum of 400 mm (16 in.) wide.” ~~When obstructions are encountered, the width shall be permitted to be decreased to less than 400 mm (16 in.). The reduced width shall be as wide as the available space permits, but not less than 356 mm (14 in.).~~ **deleted in version 3.**

(e) Modify subsection 2.2.4.2.4 to read as follows:

“A clear distance of not less than 178mm (7 in.) from the centerline of the rungs, cleats, or steps to the nearest permanent object in back of the ladder shall be provided.”

(f) Modify subsection 2.2.4.2.5 to read as follows:

“Side rails, if provided, shall have a clear distance of not less than 115 mm (4.5 in.) from their centerline to the nearest permanent object. When obstructions are encountered, the 115 mm (4.5 in.) hand clearance on each side of the ladder can be reduced or eliminated by extending the ladder rungs as hand grips 1200 mm (48 in.) above the sill of the access door.”

(g) Modify subsection 2.2.5.3 to read as follows:

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“The light switch shall be located adjacent to the elevator pit access door within 18 inches to 36 inches above the access landing when access to the elevator pit is through the lowest landing door.”

(h) Modify subsection 2.2.8 to read as follows:

“Access to Underside of Car

(a) Where the distance from the pit floor to the underside of the plank channels or slings exceeds 2100mm(83 in.) but less than 2515mm (99 in.), with the car at the lowest landing, a working an inspection a platform shall be permanently installed in the pit to provide access to the equipment on the underside of the car. The working platform shall conform to the requirements of 2.7.5.3.2 through 2.7.5.3.6. be provided with a standard railing in accordance with 2.10.2 on each open side be able to support in any position at least 2 000 N (450 lbf), with a load concentration of at least 1 000 N (225 lbf) over an area of 40 000 mm² (64 in.²) with a factor of safety of not less than 5.

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(b) Where the distance from the pit floor to the underside of the plank channels or slings exceeds 2515mm (99 in.), with the car at the lowest landing, an inspection platform shall be permanently installed in the pit to provide access to the equipment on the underside of the car. The platform shall be able to support in any position at least 2 000 N (450 lbf), with a load concentration of at least 1 000 N (225 lbf) over an area of 40 000 mm² (64 in.²) with a factor of safety of not less than 5. **The platform shall be provided with a standard railing in accordance with 2.10.2 on each open side. Access to the inspection platform shall be from a ladder installed in accordance with section 2.2.4.2.2 through 2.2.4.2.6.**”

New section added to require a guard rail around the platform

§ 3147.2203 LOCATION AND GUARDING OF COUNTERWEIGHTS.

Location and guarding of counterweights shall comply with Section 2.3 except as modified herein:

(a) Modify subsection 2.3.2.3 to read as follows:

“Guarding of Counterweights in a Multiple-Elevator Hoistway. Where a counterweight is located between elevators, the counterweight runway shall be guarded on the side next to the adjacent elevator. The guard shall extend at least the horizontal distance between the backs of the counterweight guide rails with a maximum 3 in. clearance to the counterweight assembly or guides. The guard shall be of noncombustible material. The guard, if of openwork material, shall reject a ball 25 mm (1 in.) in diameter and be made from material equal to or stronger than 1.110 mm (0.0437 in.) diameter wire. The guard shall be so supported that when subjected to a force of 450 N (100 lbf) applied over an area of 100 mm x 100 mm (4 in. x 4 in.) at any location, the deflection shall not reduce the clearance between the guard and the counterweight below 25 mm (1 in.).”

§ 3147.2204 VERTICAL CLEARANCES AND RUNBYS FOR CARS AND COUNTERWEIGHTS.

Vertical clearances and runbys for cars and counterweights shall comply with Section 2.4 except as modified herein:

(a) Subsections 2.4.2.1(a) and 2.4.2.1(b) are not adopted

(b) Modify subsection 2.4.7.1 to read as follows:

“When the car has reached its maximum upward movement, the clearance above the car top, measured vertically up to the horizontal plane described by the lowest part of the

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overhead structure or other obstruction and measured within the projection of the car enclosure top, shall be not less than 1 100 mm (43 in.). In no case shall the following additional clearances be less than:

- (a) 600 mm (24 in.) above the car crosshead assembly or the distance which any sheave assembly mounted in or on the crosshead projects above the top of the car crosshead, whichever is greater, but in no case shall there be less than 150 mm (6 in.) clearance above the sheave assembly.
- (b) 600 mm (24 in.) above equipment attached to and projecting above the car enclosure top, exclusive of
 - (1) standard railings (see also 2.14.1.7.2)
 - (2) roller and sliding guide assemblies (see also 2.4.9)
 - (3) gatepost(s) for vertically sliding gates (see also 2.4.9). Spreader bars between gateposts with horizontal and vertical clearances not in compliance with 2.14.1.7.2 shall have yellow and black diagonal stripes of not less than 25 mm (1 in.) wide along the length of the spreader bar, mounted at a location visible from the car top”

(c) Modify subsection 2.4.7.2 to read as follows:

“Any horizontal area above the car enclosure top which could contain a circle with a diameter of equal to or greater than 350 mm (14 in.) that does not have a vertical clearance of 1 100mm(43 in.) when the car has reached its maximum upward movement shall be clearly marked. The marking shall consist of alternating 50 mm (2 in.) diagonal red and white stripes. In addition, when markings are provided, sign(s) with the words “DANGER LOW CLEARANCE” shall be prominently posted on the crosshead and be visible from the hoistway entrance(s). The sign(s) shall
(a) conform to the requirements of ANSI Z535.4 or CAN/CSA Z321 (see Part 9)
(b) be made of durable material and shall be securely fastened”

(Section deleted— change included in March spreadsheet)

This section deleted in version 3.

§ 3147.2205 HORIZONTAL CAR AND COUNTERWEIGHT CLEARANCES.

Horizontal car and counterweights shall comply with Section 2.5 except as modified herein:

- (a) Subsection 2.5.1.5.3 is not adopted

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**§ 3147.2207 MACHINERY SPACES, MACHINE ROOMS, CONTROL SPACES, AND
CONTROL ROOMS.**

Machinery spaces, machine rooms, control spaces and control rooms shall comply with Section 2.7 except as modified herein:

(a) Subsections 2.7.3.1.2 (c) and (d), 2.7.4.5, 2.7.5.1.3 (a), (b) and (c), 2.7.5.1.4 through 2.7.5.5, 2.7.6.3.2(a), (b), (c) and (d) and 2.7.6.5 are not adopted.

(d) Modify subsection 2.4.7.2 to read as follows:

“Any horizontal area above the car enclosure top which could contain a circle with a diameter of equal to or greater than 350 mm (14 in.) that does not have a vertical clearance of 1-100mm(43 in.) when the car has reached its maximum upward movement shall be clearly marked. The marking shall consist of alternating 50 mm (2 in.) diagonal red and white stripes. In addition, when markings are provided, sign(s) with the words “DANGER LOW CLEARANCE” shall be prominently posted on the crosshead and be visible from the hoistway entrance(s). The sign(s) shall
(a) conform to the requirements of ANSI Z535.4 or CAN/CSA Z321 (see Part 9)
(b) be made of durable material and shall be securely fastened”

(Section deleted—change included in March spreadsheet)

The above deleted from version 3

(b) Modify subsection 2.7.2.3 to read as follows:

“**Maintenance Clearance in Machine Rooms and Control Rooms.** A clearance of not less than 450mm (18 in.) shall be provided in the direction(s) required for maintenance access to equipment.”

(c) Modify subsection 2.7.2.4.1 to read as follows:

“Where a space is intended to be accessed with full bodily entry, then the requirements of 2.7.2.3 shall apply.

When the machinery space is inside the hoistway the following shall apply:

- (a) An unobstructed area on the car enclosure top at the point of access to components of driving machines, motors, brakes and governors shall be provided.
- (b) All components of driving machines, motors, brakes and governors shall be installed within 533 mm (21 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.
- (c) The top of all components of driving machines, motors, brakes and governors shall be located no more than a maximum of 1829mm (72 inches) above the car enclosure top.

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(d) The maximum vertical dimensions shall be measured when the car enclosure top is level with the top landing and the locking means required by section 2.7.5.1.1 has been engaged.”

(d) Modify subsection 2.7.3.1.1(c) to read as follows:

“(c) machinery spaces and control spaces inside the hoistway that do not have a means of access to the space in conformance with 2.7.3.1.2 shall be accessed from outside the hoistway as specified in 2.7.3.3.”

(e) Modify subsection 2.7.3.1.2(b) to read as follows:

“(b) from the car top shall comply with ~~2.7.2.2~~ 2.7.2.4.1 and 2.12.7”

(Changed section reference)

Revised language: b) from the car top shall comply with 2.7.2.4.1 and 2.12.7

(f) Modify subsection 2.7.3.3.2 to read as follows:

“A permanent, noncombustible stair shall be provided where the floor of the room or the space above or below the floor or roof from which the means of access leads, or where the distance between floor levels in the room or space, is 900 mm (35 in.) or more. Vertical ladders with handgrips shall be permitted to be used in lieu of stairs for access to overhead machinery spaces, except those containing controllers, motor generators and driving machines.”

(g) Modify subsection 2.7.4.1 to read as follows:

“Elevator machine rooms, control rooms, and machinery spaces containing an elevator driving machine shall have a clear headroom of not less than 2 130 mm (84 in.)”

Was (e) in Version 2

(h) Modify subsection 2.7.4.2(a) to read as follows:

“(a) spaces containing driving machines or motor-generators, 2 130 mm (84 in.)”

Was (f) in version 2.

(i) Modify subsection 2.7.5.1 to read as follows:

“**Working Areas on the Car Top.**

The requirements of 2.7.5.1.1 through 2.7.5.1.3 shall be complied with if maintenance or inspections of the elevator driving-machine brake or emergency brake are to be carried out from the car top.”

Reference changed from 2.7.5.1.4 to 2.7.5.1.3. Was (g) in Version 2

(j) Modify subsection 2.7.5.1.1 to read as follows:

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“If maintenance or inspection of the elevator driving-machine brake or an emergency brake from the car top could result in unexpected vertical car movement, a means to prevent this movement shall be provided.” Was (h) in Version 2

(k) Modify subsection 2.7.5.1.3 to read as follows:

“When the means required in 2.7.5.1.1 is engaged, the car top shall be level with the landing and egress from the working area shall be provided through the hoistway landing door.” Was (i) in Version 2.

