524 CMR 1.00: SCOPE AND ADMINISTRATION

Section

1.01: General

(1) Adoption. For the adoption of national model codes incorporated by reference into 524 CMR, *see* 524 CMR 35.00 through 38.00.

(2) The above adoptions, together with the Chapters and Massachusetts modifications to the national model codes, collectively comprise the Board of Elevator Regulations, referred to as 524 CMR.

(3) 524 CMR contains chapters 1 through 38 (*see* table of contents for chapter titles).

1.02: Scope

Elevators are regulated as follows:

(a) Except as otherwise provided by statute, the provisions of 524 CMR shall control the inspection, design, construction, installation, relocation, alteration, demolition, decommissioning, reclassification, maintenance, and operation of all elevators, as defined by M.G.L. c. 143, § 71E and 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*. The provisions of 524 CMR shall not apply to portable elevating devices used to handle materials only, and located and operated entirely within one story.

(b) The provisions of 524 CMR are not retroactive except as specifically provided in 524 CMR; and except further that if, upon inspection of any device covered by 524 CMR, the equipment is found in dangerous or unsafe condition, or there is an immediate hazard to those riding on or using such equipment, or the method of operation in combination with devices used is considered inherently dangerous in the opinion of the state elevator inspector.

(c) Applications for elevator permits filed June 1, 2018 may comply with either 524 CMR effective June 1, 2018, or with the version of 524 CMR in effect immediately prior to June 1, 2018, but not a mix of both. After December 1, 2018, concurrency with the prior version ends, and all elevator permits shall comply with 524 CMR as amended effective June 1, 2018.

1.03: Intent

The purpose of 524 CMR is to establish the minimum requirements to safeguard the public health, safety and general welfare through regulatory control of the design, construction, installation, relocation, alteration, demolition, decommissioning, operation, inspection, testing and/or maintenance of elevators.

1.04: Referenced Codes

Codes referenced in 524 CMR include the specialized codes of M.G.L. c. 143, § 96, including, but not limited to the following:

(1) Building. Any reference to the Building Code of Jurisdiction shall be considered reference to 780 CMR: *Board of Building Regulations and Standards*. 780 CMR is enforced by the building official.

(2) Architectural Access. Any reference to accessibility standards shall be considered reference to 521 CMR: *Architectural Access Board*. 521 CMR is enforced by the building official.

(3) Electrical. Any reference to the National Electrical Code (NEC) shall be considered reference to 527 CMR 12.00: *Massachusetts Electrical Code Amendments*. 527 CMR 12.00 is enforced by wiring inspectors.

(4) Gas and Plumbing. Any reference to national gas and plumbing standards shall be considered reference to 248 CMR: *Board of State Examiners of Plumbers and Gas Fitters*. 248 CMR is enforced by gas and plumbing inspectors.

(5) Fire. Any reference to fire safety standards not covered by 780 CMR shall be considered reference to 527 CMR: *Board of Fire Prevention Regulations*. 527 CMR is enforced by the fire official.

1.05: Applicability

(1) General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of 524 CMR specify different materials, methods of construction or other requirements, the most restrictive shall govern.

(2) Other Laws. It is the code user's responsibility to determine all applicable laws and regulations relevant to elevators, regardless of whether such laws or regulations are referenced in 524 CMR. All referenced standards adopted or incorporated by reference within 524 CMR are accepted to the degree that such are not in conflict with the specialized codes as set forth in M.G.L. c. 143, § 96.

(3) Application of References. References to Chapter or Section numbers, or to provisions not specifically identified by number, refer to 524 CMR.

(4) Partial Invalidity. In the event that any part or provision of 524 CMR is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

1.06: Registration Numbers Required

To provide a uniform system of identification of all elevators, the following is required:

(1) Every elevator shall be issued a unique registration number by the Office of Public Safety and Inspections, which shall be permanent unless the Office shall change a registration number for administrative purposes. This number shall be noted on the approved layout or drawings and on all other documents pertaining to the unit during its life, *e.g.*, data, records, permit applications, operating certificates, accident reports, decommissioning records.

(2) A permanent record of the assigned registration number or numbers for every elevator shall be maintained by the Office.

(3) Registration numbers shall be permanently affixed to the following:
   (a) Car crosshead front and center so as to be visible when the hoistway door is opened;
   (b) Machine, pump unit or drive unit;

1.06: continued

(c) Certificate of inspection;
(d) Main line disconnect switch; and
(e) For escalators, the plate shall be located near the handrail entrance brush on the side of the unit containing the stop/start section at each end of the unit and on the disconnect switch, controller or machine.