(l) Modify subsection 2.7.6.3.2 to read as follows:

“Elevator motion and motor controllers shall be located in a control room or machine room constructed in conformance with the Title 24, Part 2, California Building Code and set aside for that purpose. A permanent and unobstructed path of not more than 25 ft. in distance shall be provided between the control room or machine room door and the elevator hoistway door (or the nearest hoistway door for a group of elevators). The distance from the control room or machine room door to the hoistway door may be over 25 feet when the control room or machine room is located directly above the hoistway in a conventional overhead traction installation. All electrical clearances in the control room or machine room shall be provided and maintained with the door in the closed position. The door shall not swing into the required electrical clearances. The door shall be labeled “ELEVATOR EQUIPMENT” “ELEVATOR MACHINE ROOM” or “ELEVATOR CONTROL ROOM” with letters not less than 51 mm (2 in) high on a contrasting background. The room shall be arranged so that passage through the room is not necessary to gain access to other equipment or other parts of the building. Access to the room shall not be through a restroom, locker rooms, dressing rooms or a locked tenant/owner space.

A permanent sign shall be mounted no less than 1200 mm (48 inches) and no greater than 1975 mm (78 inches) high on the elevator entrance jamb of all elevators at their main recall floor and at the fire control panel designated level adjacent to the “FIRE RECALL” switch and adjacent to the fire alarm control unit, which will read “ELEVATOR CONTROL ROOM LOCATED ON LEVEL *****” or “ELEVATOR MACHINE ROOM LOCATED ON LEVEL *****”. The sign shall be a minimum of 6 mm (1/4 inch) high on a contrasting background. If all the conveyances elevators in a lobby share a common control room or machine room a single sign at the fire recall switch designated level, adjacent to the “FIRE RECALL” switch shall be permitted in lieu of individual signs for each elevator.”

(m) Modify subsection 2.7.6.3.3 to read as follows:

“Where sheaves and other equipment (except governors) are located overhead inside the hoistway, they shall be provided with a means of access from outside the hoistway conforming to the requirements of 2.7.3.3, unless they can be inspected and serviced from the top of the car without the use of ladders.”

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(n) Modify subsection 2.7.6.3.4(a) to read as follows:

“(a) the governor can be inspected and serviced from the top of the car and the governor can be tripped for testing from outside the hoistway; and means are furnished to prevent movement of the car when servicing the governor. A sign with the words “SECURE CAR AGAINST MOVEMENT BEFORE SERVICING THE GOVERNOR” shall be prominently posted and be visible from the governor. The sign shall conform to ANSI Z535.2 or CAN/CSA-Z321, whichever is applicable. The sign shall be of such material and construction that the letters and figures stamped, etched, cast, or otherwise applied to the face shall remain permanently and readily legible; and”

(o) Modify subsection 2.7.6.4 to read as follows:

“**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 and arranged so that they can be operated from outside the hoistway and shall conform to 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.”

(p) Modify subsection 2.7.6.4.2 to read as follows:

“The means necessary for tests shall be located in the elevator controller located in a machine room or control room.”

(q) Modify subsection 2.7.9.1 to read as follows:

“**Lighting.** Permanently installed electric lighting shall be provided in all machinery spaces, machine rooms, control spaces, and control rooms. The illumination shall be not less than 200 lx (19 fc) at the floor level, or at the standing surface of the car when it is in the blocked position (see 2.7.5.1). The light switch shall be located as follows:

- (a) At the point of entry for machinery spaces and control spaces that do not require full bodily entry.
- (b) At the point of entry inside the hoistway for machinery spaces and control spaces that do require full bodily entry.
- (c) Inside the room on the lock-jamb side of the access door for machine rooms and control rooms.

The use of motion sensing switches or timed lighting switches shall not be permitted.”

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§ 3147.2208 EQUIPMENT IN HOISTWAYS, MACHINERY SPACES, MACHINE ROOMS, CONTROL SPACES, AND CONTROL ROOMS

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Equipment in hoistways, machinery spaces, machine rooms, control spaces, and control rooms shall comply with Section 2.8 except as modified herein:

Added new subsection and renumbered following sections)

New (a): Subsection 2.8.6 is not adopted

(a) Subsection 2.8.6 is not adopted.

(b) Modify subsection 2.8.3.3.2 to read as follows:

“In jurisdictions not enforcing the NBCC, 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. Shunt trip devices that are incorporated into the design and function of listed equipment which is utilized as the single means of disconnecting main line power to the conveyance shall be permitted to reside in machine rooms or control rooms. Shunt trip equipment that is not incorporated into the design and function of the single means of disconnecting the main line power to the conveyance shall not be located in machine rooms or control rooms.

(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 2.27.3.3.6.

(d) Means 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 shall not be provided for elevators not provided with Phase I Emergency Recall Operation (also see 2.27.3.1 and 2.27.3.2).”

(c) Modify subsection 2.8.5.1 to read as follows:

“Air conditioning equipment shall not be located directly above elevator equipment or inside the hoistway.”

§ 3147.2209 MACHINERY AND SHEAVE BEAMS, SUPPORTS, AND FOUNDATIONS.

Machinery and sheave beams, supports, and foundations shall comply with Section 2.9 except as modified herein:

(a) Subsections 2.9.3.1.2 and 2.9.3.3.2 are not adopted.

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(a) Modify subsection 2.9.3.1.2 to read as follows:

“Securing bolts or fastenings are not required where sound isolation in compression is used between bases of machinery or equipment and supporting beams or floors (also see 8.4.2.2 for seismic fastening requirements).”

(b) Modify subsection 2.9.3.3.2 to read as follows:

“Securing bolts or fastenings are not required where sound isolation in compression is used between bases of machinery or equipment and their supports (also see 8.4.2.2 for seismic fastening requirements).”

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§ 3147.2210 GUARDING OF EQUIPMENT AND STANDARD RAILING.

Guarding of equipment and standard railings shall comply with Section 2.10 except as modified herein:

(a) ~~Subsection 2.10.1(c) and (d)~~ **Old (A) from version 2, New (a) below.**

(a) Subsection 2.10.1(c) and (d) are not adopted.

(b) Modify subsection 2.10.1 to read as follows:

“Guarding of Equipment

In machinery spaces, machine rooms, control spaces, and control rooms, the following shall be guarded to protect against accidental contact:

(a) Guarding in Machine Rooms , Control Rooms, Machinery Spaces and Control Spaces. The following equipment located in machine rooms or machinery spaces shall be guarded to protect against accidental contact:

(1) Driving-machine sheaves and suspension means whose vertical projection upon a horizontal plane extends beyond the base of the machine.

(2) Exposed external moving parts such as gears, sprockets, sheaves, drums, shafts and their driving ropes, chains or tapes for selectors, floor controllers or signal machines.

EXCEPTION: Guards are not required for equipment located more than 7 ft (2.13m) above the floor.

(3) The nip points of the drive sheaves and deflection sheaves of traction machines where the machine frame does not provide this protection.

(4) All moving parts of the equipment in sheave spaces shall be completely guarded. Expanded metal or grillwork shall be used for sheave guards.

Exception: Guards are not required for equipment located more than 7 ft (2.13m) above the secondary sheave space floor.

(5) The moving parts of equipment in overhead sheave spaces having a ceiling height of less than 78 in. (1.98m) shall be completely guarded.

(6) The moving parts of equipment in overhead sheave spaces shall be guarded when it is necessary to pass over or by the moving parts to gain access to the governor.

(b) Guarding in the Hoistway and on the Car. The following equipment located in the elevator hoistway or on the elevator car shall be guarded to protect against accidental contact:

(1) Hoisting Rope Sheaves attached to and mounted above the car crosshead shall be completely guarded. Handholds shall be provided on each side of the guard.

(2) Hoisting rope Sheaves mounted within the car crosshead or underneath the car shall be provided with guards at the exposed nip points.

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- (3) Where secondary or deflecting sheaves are located on the hoisting side of overhead machines, the suspension means shall be guarded at the point of contact with the sheave, except where the bottom of the sheave is more than 7 ft (2.13m) above the crosshead of the car when the car is at the top terminal landing.
- (4) Where overhead sheaves are located above the crosshead, the suspension means attached to the crosshead shall be guarded at the point of contact with the overhead sheave unless the sheave is located in an overhead sheave space.
- (5) Ventilating fans or blowers installed on the car top shall be guarded.”
- ~~(6) Exposed external moving parts such as gears, sprockets, sheaves, drums, shafts and their driving ropes, chains or tapes for selectors, floor controllers or signal machines.”~~ **was included in Version 2, deleted in version 3.**

§ 3147.2211 PROTECTION OF HOISTWAY OPENINGS.

Protection of hoistway openings shall comply with Section 2.11 except as modified herein:

- (a) Subsection ~~2.11.1.2~~ and 2.11.1.4 is not adopted.

(new language adopts 2.11.1.2 with modifications to subsection e and h – included in April spreadsheet)

- (b) Modify subsection 2.11.1.2 to read as follows:
 - “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 700 mm (28 in.) wide and 2 030 mm (80 in.) high.
 - (b) It shall be easily accessible and free from fixed obstructions.
 - (c) It shall be either of the horizontally sliding or swinging single-section type, irrespective of the type of door installed at other landings.
 - (d) It shall be self-closing and self-locking and shall be marked, in letters not less than 50 mm (2 in.) high, “DANGER, ELEVATOR HOISTWAY.”
 - (e) It shall be provided with electric contact(s) that will prevent the operation of the driving machine unless the door is in the closed and locked position (see 2.26.2.25).
 - (f) It shall be unlocked from the landing side only through the use of a cylinder-type lock, having not less than five pins or five discs. The cylinder lock shall
 - (1) not be unlocked by any key that will open any other lock or device used for any purpose in the building
 - (2) be so designed that the key shall be removable only in the locked position
 - (g) It shall be openable from the hoistway side without the use of a key.

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(h) The key shall be of Group 1 Security (see 8.1), but shall not be a key used for any other Group 1 security lock. This key shall also be made available to emergency personnel during an emergency.”

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(i) A hinged self-closing barrier independent of the door shall be installed horizontally across the entrance on the hoistway side at a height of 1 070 mm (42 in.). The barrier shall not open into the hoistway.
Note: For the purposes of this subsection a single blind hoistway is a hoistway that contains a single elevator, and a portion of the hoistway is not provided with hoistway entrances."

§ 3147.2212 HOISTWAY DOOR LOCKING DEVICES AND ELECTRIC CONTACTS, AND HOISTWAY ACCESS SWITCHES.

Hoistway door locking devices and electric contacts, and hoistway access switches shall comply with Section 2.12 except as modified herein:

- (a) Subsections 2.12.6 and 2.12.7.1.2 is not adopted.

~~(deleted the following subsections b and c, renumbered d)~~

- ~~(a) Modify subsection 2.12.2.4.2 to read as follows:~~

~~"The locking member of the interlock shall hold the door in the locked position by means of gravity, or by a restrained compression spring, or by both, or by means of a positive linkage. The locking member shall not disengage when the door is subjected to a repetitive force of 450 N (100 lbf) in the direction of opening and at a right angle."~~

~~Modify subsection 2.12.3.4.3 to read as follows:~~

~~"The mechanical lock shall hold the door in the locked position by means of gravity or by a restrained compression spring, or by both. The locking member shall not disengage when the door is subjected to a repetitive force of 450 N (100 lbf) in the direction of opening and at a right angle."~~ Deleted in version 3.

- (b) Modify subsection 2.12.7.1.1 to read as follows:

"Hoistway access switches are required regardless of the rated speed and shall be installed in the hoistway entrance frame or within 12 inches of the entrance frame and not less than 36 inches (914 mm) nor more than 78 inches (1.98 m) above floor level. Hoistway access switches shall be located as follows:

- (a) the lowest landing when a separate pit access door is not provided

(b) the top landing"

(c) Additional hoistway access switches shall be permitted at other landings only when switches specified in 2.12.7 (a) and (b) have been provided." Deleted in version 3

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§ 3147.2213 RESERVED

§ 3147.2214 CAR ENCLOSURES, CAR DOORS AND GATES, AND CAR ILLUMINATION.

Car enclosures, car doors and gates, and car illumination shall comply with Section 2.14 except as modified herein:

(a) Subsections 2.14.2.2(f), 2.14.2.2(g), 2.14.2.6, 2.14.4.2.2 and 2.14.6.3 are not adopted.

(b) Modify subsection 2.14.1.5.1 to read as follows:

“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 in²) and shall measure not less than 400 mm (16 in.) on any side.

(b) The emergency exit shall reside within the standard railing on the perimeter of the car enclosure top, if a standard railing is required. If the standard railing impedes on the clear passageway required by 2.14.1.5.1(c)(2), the intermediate rail and toe board shall be moved to the perimeter of the car top in the area of the emergency exit only, and subject to the following:

(1) The top rail of the standard railing may overlap (not in vertical alignment with the toe board and intermediate rail) the emergency exit a maximum of 254mm (10 in) on one side only. The intermediate rail and toe board shall be installed in such a manner that a parallelepiped volume (see 2.14.1.5.1(c)(2)) can pass through the emergency exit to the car enclosure top.

(2) The area between the top rail and intermediate rail of the standard railing, in the area of the emergency exit only, shall be enclosed with solid material.

(3) The clearance requirements of 2.14.1.7.2 shall apply to the top rail only.

(c) 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 x 500 mm by 1 500 mm (12 in. x 20 in. by 59 in.) at an angle not less than 60 deg from the horizontal (see Nonmandatory Appendix C).

(d) The top emergency exit cover shall open outward. It shall be hinged or securely attached with a chain when in both the open and closed positions. If a chain is used, it 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.

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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.

(e) The movable portion (exit panel) of the suspended ceiling that is below the top exit opening shall be restrained from falling. It shall be permitted to be hinged upward or downward, provided that the exit permits a clear opening with the top exit opening.

(1) A minimum clear headroom of 2 030mm(80 in.) above the car floor shall be maintained when downward- swinging suspended ceiling exit panels are used.

(2) Upward-opening suspended ceiling exit panels shall be restrained from closing when in use and shall not diminish the clear opening area of the corresponding top exit opening.

(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.

(f) 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 2.14.1.6.2.

(g) 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 2.14.1.6.2). All exit covers shall be provided with a car top emergency exit electrical device (see 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”

(c) Modify subsection 2.14.1.6.2 to read as follows:

“An unobstructed horizontal area, within the car top railing if provided, of not less than 0.5 m² (5.4 ft²) shall be provided on top of the car enclosure for refuge space. It shall measure not less than 600 mm (24 in.) on any side. This area shall be permitted to include the space utilized for the top emergency exit [see 2.14.1.5.1(f)]. The minimum vertical distance in the refuge area between the top of the car enclosure and the overhead

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structure or other obstruction shall be not less than 1 100 mm (43 in.) when the car has reached its maximum upward movement.”

In any area outside the refuge space where the vertical clearance between the top of the car enclosure and the overhead structure or other obstructions is less than specified in 3147.2204(b), the top of the car enclosure shall be clearly marked. The marking shall consist of alternating 100 mm (4 in.) diagonal red and white stripes. In addition, a sign with the words “DANGER LOW CLEARANCE” shall be prominently posted on the car top and be visible from the entrance. The sign shall conform to the requirements of ANSI Z535.4 or CAN/CSA Z321 (see Part 9). The sign shall be made of durable material and shall be securely fastened.” **deleted in version 3**

(d) Modify subsection 2.14.1.7.1 to read as follows:

“A standard railing conforming to 2.10.2 shall be provided on the outside perimeter of the car enclosure top on all sides where the perpendicular distance between the edges of the car enclosure top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance and on sides where there is no hoistway enclosure. If clearances require (see 2.14.1.7.2) the standard railing to be located more than 50 mm (2 in.) from the edge of the outside perimeter of the car enclosure top, the top of the car enclosure outside of the railing shall be clearly marked. The marking shall consist of alternating ~~100 mm (4 in.)~~ **50 mm (2 in.)** diagonal red and white stripes. Where conditions exist that do not permit locating the standard railing within 50mm (2 in.) of the perimeter of the car top, the standard railing shall be permitted to be inset to establish the minimum railing clearances required by 2.14.1.7.2. The railing may be inset a maximum of 300mm (12 in.) and shall conform to the following requirements:

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(a) A sign with letters not less than 52mm (2 in.) high on a contrasting background permanently attached to the standard railing and visible from the entrance side of the car top shall be provided. The sign shall conform to the requirements of ANSI Z535.4 or CAN/CSA-Z321 (see Part 9). The sign shall be made of durable material and shall be securely fastened. The sign shall state:

CAUTION
DO NOT STAND ON OR CLIMB OVER THIS RAILING

(Removed this note)

Note: see section 2.7.2 2 Maintenance path in machinery spaces and control spaces.

This note removed in Version 3

(b)The forces specified in 2.10.2.4 shall not deflect the railing beyond the perimeter of the car top. The top-of-car enclosure, or other surface specified by the elevator installer, shall be the working surface referred to in 2.10.2.”

(e) Modify subsection 2.14.1.7.2 to read as follows:

“The following minimum clearances shall be provided and maintained from the standard railing to fixed electrical, mechanical or structural objects, and the counterweight assembly and to fixed electrical, mechanical or structural objects not attached to the car that create a horizontal projection into the hoistway.:

(a) 300mm (12 in.) horizontally, at any position in the hoistway, in the direction toward the hoistway walls. The horizontal clearance may be reduced to 102mm (4in) for suspension means, governor rope(s) and governor rope(s) guards, selector tape(s), traveling cable(s), flexible metal conduit, and for the following conditions: Deleted from Version 2. Moved to Exceptions

Exceptions:

(1) The horizontal clearance may be reduced to no less than 102mm (4in) for the following:

- (a) suspension means
- (b) governor ropes
- (c) governor ropes guards
- (d) selector tapes
- (e) traveling cables
- (f) traveling cable hangers mounted directly to the hoistway wall
- (g) flexible metal conduit
- (h) drive machines located in the hoistway
- (i) car rail brackets making a horizontal projection less than 152mm (6in) in length

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- (j) mounting brackets and assemblies attached to the guide rails making a horizontal projection less than 152mm (6in) in length
- (k) horizontal electrical raceways and fixtures attached directly to the hoistway wall protruding less than 51 mm (2in) into the hoistway
- (l) vertical electrical raceways attached directly to the hoistway wall
- (m) horizontal hoistway recesses or projections that are beveled in accordance with section 2.1.6.2.

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(2) The horizontal clearance may be reduced to no less than 102mm (4in) for objects making a horizontal projection 152mm (6in) or greater in length, if the underside of the object is suitably protected by the following methods:

- (a) beveling the underside of the projection with a solid material at an angle of not less than 60 degrees with the horizontal. The material shall be of solid construction with the exposed edge of the angle being rolled or formed to prevent sharp edges. The angle of the material shall not create an entrapment point with any item or device attached to the bracket. The material shall be suitably attached to prevent it from being deformed, dislodged or deflected into required running clearances.
- (b) screening with a perforated metal guard with openings that will reject a ball 50 mm (2 in.) in diameter that spans the full horizontal length of the object for the full travel of the elevator. The material shall be suitably attached to prevent it from being deformed, dislodged or deflected into the required running clearances.
- (c) For counterweight assemblies only, screening shall extend vertically from the point in the hoistway where the car top resides when the car is on its fully compressed buffer, to the point in the hoistway where the bottom of the counterweight assembly intersects with the top of the car top railing. The screening shall guard the full width of the counterweight assembly. The screening shall be a perforated metal guard with openings that will reject a ball 50 mm (2 in.) in diameter. The material shall be suitably attached to prevent it from being deformed, dislodged or deflected into the required running clearances.

(b) 300mm (12 in.) vertically at the extreme limit of travel.

(c) 600mm (24 in.) horizontally towards the centerline of the of the car top, at any position in the hoistway.”

(f) Modify subsection 2.14.3.2 to read as follows:

“**Openings in Car Tops.** Hinged or removable panels shall not be provided in car tops, except those required for the emergency exit.”

§ 3147.2215 RESERVED

§ 3147.2216 RESERVED

§ 3147.2217 RESERVED

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§ 3147.2218 SPEED GOVERNORS.

Speed governors shall comply with Section 2.18 except as modified herein:

~~(a) Modify subsection 2.18.4.2.5(a) to read as follows:~~

~~“(a) A speed-reducing device conforming to 2.18.4.1.3 is provided that effectively monitors the speed of the elevator in all conditions, and will reduce the speed of the elevator in case of overspeed, and that shall be set to open as specified in 2.18.4.2.1, 2.18.4.2.2, or 2.18.4.2.3.”~~

~~(Revised wording in section — change included in April spreadsheet)~~

This section deleted from version 3.