(4) Registration numbers shall be a minimum of ½" in height and of a contrasting color from the background color on which it is applied or mounted. This identification number shall be applied in the form of a metal or plastic plate only.

(5) Elevators shall be registered with the following class codes:

TABLE 1.06 Elevator Class Codes

Auto Park Device	A	Outside Hoist	H	Passenger	P
Chair Lift	C	Industrial Lift	I	Single Family Owner Occupied (SFOO)	R
Dumbwaiter	D	Shipboard	J	Sidewalk	S
Escalator	E	Stage/Organ	K	Turbine	T
Freight	F	Limited Use/Limited Application (LULA)	L	VRCs	V
Casket Lift	G	Moving Walks	M	Wheel Chair Lift	W

1.07: Duties and Powers of Elevator Inspectors and the Office of Public Safety and Inspections

(1) Municipal and State Enforcement. 524 CMR is the singular code applicable to all elevators in the Commonwealth and is exclusively enforced by the Board and the Office, in accordance with M.G.L. c. 143, §§ 62 through 71G, as applicable.

(2) Applications, Permits and Inspections. The Office shall receive and review applications for elevator permits and inspections, issue permits where compliance with 524 CMR is demonstrated, and conduct elevator inspections.

(3) Areas Prone to Flooding. The Office shall ensure permit application and review includes compliance with ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators,* Section 8.12 as modified by 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code.*

(4) Inspections. The state elevator inspector shall observe all inspections required by M.G.L. c. 143.

(5) Identification. The state elevator inspector shall carry proper identification in the performance of all duties under 524 CMR including inspections.

(6) Right of Entry. Where it is necessary to make an inspection to enforce the provisions of 524 CMR, or where the state elevator inspector has reasonable cause to believe that there exists a condition which is contrary to or in violation of 524 CMR which makes the elevator unsafe, dangerous or hazardous, the state elevator inspector is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by 524 CMR, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the state elevator inspector shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the state elevator inspector shall have recourse to the remedies provided by law to secure entry.

1.07: continued

(7) Office Records. The Office shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

1.08 Permits

(1) Required. It shall be unlawful to construct, install, relocate, demolish, decommission, reclassify, or to make alterations or replacements as set forth in 524 CMR 10.00: *Alterations of Elevators*, as to any elevator without first filing a permit application with the Office. Such permit applications shall be filed by a registered elevator contractor.

EXCEPTION: Notwithstanding 524 CMR 1.08(1), repairs conducted on an emergency basis may be made prior to the filing of the permit application in accordance with 524 CMR 1.08(2).

(2) Emergency Repairs. Where replacements and repairs governed by 524 CMR shall be performed in an emergency situation, the permit application shall be filed no later than close of business on the next business day, and such repairs shall not be conducted without prior notification *via* electronic mail to the Chief or a supervisor within the Division.

(3) Timing of Elevator Permit Application. Prior to the commencement of any work requiring a permit, the owner of the elevator or the registered elevator contractor shall apply for and obtain a permit from the Office.

(4) Action on Application. The Office shall issue or deny a permit within 30 days of receipt of permit application. If the application, construction documents or other submittals do not conform to the requirements of 524 CMR or applicable elevator laws, the Office shall deny such application, stating the reasons therefor. Where proposed work has already received an elevator permit but the scope of work changes, a permit reapplication and attendant fees may be required.

(5) Validity of Permit. The issuance of a permit shall not be construed to allow any violation of 524 CMR or to allow a variance from 524 CMR. Any proposed work that deviates from the provisions of 524 CMR shall obtain variance approval prior to permitting. Upon discovering errors in the construction documents or other information offered in support of a permit application, the Office may take any action supported by law or regulation in addition to suspending or revoking a permit, requiring the errors to be corrected, and preventing the use of the elevator.

(6) Expiration. Work authorized by a permit shall be completed within 365 days of permit issuance. The Office may grant, in writing, one or more extensions of time for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

EXCEPTION: In large projects where it is known at the time of permitting that project completion will exceed 365 days, the Office may consider the expected duration of the project in allowing an expiration date in excess of 365 days.

(7) Inspections of Elevators Under Permit. Periodic inspections are required according to the expiration date on the certificate if permitted work has not commenced and also proceeded in good faith prior to the certificate expiration date.

(8) Suspension or Revocation. The inspector is authorized to suspend or revoke a permit wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or when the work performed is in violation of 524 CMR or other regulation, law or ordinance.