(b) Add new subsection 2.18.4.2.6 to read as follows:

“2.18.4.2.6 Alternative to a Speed-Governor Speed-Reducing Switch

A device is permitted as an alternative to the governor speed-reducing switch described in 2.18.4.1 thru 2.18.4.3. The device shall monitor the speed of the elevator in all conditions, and will reduce the speed of the elevator in case of overspeed, and shall be set to open as specified in 2.18.4.2.1, 2.18.4.2.2, or 2.18.4.2.3. The device if not integral to the governor shall be arranged to be fail safe. Subsequent to the first stop of the car following the opening of the speed-reducing switch/device, the car shall remain inoperative until the switch/device is manually reset.”

(c) Modify subsection 2.18.9 to read as follows:

“Speed-Governor Marking Plate

A metal plate shall be securely attached to each speed governor and shall be marked in a legible and permanent manner with letters and figures not less than 6 mm (0.25 in.) in height indicating the following:

(a) the speed in m/s (ft/min) at which the governor is set and sealed to trip the governor-rope retarding means

(b) the size, material, and construction of the governor rope on which the governor-rope retarding means were designed to operate

(c) the governor pull-through tension (force) in N (lbf) (see 2.18.6.2)

(d) manufacturer’s name or trademark

(e) statement “DO NOT LUBRICATE GOVERNOR ROPE”

(f) The speed governor and safety marking plates shall contain the manufacturer's model number”

§ 3147.2219 RESERVED

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§ 3147.2220 SUSPENSION MEANS AND THEIR CONNECTIONS.

Suspension means and their connections shall comply with Section 2.20 except as modified herein:

- (a) Subsections 2.20.1(c) and 2.20.4.2 is not adopted.
- (b) All references to ASME A17.6 within section 2.20 of ASME A17.1-2013 shall be to ASME A17.6-2010 except part 2 (Aramid Fiber ropes are not permitted).

(added new section c and renumbered following sections – change included in April spreadsheet)

e) The section 2.20.8.3 reference to “means” shall be a device that utilizes a proven methodology to physically interact with and continuously monitor the actual residual strength of each load bearing suspension member at any time during its operational life cycle and shall be capable of measuring changes in residual strength that may occur due to unusual or unforeseen conditions. The monitoring device shall be properly installed and functional. If upon routine inspection by the Division, the monitoring device is found to be in a non-functional state or removed, the elevator shall be removed from service. If the device is removed to facilitate the replacement of the suspension members, it shall be properly installed and functional before the elevator is returned to service.

This section deleted from Version 3.

(c) Modify subsection 2.20.1 to read as follows:

“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 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”

(d) Modify subsection 2.20.8.3 to read as follows:

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“Suspension-Member Residual Strength. All electric traction elevators, excluding those with steel wire ropes, shall be provided with residual-strength detection device. The device shall

- (a) Utilize a proven methodology which effectively monitors the physical properties of the suspension members. The device shall monitor the actual residual-strength of each load bearing suspension member at any time during its operational life cycle. The device shall be capable of detecting changes in residual-strength that may occur due to unusual or unforeseen conditions.
- (b) operate before any suspension member is reduced in strength to 60% of its rated breaking force
- (c) when actuated, automatically function to stop the car at the next available landing, open the doors, and prevent the elevator from restarting except on hoistway access or inspection operation
- (d) be arranged to be tested in accordance with the requirements in 8.10.2.2.2(ss)(2), and instructions for testing shall be included in the Maintenance Control Program [see 8.6.1.2.1(f)] with sufficient detail to ensure that testing can be accomplished by elevator personnel
- (e) remain actuated until manually reset
- (f) The residual-strength monitoring device shall be properly installed and functional at all times. If the monitoring device becomes non-functional, or is removed, the elevator shall be placed out of service. If the monitoring device is removed to facilitate the replacement of the suspension-members, it shall be properly installed and tested for proper operation before the elevator is returned to service.

Notes:

- (1) A means that utilizes lifecycle replacement criteria provided by the manufacturer of the suspension shall not be considered as a substitute for this residual-strength detection device.
- (2) [2.20.8.3(a)(4)]: This does not require the means itself to remain actuated, only that the elevator shall not be permitted to restart except on hoistway access or inspection operation until a manual reset is performed.”

§ 3147.2221 RESERVED

§ 3147.2222 BUFFERS AND BUMPERS.

Buffers and bumpers shall comply with Section 2.22 except as modified herein:

- (a) Subsection 2.22.4.8 is not adopted.

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- (b) All equivalent type buffers as referenced by subsection 2.22.1.1 shall be subject to approval by the Division.

Modify subsection 2.22.2 to read as follows:

“Solid Bumpers

Solid bumpers, where permitted, shall be made of wood or other suitably resilient material of sufficient strength to withstand without failure the impact of the car with rated load, or the counterweight, descending at governor tripping speed. The material used shall be of a type that will resist deterioration or be so treated as to resist deterioration. All elastomeric bumpers shall be marked with the manufacturer’s recommended replacement criteria.”

(revised section — change included in April spreadsheet)

This section deleted in version 3

- (c) Modify subsection 2.22.3.3 to read as follows:

“Marking Plates.

Each spring buffer or its equivalent shall be provided with a marking plate showing its load rating and stroke and the number of springs or equivalent buffers required. Where the springs are removable, each spring shall be identified, and the assembly marking plate shall indicate this identification. All elastomeric buffers shall be marked with the manufacturer’s recommended replacement criteria. Markings shall be made in a permanent and legible manner.”

- (d) Modify subsection 2.22.4.5(c) to read as follows:

“(c) spring-return-type and gas spring-return oil buffers shall be provided with a switch conforming to 2.26.2.22 that shall be actuated if the plunger is not within 13 mm (0.5 in.) of the fully extended position”

§ 3147.2223 CAR AND COUNTERWEIGHT GUIDE RAILS, GUIDE-RAIL SUPPORTS, AND FASTENINGS.

Car and counterweight guide rails, guide-rail supports, and fastenings shall comply with Section 2.23 except as modified herein:

- (a) Modify subsection 2.23.9.3 to read as follows:

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“Slotted guide-rail brackets shall be secured in their final position by a bolt not less than 3/8 inch diameter or by welding in accordance with section 8.8. Such means shall have a factor of safety of not less than 5.”

(Revised wording in section – change included in April spreadsheet)

“Slotted guide-rail brackets shall be pinned in their final position by bolts or by welding as specified by the manufacturer. Such means shall have a factor of safety of not less than 5.”

Text changed in version 3. Reference to welding section 8.8 Deleted.

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§ 3147.2224 DRIVING MACHINES AND SHEAVES.

Driving machines and sheaves shall comply with Section 2.24 except as modified herein:

- (a) Subsection 2.24.2.3.2 is not adopted.

§ 3147.2225 RESERVED

§ 3147.2226 OPERATING DEVICES AND CONTROL EQUIPMENT.

Operating devices and control equipment shall comply with Section 2.26 except as modified herein:

- (a) Subsections 2.26.1.4.1(a)(1)(a) and (b), 2.26.1.4.1(a)(2)(d), (e), (f) and (g), 2.26.1.4.2(g), 2.26.1.4.4(a)(3), (4) and (5), 2.26.1.4.4(b), (c) and (d), 2.26.1.5(a) and (b), ~~2.26.2.25~~, 2.26.2.31, 2.26.2.32, 2.26.2.35, 2.26.2.36, 2.26.2.37 and ~~2.26.2.38~~ are not adopted.

2.26.2.25 deleted from version 2, 2.26.2.38 added to version 3.

- (b) Modify subsection 2.26.1.4.1(a) to read as follows:

“(a) Operating Devices

(1) Operating devices for inspection operation shall be provided on the top of the car.

(2) Operating devices for inspection operation shall also be permitted

(a) in the car

(b) in a machine room

(c) in a control room”

- (c) Modify subsection 2.26.1.4.4 to read as follows:

“**Machine Room and Control Room Inspection Operations.** Where inspection operation in a machine room or control room is provided, it shall conform to 2.26.1.4.1 and the following:

(a) The transfer switch [see 2.26.1.4.1(b)] shall be

(1) located in the machine room or control room, as applicable

(2) rendered ineffective if top-of-car inspection operation, in-car inspection operation, or hoistway access operation is activated, or when a car door or hoistway door bypass switch is in the “BYPASS” position”

- (d) Modify subsection 2.26.1.5 to read as follows:

“**Inspection Operation With Open Door Circuits.** A single set of switches marked “CAR DOOR BYPASS” and “HOISTWAY DOOR BYPASS” shall be provided. The switches shall be accessible from outside of the hoistway. They shall be located in a controller enclosure for the elevator located outside the hoistway in a control room or machine room.” **Corrected numbering from (c) to (d)**

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(e) Modify subsection 2.26.2.6 to read as follows:

“Broken Rope, Tape, or Chain Switches. The switch or switches that shall be opened by a failure of a rope, tape, or chain, shall be provided when required by 2.25.2.3.2 or 2.25.4.1.8(b).” **Corrected numbering from (d) to (e)**

(f) Modify subsection 2.26.2.22 to read as follows:

“Buffer Switches for Spring-Return-Type and Gas Spring-Return Oil Buffers. Buffer switches conforming to 2.22.4.5(c) shall be provided.” **Corrected numbering from (e) to (f)**

§ 3147.2227 EMERGENCY OPERATION AND SIGNALING DEVICES

Emergency operation and signaling devices shall comply with Section 2.27 except as modified herein:

(a) General requirement for Emergency Operation and Signaling Devices.

(1) **An audible signaling device in accordance with subsection 2.27.1.2 shall be provided on all elevators, regardless of the existence of an emergency stop switch. The audible signal shall be actuated by a push button located in or adjacent to the car operating panel. The push button shall be visible and permanently identified with the “ALARM” symbol (see 2.26.12.1). The identification shall be on or adjacent to the “ALARM” push button. It is permissible to use the “PHONE” push button for the “ALARM” function without adding an individual “ALARM” push button. The “PHONE” button shall operate as the “ALARM” button only when the phone line is not functional per 2.27.1.1.6. Additional permissive option added.**

(b) Modify subsection 2.27.3 to read as follows:

“Firefighters’ Emergency Operation: Automatic Elevators

Firefighters’ Emergency Operation shall apply to all automatic elevators except:

(a) 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.