(9) Posting of Permit. The permit or copy shall be kept on the site and posted in plain sight for the duration of the permitted work.

1.08 continued

(10) Date of Construction. The permit application date is the date of installation, relocation, or alteration for that equipment for the purposes of determining the applicable version of 524 CMR.

1.09: Submissions

(1) General. Submissions consisting of construction documents, statement of special inspections, if applicable, and other data required by the Office shall be attached to each permit application. The construction documents shall be prepared and stamped by a registered design professional.

(2) Construction Documents. Construction documents shall be dimensioned and filed in either paper or electronic form. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of 524 CMR and relevant laws, ordinances, rules and regulations.

(3) Base Flood Elevations. Base flood elevations shall be identified by the registered design professional when applicable and determined in accordance with methods set forth in 780 CMR: *State Board of Building Regulations and Standards*.

1.10: Fees

(1) Payment. An elevator permit shall not be valid until the fees prescribed by law have been paid.

(2) Schedule of Permit Fees. For state elevator permit fees, *see* 801 CMR 4.02: *Fees for Licenses, Permits, and Services to Be Charged by State Agencies* and Board of Elevator Regulations.

(3) Work Commencing Before an Elevator Permit is Issued. Except as to work conducted pursuant to 524 CMR 1.08(2), any person who commences any work governed by 524 CMR on an elevator before obtaining the necessary elevator permit shall be in violation of 524 CMR and subject to penalties.

(4) Cancellation of Scheduled Inspections. Inspections canceled by the owner or contractor as applicable within ten days of the scheduled inspection will result in forfeiture of all fees and a requirement to refile for said inspection.

(5) Related Fees. Payment of the elevator permit fee shall not relieve the applicant or holder of the elevator permit from the payment of other fees that are prescribed by law.

1.11: Inspections

(1) General. The permit applicant shall cause any permitted work subject to testing pursuant to 524 CMR 10.00: *Alterations of Elevators* to remain accessible and exposed for inspection purposes until approved, and shall conduct, install, protect and complete work in compliance with 524 CMR and M.G.L. c. 143, §§ 62 through 71G, as applicable. Inspections presuming to give authority to violate or cancel the provisions of 524 CMR or of other ordinances of the jurisdiction shall not be valid.

(2) Required Acceptance Tests and Inspections. Acceptance tests and inspections shall be required on all new, relocated or decommissioned elevators, as well as alterations subject to testing under 524 CMR 10.00: *Alterations of Elevators*. Such tests and inspections are subject to the provisions of 524 CMR and M.G.L. c. 143, §§ 62 through 71G, as applicable.

(3) Inspection Requests. It shall be the duty of the holder of the elevator permit or their duly authorized agent to notify the inspector when work is ready for inspection. The permit holder or his or her agent shall attend the inspection, and shall provide the inspector with access to permitted work and, if necessary, means for inspection.

1.11: continued

(4) Inspection Following Decommissioning. The permit holder shall request an inspection following decommissioning.

(5) Periodic Inspections. The inspector shall inspect existing elevators according to the provisions of M.G.L. c. 143, § 64 and any other general or special law, as applicable.

(6) Inspection Certificates. The inspector shall issue a certificate to the owner of the elevator, who shall post the certificate in a conspicuous place in or near the cab or car of such elevator. When the certificate frame is an integral part of the car operating panel and it is required to open the panel, the certificate shall be installed by a Massachusetts licensed elevator mechanic. When posted in the lobby, the certificate and the corresponding elevator shall be identified. The certificate shall be posted in a vandal-resistant frame.

(7) Invalidation of Certificates. Inspection certificates shall continue in force for the stated timeframe so long as the owner maintains compliance with all applicable elevator laws and regulations.

(8) Limited Certificate of Compliance. The state elevator inspector is authorized to issue a limited certificate of compliance for any equipment covered by 524 CMR which is being installed, relocated or altered, to permit its limited use during the period of such installation, relocation or alteration. Such certificate shall be signed by the state elevator inspector, shall bear the dates of issuance, renewal and/or expiration, and shall designate the use allowed. An elevator mechanic's license is required to operate any elevator operating under a limited certificate of compliance.

Time Limitation. Limited certificates of compliance shall be issued for periods of not more than 30 days. The state elevator inspector is authorized to renew such certificates for additional periods of not more than 30 days each.

(9) Temporary Certificates for Construction Hoists. The state elevator inspector is authorized to issue a temporary certificate for construction hoist to any elevator registered as class H, P, or F under 524 CMR 1.06(5).