(b) In jails and penal institutions where the recall of elevators will interfere with security.”

Requirement unchanged from version 2 but reformatted.

(c) Modify subsection 2.27.3.2.1(c) to read as follows:

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~~“(c) in the elevator hoistway, when sprinklers are located in those hoistways, excluding sprinklers located within 610mm (24in) of the pit floor.”~~

~~(deleted subsection — change included in April spreadsheet)~~

Deleted in version 3.

(c) Modify subsection 2.27.3.2.3(a) to read as follows:

“(a) The activation of a fire alarm initiating device specified in 2.27.3.2.1(a) or 2.27.3.2.2(a) at any floor, other than at the designated level, shall cause all elevators that serve ~~that floor which share the same hoistway or lobby, machine room, control room, control space~~ **the elevator lobby of the fire alarm initiating device**, and any associated elevator of a group automatic operation, to be returned nonstop to the designated level.”

Text revised from version 2

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(d) Modify subsection 2.27.3.2.4(a) to read as follows:

“(a) the activation of a fire alarm initiating device specified in 2.27.3.2.1(a) or 2.27.3.2.2(a) that is located at the designated level, shall cause all elevators serving ~~that level which share the same hoistway or lobby, machine room, control room, control space~~ **the elevator lobby of the fire alarm initiating device** to be recalled to an alternate level, unless Phase I Emergency Recall Operation is in effect.”

Text revised from version 2

§ 3147.2228 RESERVED

§ 3147.2229 RESERVED

§ 3147.2230 RESERVED

§ 3147.2300 HYDRAULIC ELEVATORS

§ 3147.2301 RESERVED

§ 3147.2302 RESERVED

§ 3147.2303 RESERVED

§ 3147.2304 RESERVED

§ 3147.2305 RESERVED

§ 3147.2306 RESERVED

§ 3147.2307 MACHINERY SPACES, MACHINE ROOMS, CONTROL SPACES, AND CONTROL ROOMS.

Machinery spaces, machine rooms, control spaces, and control rooms shall comply with Section 3.7 except as modified herein:

(a) Subsections 3.7.1.1 through 3.7.1.6, and 3.7.1.8 are not adopted.
Added modifications to 3.7.1 and new 3.7.2

New language as follows (does not match March:

(a) Subsections 3.7.1.1 through 3.7.1.9 are not adopted.

(b) Modify subsection 3.7.1 through 2.7.4, 2.7.6, 2.7.7, and 2.7.9.

a. Any reference to “electric driving-machine” in Section 2.7 shall be replaced by the words “hydraulic machine”.

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(c) Modify section 3.7 to add new subsection 3.7.2 to read as follows:

“3.7.2 Location of Machine Rooms

Hydraulic elevator machine and control rooms shall be located overhead, adjacent to, underneath the hoistway or at a remote location. They shall not be located in the hoistway. Where hydraulic machines and electrical control equipment are located in spaces separated from the hoistway enclosure (see 2.1.1), such spaces shall be separated from other parts of the building by enclosures conforming to 2.7.1.2 and having access door conforming to 2.7.3.4.”

⋮

(a) Modify subsection 3.7.1 to read as follows:

“Machinery spaces, machine rooms, control spaces, and control rooms shall conform to the requirements of 2.7.1 through 2.7.4, 2.7.6, 2.7.7 and 2.7.9.

(a) Any reference to “electric driving-machine” in Section 2.7 shall be replaced by the words “hydraulic machine”.”

Version 2 said modify subsection 3.7. 1 through 2.7.4, 2.7.6, 2.7.7, and 2.7.9.

(b) Modify section 3.7 to add new subsection 3.7.2 to read as follows:

“3.7.2 Location of Machine Rooms

Hydraulic elevator machine and control rooms shall be located overhead, adjacent to, underneath the hoistway, or at a remote location. They shall not be located in the hoistway. Where hydraulic machines and electrical control equipment are located in spaces separated from the hoistway enclosure (see 2.1.1), such spaces shall be separated from other parts of the building by enclosures conforming to 2.7.1.2 and having an access door conforming to 2.7.3.4.”

§ 3147.2308 RESERVED

§ 3147.2309 RESERVED

§ 3147.2310 RESERVED

§ 3147.2311 RESERVED

§ 3147.2311 PROTECTION OF HOISTWAY LANDING OPENINGS.

Protection of hoistway landing openings shall comply with Section 3.11 except as modified herein:

(a) Subsection 3.11.1 is not adopted.

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~~Language deleted, Section changed to “Reserved” — change not included in previous spreadsheets.~~

01673147.2311 reserved in version 3.

§ 3147.2312 RESERVED

§ 3147.2313 RESERVED

§ 3147.2314 RESERVED

§ 3147.2315 RESERVED

§ 3147.2316 RESERVED

§ 3147.2317 RESERVED

§ 3147.2318 RESERVED

§ 3147.2319 VALVES, PRESSURE PIPING, AND FITTINGS.

Valves, pressure piping, and fittings shall comply with Section 3.19 except as modified herein:

- (a) Subsection 3.19.2.7 is not adopted.
- (b) Modify subsection 3.19.2.5 to read as follows:
“**Pressure Gauge Fittings.** A pressure gauge fitting shall be provided on jack side of the check valve or immediately adjacent to the hydraulic control valve. When a pressure gauge is permanently installed, a shutoff means shall be provided to protect the gauge.”
- (c) Modify subsection 3.19.4.1 to read as follows:
“**Shutoff Valve.** A manually operated shutoff valve shall be provided between the hydraulic machines and the hydraulic jack and shall be located outside the hoistway and adjacent to the hydraulic machine.”

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(d) Modify subsection 3.19.4.4 to read as follows:

“Manual Lowering Valve. A manually operated valve, located on or adjacent to the control valves, shall be provided and identified, which permits lowering the car at a speed not exceeding 0.10 m/s (20 ft/min). This valve shall be so marked to indicate the lowering position.”

§ 3147.2320 RESERVED

§ 3147.2321 RESERVED

§ 3147.2322 RESERVED

§ 3147.2323 RESERVED

§ 3147.2324 HYDRAULIC MACHINES AND TANKS.

Hydraulic machines and tanks shall comply with Section 3.24 except as modified herein:

(a) Modify subsection 3.24.3.1 to read as follows:

“Covers and Venting. Tanks shall be covered and suitably vented to the atmosphere.”

§ 3147.2325 TERMINAL STOPPING DEVICES.

Terminal stopping devices shall comply with Section 3.25 except as modified herein:

(a) Modify subsection 3.25.2.2 to read as follows:

“General Requirements. Terminal speed-reducing devices shall conform to 3.25.2.2.1 through 3.25.2.2.3.”

§ 3147.2400 ELEVATORS WITH OTHER TYPES OF DRIVING MACHINES

§ 3147.2401 RESERVED

§ 3147.2402 SCREW-COLUMN ELEVATORS.

Screw-column elevators shall comply with Section 4.2 except as modified herein:

(a) Modify subsection 4.2.2.4 to read as follows:

“Refuge Space on Top-of-Car Enclosure. A refuge space shall be provided on top of the car enclosure conforming to 2.14.1.6.2.”

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§ 3147.2500 SPECIAL APPLICATION ELEVATORS

§ 3147.2501 RESERVED

§ 3147.2502 LIMITED-USE/LIMITED-APPLICATION ELEVATORS.

Limited-use/limited-application elevators shall comply with Section 5.2 except as modified herein:

- (a) Subsection 5.2.1.4.2.2 is not adopted.
- (b) General requirements for Limited-Use/Limited-application elevators.
 - (1) Limited-use/limited application elevators may be installed to facilitate access according to Title 24, under the jurisdiction of the Division intended for the exclusive use of persons with disabilities only.
 - (2) A sign shall be securely fastened in a conspicuous place at each landing and in the enclosure. The sign shall state "No Freight" in letters not less than 1/4 in. (6.4 mm) high and shall include the international symbol of accessibility.
- (c) Modify subsection 5.2.1.3 to read as follows:
"Location and Guarding of Counterweights. The location and guarding of counterweights shall conform to 2.3."
- (d) Modify subsection 5.2.1.13 to read as follows:
"Power Operation of Hoistway Doors and Car Doors. Power opening and power closing of hoistway doors and car doors shall be provided, conforming to 2.13, except as modified by 5.2.1.13.
 - (a) Requirement 2.13.1 does not apply. Both car and hoistway doors shall be of the horizontally sliding type.
 - (b) Vertically sliding doors shall not be permitted."
- (e) Modify subsection 5.2.1.14(f) to read as follows:
"(f) Requirement 2.14.4.3 does not apply. Doors shall be of the horizontally sliding type. Material shall conform to 2.14.2.1."

Renumbered to be correct.

§ 3147.2503 PRIVATE RESIDENCE ELEVATORS

Private Residence elevators shall comply with Section 5.3 except as modified herein:

- (a) Subsection 5.3.1.8.1(d) is not adopted.

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(b) Modify subsection 5.3.1.7.1 to read as follows:

“Where Required. Where a hoistway enclosure is required, landing openings shall be protected by swinging or horizontally sliding doors. The landing face of horizontally sliding hoistway doors shall have no areas recessed or raised more than 3 mm (0.125 in) from the adjacent area. Recesses for hand grips on manually operated hoistway doors may be 6mm (0.25) from the adjacent area. 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 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.”

(c) Modify subsection 5.3.1.7.2 to read as follows:

“Clearance Between Hoistway Doors and Landing Sills and Car Doors. The distance between the hoistway face of the hoistway door and the car door shall not exceed 102 mm (4in). The measurement shall be made when both doors are in the fully closed position at the deepest recess.

(a) **Horizontally Sliding Hoistway Doors.** The hoistway face of manually operated, horizontally sliding hoistway doors shall have no areas recessed or raised more than 3 mm (0.125 in) from the adjacent area. Recesses for hand grips may be 6mm (0.25) from the adjacent area. The hoistway face of power operated, horizontally sliding hoistway doors shall have no areas recessed or raised more than 3 mm (0.125 in) from the adjacent area.

(b) **Swinging Hoistway Doors.** Where the hoistway face of a swinging door has a recessed area, greater than 6 mm (0.25 in.) deep and is more than 100 mm (4 in.) wide, the distance shall be measured to the recessed area.

(c) **Space Guards.** When space guards are provided they shall conform to the following:

(i) The space guard shall be constructed of 16-gauge sheet metal or material of equivalent strength, attached to the hoistway door or the car door by tamper resistant means.