Time Limitation. Temporary certificates of compliance shall be issued for periods of not more than 90 days. The state elevator inspector is authorized to renew such certificates for additional periods of not more than 90 days each.

(10) Code Applicable to Inspections of Existing Elevators. Existing elevators regulated by 524 CMR, but not undergoing permittable construction, installation, replacement, relocation, alteration, decommissioning or reclassification shall be inspected in accordance with the governing requirements of that version of 524 CMR in effect at the time of permitting of construction, installation, replacement, relocation, alteration, decommissioning or reclassification of the elevator or portion thereof as applicable.

1.12: Appeals

In accordance with M.G.L. c. 143, § 70, whoever is aggrieved by an interpretation, order, requirement or direction of an inspector or other person charged with the enforcement of any provision of law, code, rule or regulation relating to the installation or alteration of elevators may within ten days after the service or notice thereof appeal to the Board.

1.13: Enforcement

(1) Violations. It shall be unlawful for any person to operate, construct, install, repair, relocate, alter, replace, demolish, decommission, or reclassify any elevator or part thereof, or cause same to be done, in conflict with or in violation of any of the provisions of 524 CMR.

1.13: continued

(2) Notice of Violation. The state elevator inspector is authorized to serve a notice of violation or order on the person responsible for the construction, installation, relocation, alteration, replacement, demolition, decommissioning or reclassification to any elevator regulated by 524 CMR. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation and further note the availability of an appeal.

(3) Penalties. Any person who violates a provision of 524 CMR or a directive of the Office shall be subject to penalties as prescribed by the applicable provisions of M.G.L. c. 143, §§ 62 through 71G, M.G.L. c. 22, § 22, 520 CMR 1.00: *Enforcement of Civil Fines* and 16.00: *Enforcement of Civil Fines for Expired Elevator Certificates* and 524 CMR.

(4) Notice of Dangerous Conditions (Placarding) Pursuant to M.G.L. c. 143, § 65.

(a) Issuance. The placard shall be in writing and shall cite the 524 CMR violations observed and shall be issued to the owner, the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order.

(b) Unlawful Continuance. Any person who continues any work subject to a stop work order after except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by 524 CMR, 520 CMR 1.00: *Enforcement of Civil Fines* and 16.00: *Enforcement of Civil Fines for Expired Elevator Certificates*, and applicable portions of M.G.L. c. 143, §§ 62 through 71G and other laws.

(5) Unsafe or Noncompliant Conditions. If upon inspection any elevator is found in an unsafe condition, or not in accordance with the provisions of 524 CMR in effect at the time of its installation, the state elevator inspector shall serve a written notice upon the building owner or lessee, or his or her designee, citing the section of 524 CMR or other referenced standard of which said equipment is in violation, stating the action required to bring the equipment into compliance, and the date when recommended repairs or changes shall be completed. After the service of such notice, it shall be the duty of the owner to proceed within the time allowed to make such repairs as are necessary to place the equipment in a safe and compliant condition. It shall be unlawful to operate such equipment after the date stated in the notice unless such recommended repairs or changes have been made and the equipment has been approved, or unless an extension of time has been secured from the state elevator inspector in writing. The state elevator inspector may withhold issuance of the inspection certificate until such time as the equipment is brought into compliance with all outstanding orders.

(6) Power to Seal Equipment. The state elevator inspector shall have the power to seal out of service any elevator for noncompliance with 524 CMR, or any other law or regulation requiring compliance with 524 CMR, including but not limited to 520 CMR 16.00: *Enforcement of Civil Fines for Expired Elevator Certificates*, or when the elevator is unsafe.

(a) Notice of Sealing Out of Service. Before sealing any device out of service, the state elevator inspector, except in the case of emergency, shall serve written notice upon the building owner or lessee stating intention to seal the equipment out of service and the reasons therefor.

(b) Unlawful to Remove Seal. Any device sealed out of service by the state elevator inspector shall be plainly marked with a sign or tag indicating the reason for such sealing. Any tampering with, concealing, defacing, or removal of the seal without approval of the state elevator inspector is not allowed.

(7) Matters Not Provided For. If upon inspection by a state elevator inspector any elevator is determined to be in an unsafe or a typical state due to a condition not specifically provided for in 524 CMR the inspector may take whatever action is deemed necessary in the interest of public safety. If any action is taken pursuant to 524 CMR 1.13(2), the inspector shall provide written notice to the owner or lessee, or their designee, clearly describing the condition to be corrected and shall immediately notify the Board in writing.

1.14: Variances

(1) Elevators shall conform to all requirements of 524 CMR and where such equipment lacks features required by 524 CMR or contains features different than those required of 524 CMR, a variance from the Board is required. Variances shall be filed, reviewed and decided in accordance with M.G.L. c. 143, § 70. The Board may grant variances in one of three ways:

(a) Prototype approval (required for product approval).

(b) Product approval (required after prototype approval if more than one installation is sought).

(c) Variance approval (required when one installation is sought).

(2) Approval Requirements. Application for product approval, prototype approval or variance approval shall be made on application forms. Any non-compliance with 524 CMR shall be specifically identified by 524 CMR and chapter and section number.

(3) Prototype Approval. If product approval is sought, prototype approval shall first be obtained by way of a variance request for the new prototype. All features which do not comply with 524 CMR shall be listed in the prototype approval application. Prototype approval shall be obtained prior to a permit for installation and submitted with the permit application.

(4) Product Approval. Product approval is obtained after installation is complete by way of an on-site review of the prototype by the Board or its designee. Once a product is approved, no further approvals will be required for future installations of the same product, so long as it is manufactured and installed precisely according to the specifications of the product approval issued by the Board. However, every permit application for future installations shall contain the product approval issued by the Board.

(5) Variance Approval. Where prototype approval and/or product approval is not sought but where elevator features do not comply with requirements of 524 CMR, variance approval is necessary. Variance approval shall be obtained prior to a permit for installation and submitted with the permit application.

REGULATORY AUTHORITY

524 CMR 1.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 3.00: ELEVATOR, ESCALATOR, DUMBWAITERS AND MOVING WALKS: DEFINITIONS

NOTE: All definitions are contained in Section 1.3 of ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, as amended by 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

REGULATORY AUTHORITY

524 CMR 3.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 4.00: ACCIDENT AND INJURY REPORTING REQUIREMENTS

Section

4.01: Reporting Requirements

(1) Pursuant to M.G.L. c. 143, § 66, the owner, operator or person in charge of an elevator having knowledge of an accident occurring to the elevator, or if such person believes or has reason to believe the elevator is unsafe, shall immediately report such accident to an inspector assigned by the commissioner, who shall forthwith inspect such elevator. Additionally, any person employed to inspect, repair or install an elevator shall immediately report an accident occurring to an elevator during installation or repair or an unsafe condition noticed as a result of such installation or repair.

(2) Reports of accidents or unsafe conditions mandated by M.G.L. c. 143, § 66 are subject to the following requirements:

(a) Accidents Involving Serious Injury or Serious Mechanical Failure. All accidents involving serious injury or serious mechanical failure, or both, shall be reported to the Office by telephone within one hour of occurrence or promptly upon first learning of the accident or mechanical failure if beyond that time frame. Notification telephone numbers can be found on the inspection certificates located inside the elevator. If the accident occurs on a weekend, holiday, or between the hours of 5:00 P.M. and 9:00 A.M. on a weekday, the accident shall be reported to the Massachusetts Emergency Management Agency at (508) 820-2121.

(b) Accidents Involving Minor Injury. Accidents involving minor injury shall be reported by telephone call within 48 hours or promptly upon first learning of the accident. Accidents may also be reported in writing, although the written reports required under 524 CMR 4.01(2)(c) may be filed either by the person reporting the accident or by the Office.

(c) Written Reports. Written reports are required for every accident and unsafe condition, and they shall be filed with the Office within 48 hours of the accident or discovery of such condition. The report shall be filed on a form provided by the Office.

4.02: Post-accident Requirements

An elevator involved in an accident involving serious injury or serious mechanical failure shall be immediately shut down until express consent to resume operation is granted by a supervisor of elevator inspectors employed by the Office. In the event of such an accident or mechanical failure, the owner, operator, or person in charge of an elevator shall ensure that the elevator and area surrounding the elevator are secured and are not disturbed, cleaned, or altered in any way until such time as an inspector has completed an investigation. The only exception to this requirement shall be acts in furtherance of ensuring the safety of the area or a person, or for the extraction of an injured person.