(ii) The bottom of the guard shall not be more than 13 mm (0.5 in.) above the sill.

(iii) The face of the guard shall run vertically the full height of the door. A vision panel conforming to the requirements of 2.11.7.1 shall be provided in the space guard, if the hoistway door is provided with a vision panel.

(iv) Cutouts in space guards for hoistway door handles, locks or interlocks shall be limited to that required for proper operation.

(v) The guard shall extend to within 1.5 in. (38 mm) of the edges of the door. The top of the guard shall be inclined toward the face of the door at an angle of not less than 60 deg nor more than 75 deg from the horizontal.

(vi) Exposed edges shall be beveled or rolled.

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(vii) The guard shall be sufficiently rigid or reinforced to prevent collapsing or denting.

(viii) Mounting of the guard shall have proper clearances at the bottom and sides to permit easy closing of the door and shall not interfere with self-closing.

(ix) Space guards shall not project beyond the edge of the hoistway sill.”

(d) Modify subsection 5.3.1.7.3 to read as follows:

“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.”

(e) Modify subsection 5.3.1.7.4 to read as follows:

“Locking Devices for Hoistway Doors. Hoistway doors shall be provided with locking devices. The locking device shall be of a type that will

(a) either prevent car movement unless the door is locked in the closed position;
or

(b) permit the car to start if the door is in the closed position but not locked, provided that the device stops the car if the door gate fails to lock before the car has moved 150 mm (6 in.) away from the landing. The device shall also prevent the opening of the hoistway door unless the car is within 150 mm (6 in.) of the landing. The locking device shall conform to 2.12.4.”

(f) Modify subsection 5.3.1.7.5 to read as follows:

“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.”

Modify subsection 5.3.1.7.8 to read as follows:

“Power Operation of Hoistway Doors. Power opening shall be permitted for hoistway doors and shall conform to 2.13.2.2.1 and 2.13.2.2.2. Power closing shall be permitted for hoistway doors and shall conform to 2.13.3.2 through 2.13.4, and 2.13.6.”

Paragraph is incorrectly formatted

(g) Modify subsection 5.3.1.8 to read as follows:

“Car Enclosures, Car Doors and Car Illumination”

(h) Modify subsection 5.3.1.8.2 to read as follows:

“Car Doors. A car door 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 of solid construction.

(a) Power Operation of Car Doors. Power opening shall be permitted for car doors and shall conform to 2.13.2.1 and 2.13.6. Power closing shall be permitted for car doors and shall conform to 2.13.3 through 2.13.6.

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

(c) Car Door Electric Contacts. Every car door shall be provided with an electric contact conforming to 2.14.4.2.3 and 2.14.4.2.5. The design of the car door electric contacts shall be such that the car cannot move unless the door is within 50 mm (2 in.) of the closed position.”

§ 3147.2504 RESERVED

§ 3147.2505 RESERVED

§ 3147.2506 RESERVED

§ 3147.2507 RESERVED

§ 3147.2508 RESERVED

§ 3147.2509 RESERVED

§ 3147.2510 ELEVATORS USED FOR CONSTRUCTION.

Elevators used for construction shall comply with Section 5.10 except as modified herein:

(a) Subsection 5.10.1.9.5 (a) is not adopted.

(b) General requirements for elevators used for construction.

- (1) A trained and authorized person shall be stationed at, and operate the controls in, the elevator car at all times while the elevator is accessible and available for use. Training shall include at least conveyance operation and emergency procedures such as entrapment, elevator fire, earthquake conditions, or other emergency procedures associated with conveyance operations.
- (2) There shall be an effective means of two-way voice communication between the operator and a second person at a different location on the jobsite available at all times while the elevator is staffed by an operator.

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- (3) There shall be an effective means of two-way voice communication (wired or wireless) between the conveyance operator and all hall landings. A separate communication system shall be provided at each landing and be operable at all times while the elevator is in use, i.e., an annunciator next to the operator's station in the car, which can be activated from the landings.
- (4) An emergency plan and procedure to include items such as entrapment, elevator fire, earthquake conditions, or other emergency procedures associated with conveyance operations shall be developed and made available to the Division during any inspection.
- (5) A durable sign with lettering not less than 1/2 inch on a contrasting background shall be conspicuously posted inside the elevator car indicating that:
- (A) The conveyance is for construction use only.
- (B) The conveyance shall be operated only by an authorized person.
- (6) Durable signs with lettering not less than 1/2 inch on a contrasting background shall be conspicuously posted at all landings instructing the elevator user how to summon the conveyance.
- (7) The conveyance shall be parked and secured against unauthorized access after working hours.
- (c) Modify subsection 5.10.1.9.5(b) to read as follows:
“(b) The hoistway doors for all elevators used for construction shall be provided with an interlocks conforming to 2.12.2.”
- (d) Modify subsection 5.10.1.9.6 to read as follows:
“**Closing of Hoistway Doors and Gates.** Temporary or permanent hoistway doors and gates shall be considered to be in the closed position when the door or gate is fully closed and latched. The hoistway doors and gates shall be provided with an interlock conforming to 2.12.2.”
- (e) Modify subsection 5.10.1.10.4(e) to read as follows:
“(e) Operation of the car with the top emergency exit open is permissible only when the load cannot be carried totally within the car enclosure and the operation is under the direct supervision of a certified competent conveyance mechanic. The car shall not be operated at a speed of more than 0.75 m/s (50 ft/min).”

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§ 3147.2511 RESERVED

§ 3147.2512 RESERVED

§ 3147.2600 ESCALATORS AND MOVING WALKS.

§ 3147.2601 ESCALATORS.

Escalators shall comply with Section 6.1 except as modified herein:

- (a) Subsection 6.1.6.9.3 is not adopted.
- (b) Modify subsection 6.1.6.9.2 to read as follows:
“Signs or Graphics Relating to Safety. Signs in addition to those required by 6.1.6.9.1 relating to cautions or warnings applying to escalator passengers, when provided, shall be in a readily visible location, and limited to conveying any additional cautions and/or warnings. The additional signs shall be prohibited in the area starting from 3 000 mm (118 in.) horizontally outward from the end of the newel and to the point where the steps start to move vertically. Its location shall not impede or otherwise cause persons about to board the escalator to suddenly pause or stop. Signs other than escalator caution or warning signs on the escalator are prohibited. The sign shall comply with ANSI Z535.4 or CAN/CSA-Z321, whichever is applicable (see Part 9).”
- (c) Modify subsection 6.1.7.3.3 to read as follows:
“If access doors are provided in the side of the escalator enclosure, they shall be kept closed and locked. The key shall be removed only when in the locked position. The key shall be of Group 1 Security (see 8.1).”

§ 3147.2602 MOVING WALKS.

Moving walks shall comply with Section 6.2 except as modified herein:

- (a) Subsection 6.2.6.8.3 is not adopted.
- (b) Modify subsection 6.2.6.8.2 to read as follows:
“Signs or Graphics Relating to Safety. Signs in addition to those required by 6.2.6.8.1 relating to cautions or warnings applying to escalator passengers, when provided, shall be in a readily visible location, and limited to conveying any additional cautions and/or warnings. The additional signs shall be prohibited in the

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area starting from 3 000 mm (118 in.) horizontally outward from the end of the newel and to the point where the steps start to move vertically. Its location shall not impede or otherwise cause persons about to board the escalator to suddenly pause or stop. Signs other than escalator caution or warning signs on the escalator are prohibited. The sign shall comply with ANSI Z535.4 or CAN/CSA-Z321, whichever is applicable (see Part 9)."

(c) Modify subsection 6.2.7.3.3 to read as follows:

"If access doors are provided in the side of the moving walk enclosure, they shall be kept closed and locked. The key shall be removed only when in the locked position. The key shall be of Group 1 Security (see 8.1)."

§ 3147.2700 DUMBWAITERS AND MATERIAL LIFTS.

§ 3147.2701 RESERVED

§ 3147.2702 RESERVED

§ 3147.2703 RESERVED

§ 3147.2704 RESERVED

§ 3147.2705 RESERVED

§ 3147.2706 RESERVED

§ 3147.2707 RESERVED

§ 3147.2708 RESERVED

§ 3147.2709 RESERVED

§ 3147.2710 RESERVED

§ 3147.2711 RESERVED

All of the above deleted from Version 3.

§ 3147.2700 RESERVED

§ 3147.2800 GENERAL REQUIREMENTS.

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§ 3147.2801 SECURITY.

Security shall comply with Section 8.1 except as modified herein:

(a) Modify subsection 8.1.2 to read as follows:

“Group 1: Restricted

Group 1 covers access or operation of equipment restricted to elevator personnel, except as noted.

NOTE: See the following:

(a) Requirement 2.2.4.4(e), pit access doors.

(b) Requirement 2.7.3.4.6, access openings in machinery space floor, etc.

(c) Requirement 2.7.3.4.7(c), hoistway access doors.

(d) Requirement 2.7.5.1.4, equipment access panels.

(e) Requirement 2.7.6.3.2(b), motor controller cabinet door(s) or panel(s).

(f) Requirement 2.7.6.4.3(b), access to the means to move the car from outside the hoistway.

(g) Requirement 2.7.6.4.3(d), access to removable means to move the car from outside the hoistway.

(h) Requirement 2.7.6.5.2(b), inspection and test panel enclosure.

(i) Requirement 3.19.4.4, access to a manual lowering valve.

(j) Requirement 3.19.4.5, access to pressure gauge fittings.

(k) Requirement 2.11.1.2(h), emergency access doors. (Shall also be made available to emergency personnel during an emergency.)

(l) Requirement 2.12.6.2.4, hoistway door unlocking device.

(m) Requirement 2.12.7.2.2, hoistway access switch.

(n) Requirement 2.12.7.3.1, hoistway access enabling switch or its locked cover.

(o) Requirement 2.26.1.4.3(b), in-car inspection operation transfer switch.

(p) Requirement 2.26.2.21, in-car stop switch or its locked cover.

(q) Requirement 4.2.5.2, screw machine controllers located away from hoistway, machine room, or machinery space.

(r) Requirement 4.2.5.5, screw machine access panels.

(s) Requirement 5.1.10.1(b), inclined elevator hoistway access switch.

(t) Requirement 5.1.11.1.2(d), inclined elevator uphill end emergency exit.

(u) Requirement 5.7.8.3, hoistway door unlocking device.

(v) Requirement 7.1.12.4, power and hand dumbwaiters without automatic transfer devices hoistway access switch.

(w) Requirement 7.9.2.15, electric material lifts with automatic transfer devices car-mounted operating devices.

(x) Requirement 6.1.7.3.3, escalator side access door to interior.

(y) Requirement 6.2.7.3.3, moving walk side access door to interior.

(z) Requirement 8.4.10.1.1(a), earthquake equipment reset”

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(z) added from Version 2.

(b) Modify subsection 8.1.3 to read as follows:

“Group 2: Authorized Personnel

Group 2 covers access or operation of equipment by authorized and elevator personnel.

NOTE: See the following:

- (a) Requirement 2.7.3.4.2, machine room and control room access doors.**
- (b) Requirements 2.7.3.4.3 and 2.7.3.4.4, machinery spaces and control spaces as specified.**
- (c) Requirement 2.11.1.4, access openings for cleaning of car and hoistway enclosures.**
- (d) Requirement 2.14.2.6(b), access openings for cleaning of car and hoistway enclosure.**
- (e) Requirement 2.14.7.2.1(b), car light control switch or its locked cover.**
- (f) Requirement 3.19.4.1, access to manually operated shutoff valve.**
- (g) Requirement 5.6.1.25.2(b), rooftop elevator keyed operation switch.**
- (h) Requirement 6.1.6.2.1(d), escalator starting switch.**
- (i) Requirement 6.2.6.2.1(d), moving walk starting switch.”**

§ 3147.2802 RESERVED

§ 3147.2803 RESERVED

§ 3147.2804 ELEVATOR SEISMIC REQUIREMENTS.

Elevator seismic requirements shall comply with Section 8.4 except as modified herein:

(a) Modify subsection 8.4.3.2(e) to read as follows:

“(e) The following conditions shall apply to traveling cables:

- (1) Traveling cables where any portion of their loop below the mid-point of the elevator travel is located 915 mm (36 in.) or less horizontally from a snag point.**
- (2) The traveling cables shall be attached or restrained near the half way point in the hoistway.”**

(b) Modify subsection 8.4.4.1.1 to read as follows:

“The requirements specified in 2.14.1.5 shall apply except that the emergency exit shall be so arranged that it can be opened from within the car by means of a keyed spring-return cylinder-type lock having not less than a five-pin or five-disk combination and opened from the top of the car without the use of a key.

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No other key to the building shall unlock the emergency exit lock except that where hoistway access switches conforming to 2.12.7 are provided, the key used to operate the access switches shall be permitted to also unlock the top emergency exit. This key shall be Group 1 Security (see 8.1)."

(c) Modify subsection 8.4.10.1.1(a) to read as follows:

"(a) All traction elevators having counterweights located in the same hoistway shall be provided with the following:

(1) For seismic zone 3 or greater, or $F_p > 0.25 W_p$ with $z/h=1$ (for IBC/ASCE 7) or $h_x/h_n=1$ (for NBCC): a minimum of one seismic switch per building

(2) For all elevators covered by Section 8.4

(a) a counterweight displacement switch for each elevator

(b) an identified momentary group 1 security key switch (see 8.1) for each elevator, located in the control panel in the elevator machine room [see 8.4.10.1.3(i)]"

(d) Modify subsection 8.4.10.1.2(c) to read as follows:

"(c) A displacement switch shall be activated by the derailment of the counterweight at any point in the hoistway to provide information to the control system that any portion of the counterweight assembly has left its guides."

(e) Modify subsection 8.4.10.1.3(i) to read as follows:

"(i) An elevator shall be permitted to be returned to normal service by means of the momentary reset switch [see 8.4.10.1.1(a)(2)], provided the displacement switch is not activated."

(f) The reference in subsection 8.4.11.12 to 3.17.2, shall be corrected to 3.17.1.

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§ 3147.2805 ESCALATOR AND MOVING WALK SAFETY REQUIREMENT FOR SEISMIC RISK ZONE 2 OR GREATER.

Escalator and moving walk safety requirement for seismic risk zone 2 or greater shall comply with Section 8.5 except as modified herein:

(a) General requirement for Escalator and Moving walk Seismic risk zone 2 or greater.

(1) Intermediate supports, if any, shall be free to move laterally in all directions.

§ 3147.2806 MAINTENANCE, REPAIR, REPLACEMENT, AND TESTING.

Maintenance, repair, replacement, and testing shall comply with Section 8.6 except as modified herein:

(a) Subsections 8.6.3.2.2, 8.6.4.20.1(b), 8.6.4.20.3(e), (f) and (g), 8.6.4.20.4(b), 8.6.4.20.10(b), 8.6.7.11, 8.6.11.5.2 through 8.6.11.5.6, 8.6.11.9, and 8.6.11.10 are not adopted.

(deleted 8.6.4.20.3 e and f) e and f appear to be put back in version 3

(b) Modify subsection 8.6.1.7.2 to read as follows:

“**Periodic Test Record.** A periodic test record for all periodic tests containing the applicable Code requirement(s) and date(s) performed, and the name of the person or firm performing the test, shall be installed to be readily visible and adjacent to or securely attached to the controller of each unit in the form of a metal tag or other format designated by and acceptable to the authority having jurisdiction.”

(c) Modify subsection 8.6.4.19 to add new subsection 8.6.4.19.17 to read as follows:

“**8.6.4.19.17 Seismic device operation Deleted "device" in version 3**
Seismic operation shall be tested to determine conformance with the applicable requirements of 8.4.10.1.3. All earthquake protective devices shall be tested in accordance with the manufactures specifications to ensure proper operation.”

(d) Modify subsection 8.6.4.19.12(b) to read as follows:

“(b) simulating relative motion between the drive sheave and suspension means as specified in the Maintenance Control Program [see 8.6.1.2.1(f)].”

New language in Version 3

(e) Modify subsection 8.6.4.20.3 to read as follows:

Oil Buffers

(a) Car oil buffers shall be tested to determine conformance with the applicable requirements by running the car with its rated load onto the buffer at rated speed, except as specified in 8.6.4.20.3(b) and (c) (Item 5.9.2.1). Counterweight oil buffers

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shall be tested by running the counterweight onto its buffer at rated speed with no load in the car, except as specified in 8.6.4.20.3(b) and (c) (Item 5.9.2.1).

(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 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 full 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) A test tag as required in 8.6.1.7.2 shall be provided.”

e and f added per notes on version 2.

(f) Modify subsection 8.6.8.3.3(c) to read as follows:

“(c) ≤ 0.4 for escalators installed under Group II or ASME A17.1-2000/CSA B44-00 and earlier editions and a skirt deflector device is provided”

This is a retroactive requirements

(g) Modify subsection 8.6.9 to read as follows:

“Maintenance and Testing of Moving Walks

The maintenance and Testing of moving walks shall conform to 8.6.1 through 8.6.3, 8.6.8.15 (as applicable) and 8.6.9.”

(h) Modify subsection 8.6.11.1 to read as follows:

“Firefighters’ Emergency Operation. All elevators provided with firefighters’ emergency operation shall be subjected monthly to a check of Phase I recall by use of the key switch, and a minimum of one-floor operation on Phase II. The check may be performed by authorized personnel that have been instructed in the operation of the equipment. Quarterly (every 3 Months) all elevators provided with firefighters emergency operation shall be subjected to an operational test of Phase I and Phase II. The test shall include as a minimum the testing of the door reopening devices, door operations, and the in-car audible and visual signaling devices. These tests shall be performed by a **Certified Competent Conveyance Mechanic.**

All results shall be recorded on a monthly log for each elevator. This log shall be utilized by all personnel performing the check or tests. If deficiencies are identified a Certified Qualified Conveyance Company shall be contacted immediately in order to make corrections. The date and time that the CQCC was notified of the deficiencies shall also be recorded on the log. The log and findings shall be readily available on site to elevator personnel and the authority having jurisdiction. If the log is not maintained in the conveyance machine or control room, its location shall be conspicuously posted in the machine or control room.”

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- (i) Modify subsection 8.6.11.4.1 to read as follows:

“The cleaning of the exterior of transparent car enclosures or transparent hoistway enclosures from inside the hoistway shall be performed by authorized personnel (see 1.3) trained in compliance with the procedures specified in 8.6.11.4.2 and 8.6.11.4.3, only under the supervision of a Certified Competent Conveyance Mechanic. The movement of the elevator for the purpose of cleaning glass shall only occur under the direct supervision of a Certified Competent Conveyance Mechanic.”

Wording revised from version 2.

- (j) Modify subsection 8.6.11.5.1 to read as follows:

“The evacuation of passengers from stalled elevators shall be performed only by elevator and emergency personnel (see 1.3). NOTE : See ASME A17.4, Guide for Emergency Personnel.”

- (k) Modify subsection 8.6.11.6.1(a) to read as follows:

“(a) Escalators and moving walks shall be started only by authorized personnel (see 1.3) trained in compliance with the procedures specified in 8.6.11.6.2 through 8.6.11.6.4.”

- ~~(l) Modify subsection 8.6.11.13 to read as follows:~~

~~“**Occupant Evacuation Operation.** All elevators provided with Occupant Evacuation Operation shall be subjected to annual test by a certified competent conveyance mechanic, to a check of the operation in conjunction with the fire alarm system testing in accordance with the requirements of NFPA 72. Deficiencies shall be corrected. A record of findings shall be available to elevator personnel and the authority having jurisdiction.”~~

~~**OEO included in version 2. Deleted from version 3.**~~

§ 3147.2807 ALTERATIONS.

Alterations shall comply with Section 8.7 except as modified herein:

- (a) All altered or replaced components and systems shall meet the applicable requirements of section 8.4 and 8.5.

- (b) Modify subsection 8.7.6.1.6 to read as follows:

“**Handrails.** Any alteration to the handrails or handrail system shall require conformance with 6.1.3.2.2, 6.1.3.4.1 through 6.1.3.4.4, 6.1.3.4.6, 6.1.6.3.12, and 6.1.6.4.

NOTE: The application of signage to handrails is considered an alteration and is prohibited.”

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(c) Modify subsection 8.7.6.1.11 to read as follows:

“Rated Load and Speed.”

- (a) Any alteration that increases the rated load or rated speed or both shall result in the escalator’s conforming with 6.1.
- (b) Any alteration that varies the speed of the escalator after start- up shall comply with 6.1.4.1.2.”

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(d) Modify subsection 8.7.6.2.6 to read as follows:

“Handrails. An alteration to the handrails or handrail system shall require conformance with 6.2.3.2.3, 6.2.3.4, 6.2.6.3.10, and 6.2.6.4.
NOTE: The application of signage to handrails is considered an alteration and is prohibited.”

(e) Modify subsection 8.7.6.2.11 to read as follows:

“Rated Load and Speed.

(a) Any alteration that increases the rated load or rated speed or both shall result in the moving walk’s conforming with 6.2.

(b) Any alteration that varies the speed of the moving walk after start-up shall comply with 6.2.4.1.2.”

§ 3147.2808 RESERVED

§ 3147.2809 RESERVED

§ 3147.2810 ACCEPTANCE INSPECTIONS AND TESTS.

Acceptance inspections and tests shall comply with Section 8.10 except as modified herein:

(a) Section 8.10 note (2) and subsections 8.10.5.14 and 8.10.5.15 are not adopted.

(b) Modify subsection 8.10.2.2.9 to read as follows:

“Occupant Evacuation Operation. Verify conformance with 2.27.11.”

OEO added here

§ 3147.2811 PERIODIC INSPECTIONS AND WITNESSING OF TESTS.

Periodic inspections and witnessing of tests shall comply with Section 8.11 except as modified herein:

(a) Subsections 8.11.3.1.7, 8.11.5.14 and 8.11.5.15 are not adopted.

(b) Modify subsection 8.11.1.1.2 to read as follows:

“Periodic Tests

(a) Periodic tests as required in 8.6 shall be performed by a Certified Competent Conveyance Mechanic (CCCM) employed by a Certified Qualified Conveyance Company (CQCC).

(b) Periodic tests as required in 8.6 shall be witnessed by a Division inspector or CCCI employed by a municipality.

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(c) If an elevator fails a periodic test, it shall be removed from service until a satisfactory test result is achieved.”

(c) Modify subsection 8.11.1.3 to read as follows:

“Periodic Inspection and Test Frequency.

(a) The frequency of periodic inspections and tests shall be as follows

(1) Category One Tests shall be completed once every 12 months;

(2) Category Three Tests shall be completed once every 36 months; and

(3) Category Five Tests shall be completed once every 60 months.

(b) Whenever Category One Tests are performed, the test procedures shall include all earthquake protective devices.”

§ 3147.3000 Conveyances Covered by ASME A18.1-2011

Group V conveyances covered by ASME A18.1 shall comply with ASME A18.1-2011 which is hereby incorporated by reference except as modified herein:

(a) Sections 5, 6 and 7 are not adopted.

§ 3147.3100 RESERVED

§ 3147.3200 VERTICAL PLATFORM LIFTS

Vertical platform lifts shall comply with Section 2 except as modified herein:

(a) General Requirements for vertical platform lifts

(1) A separate means for disconnecting power to the lift shall be provided in the runway, accessible from the bottom runway landing, and used when accessing the pit or the underside of the platform.

(2) When the bottom runway door is equipped with an electric strike lock, a battery backup shall be provided to electrically unlock the door for emergency evacuation in case of power failure.

(3) Vertical platform (wheelchair) lifts shall have a manual lowering device. The lowering device is for use by others to lower the lift to the lower landing should the lift downward motion become impaired. The lowering device shall comply with the following:

(A) The device shall be secured against unauthorized use.

(B) The device shall be operable or accessible from outside the enclosure.

(C) When necessary to access the runway to operate the device, an opening in the runway with a lockable cover/panel shall be provided. The opening and cover/panel shall comply with the following:

(1) The opening shall be of sufficient size and located to allow safe access and reach to the lowering device; and

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- (2) The cover/panel shall be kept locked and the key shall be available on the premises during normal business hours under the control of an authorized person.
- (4) Vertical platform (wheelchair) lifts installed in accordance with section 2.1.1, 2.1.2 and 2.1.3, which require the wheelchair to be rotated 90 degrees for egress shall comply with the following:
- (A) The clear inside unobstructed platform dimensions may range from 42 inches to 48 inches on one side by 54 inches to 60 inches on the other side.
 - (B) Whenever the platform minimum width of 42 inches is increased, the platform maximum 60 inch length shall be decreased by the number of inches the width has been increased.
 - (C) When the length of the platform is reduced, the platform width shall be increased by the same amount the length has been decreased.
 - (D) The side entry of the platform door on the long side shall be hinged at the end nearest to the platform door on the short side unless the door is power operated

§ 3147.3300 INCLINED PLATFORM LIFTS

Inclined platform lifts shall comply with Section 3 except as modified herein:

- (a) General Requirements for inclined platform lifts
- (1) Durable signs with lettering on a contrasting background shall be permanently and conspicuously posted at each landing indicating that passengers not in a wheelchair shall use the seat and seat belt, and passengers in a wheelchair shall secure the wheels of the wheelchair
 - (2) Inclined platform (wheelchair) lifts installed on stairways where vision of any part of the stairway is obstructed shall be provided with an audio and visual warning device, located at the obstructed portion of the stairway, to alert persons using the stairway that the lift is in operation.
 - (3) A fold-type platform, if provided, shall comply with the following:
 - (A) Capable of being power operated from all landings;
 - (B) Instructions on the operations of the lift shall be permanently and conspicuously posted near the operating controls;
 - (C) An inclined platform (wheelchair) lift will not operate by using the landing controls unless the lift is in the fold up position.
 - (4) Intermediate stops, if provided, shall comply with the following:
 - (A) A level and clear floor area or landing at each floor or level served by special access lifts shall be provided.

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- (B) The level and clear floor areas or landings shall be part of the path of travel. Path of travel is a passage that may consist of walks and sidewalks, curb ramps and pedestrian ramps, lobbies and corridors, elevators, other improved areas, or a necessary combination thereof, that provides free and unobstructed access to and egress from a particular area or location for pedestrians and/or wheelchair users.
- (C) Access and egress to the platform shall be permitted only in the loading and unloading areas.
- (D) In new construction, the minimum size of landings shall be 60 inches by 60 inches. Other dimensions may be substituted where it can be demonstrated that a person using a wheelchair measuring 30 inches by 48 inches can enter and operate the lift safely.
- (5) Ninety degree turns when entering and exiting on inclined platform (wheelchair) lifts shall be allowed only at the lower landing when two adjacent retractable ramps on the platform are used.

§ 3147.4000 Conveyances Covered by ASME A90.1-2009

Group V conveyances covered by ASME A90.1 shall comply with ASME A90.1-2009 which is hereby incorporated by reference:

§ 3147.5000 Conveyances Covered by ASME B20.1-2012

Group V conveyances covered by ASME B20.1 shall comply with ASME B20.1-2012 which is hereby incorporated by reference except as modified herein:

- (a) Sections 6.1, 6.2, 6.3, 6.4, 6.5, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20 and 6.22 are not adopted.

§ 3147.5100 RESERVED

§ 3147.5200 RESERVED

§ 3147.5300 RESERVED

§ 3147.5400 RESERVED

§ 3147.5500 GENERAL SAFETY STANDARDS.

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§ 3147.5501 Application

(a) **Modify section 5.1 to read as follows:**

“Application

Conveyor equipment shall be used to convey only the specified commodities or materials within the rated capacity and the rated speed.”

§ 3147.5600 SPECIFIC SAFETY STANDARDS

§ 3147.5601 RESERVED

§ 3147.5602 RESERVED

§ 3147.5603 RESERVED

§ 3147.5604 RESERVED

§ 3147.5605 RESERVED

§ 3147.5606 Inclined Reciprocating Conveyors

(a) **Subsection 6.6.2(c) is not adopted**

(b) **Modify subsection 6.6.1 to read as follows:**

“Safety Considerations

(a) **Means shall be provided to prevent hazard to personnel in the event of mechanical or electrical failure. The carrier must be equipped with backstop devices sufficient to stop and hold the carrier and load.**

(b) **Overtravel devices shall be provided where necessary to minimize potential for injury to personnel.**

(c) **Riding the conveyor shall be forbidden to all personnel. Warning signs to this effect shall be prominently posted at each point of access and operation.**

(d) **Permanently installed electrical lighting of a minimum of 5ftc of illumination shall be provided in the conveyor hoistway, at each landing and in the area of the controller and machine.”**

§ 3147.5607 RESERVED

§ 3147.5608 RESERVED

§ 3147.5609 RESERVED

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§ 3147.5610 RESERVED

§ 3147.5611 RESERVED

§ 3147.5612 RESERVED

§ 3147.5613 RESERVED

§ 3147.5614 RESERVED

§ 3147.5615 RESERVED

§ 3147.5616 RESERVED

§ 3147.5617 RESERVED

§ 3147.5618 RESERVED

§ 3147.5619 RESERVED

§ 3147.5620 RESERVED

§ 3147.5621 Vertical Reciprocating Conveyors

(a) Modify subsection 6.21.1 to read as follows:

“Safety Considerations

(a) Means shall be provided to prevent hazard to personnel in the event of mechanical or electrical failure. The carrier must be equipped with backstop devices sufficient to stop and hold the carrier and load.

(b) Overtravel device(s) shall be provided where necessary to minimize potential for injury to personnel.

(c) Riding the conveyor shall be forbidden to all personnel. Warning signs to this effect shall be prominently posted at each point of access and operation.

(d) Permanently installed electrical lighting of a minimum of 5ftc of illumination shall be provided in the conveyor hoistway, at each landing and in the area of the controller and machine.”

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(b) Modify subsection 6.21.2 to read as follows:

“Guarding

(a) The conveyor shall be guarded so as to prevent injury from inadvertent physical contact. The runway of the conveyor shall be fully enclosed to a height of not less than the height of the top floor landing entrance or 8ft, whichever is greater. If the enclosure is of open work construction it shall be constructed of a metal mesh that will reject a ball 2 in. (51 mm) in diameter.

(b) The conveyor housing shall be equipped with doors or an equivalent means at each manual loading and unloading station, arranged so that they can be opened only when the carrier is present 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.

(1) Whenever a solid access door is used, audible or visible means shall be provided at each landing to indicate the platform or carrier arrival.

(c) Where the application requires that personnel walk onto the carrier to load or unload material, the carriers shall be provided with standard railings, snap chains, or equivalent across the loading/unloading side(s). Snap chains shall be at least 1 m (39 in.) at their lowest point.

(d) Controls shall be installed or located so they cannot be actuated by a person on the carrier.”

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