4.03: Violations

The Office may immediately shut down an elevator or revoke its inspection certificate, for any of the following violations:

(1) Continued operation of an elevator without proper authorization after an accident involving serious injury or serious mechanical failure;

(2) Failure of any responsible party to notify the Office of an accident involving serious injury or serious mechanical failure within an hour of its occurrence, or promptly after first learning of it;

4.03: continued

(3) Failure of the responsible party to submit an accident report to the Office within 48 hours of an accident involving serious injury or serious mechanical failure;

(4) Submission of an incomplete accident report by the responsible party to the Office;

(5) Failure to secure an elevator and the area surrounding an elevator subsequent to an accident involving serious injury or serious mechanical failure and prior to the inspection of the elevator and area by an inspector;

(6) A violation of any provision of 524 CMR 4.00.

4.04: Shutdown Period and Appeal

(1) Any elevator shut down due to an unsafe condition shall remain shut down until express written authorization is given to the owner to resume operation from the Office. In determining how long an elevator shall remain shut down or whether to revoke a certificate of inspection, the Office shall consider the seriousness of the violation, any negative effect of the violation on the public, any good faith on the part of the owner, and the owner's history of previous violations.

(2) An owner may appeal a decision to shut down an elevator or revoke an elevator's inspection certificate to the Board. Such appeal shall be made in writing and received by the Board within 30 days of the date of the Office's decision. The Board shall consider the factors outlined in 524 CMR 4.03 in reviewing the Office's decision. Appeals from the Board's decision shall be to the Board of Elevator Appeals pursuant to M.G.L. c. 143, § 70.

REGULATORY AUTHORITY

524 CMR 4.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 5.00: ELEVATOR CONTRACTORS

Section

5.01: Scope and Applicability

Unless specified elsewhere in 524 CMR, the provisions of 524 CMR 5.00 shall govern the registration, duties, responsibilities, and discipline of registered elevator contractors. No person or entity shall employ a Massachusetts licensed elevator mechanic, or be issued a permit in accordance with 524 CMR 1.08: *Permits*, for purposes of performing installation, alteration, modification, decommissioning maintenance, servicing, or repair of an elevator without being registered with the Office, on behalf of the Board, as an elevator contractor.

5.02: Registration

(1) An application for a registration as an elevator contractor shall be made in writing on a form provided by the Office. No registration shall be issued unless the applicant has submitted a completed application evidencing all requirements of 524 CMR 5.00.

(2) An application for registration as an elevator contractor shall include:

(a) The official name of the elevator contractor, the permanent business address of the contractor, applicable contact information, and the name of a contact person(s) authorized to speak on behalf of the contractor.

(b) For Corporations. An official document which lists the names and addresses of officers, directors, and major stockholders such as: a copy of the articles of incorporation, a current annual report as filed with the Secretary of the Commonwealth, a copy of the registration as a foreign corporation filed with the Secretary of the Commonwealth, or any other official documentation which lists the names and addresses of officers, directors, and major stockholders.

(c) For Partnerships. Either a copy of the current partnership agreement containing the requested information, or listing of the names and addresses of all partners on the application form.

(d) For Applicants Using a DBA. A copy of the DBA certificate filed with a city or town pursuant to M.G.L. c. 110, § 5.

(e) The applicable registration fee as set in accordance with M.G.L. c. 7, § 3B.

(3) On behalf of the Board, the Office shall issue a certificate evidencing such registration to applicants that meet the requirements of 524 CMR 5.00 and have successfully completed the application. All registrations issued pursuant to 524 CMR 5.00 shall be valid for two years from the date of issuance unless otherwise suspended or revoked by the Board.

(4) The registrant shall have the responsibility of reporting any change of mailing address, email address, contact person, and/or change of circumstance to the Office. The information on file at the Office shall be deemed accurate for purposes of notification unless changed by the registrant.

(5) The Office may require an applicant to appear in person to answer questions or provide documents in conjunction with an application for registration in addition to those required under 524 CMR 5.00.

(6) Any false statement in an application for registration under 524 CMR 5.02(6), or any action intended to subvert the intent of 524 CMR 5.00, may be deemed grounds for any of the following:

(a) Denial of the application; or

(b) If the registration has already been issued, immediate suspension or revocation of the registration without a hearing, although the registrant is entitled to a hearing upon request.

5.03: Duties and Responsibilities

A registered elevator contractor shall have the following duties and responsibilities:

(1) to ensure that every person who performs work on behalf of the contractor as an elevator constructor, maintenance person and repairman in the construction, maintenance, alteration, modification, servicing, or repair of elevators holds a license therefor granted by the Board of Elevator Examiners in accordance with M.G.L. c. 143, § 71C(1), or a temporary license therefor granted by the Commissioner in accordance with M.G.L. c. 143, § 71C(2), or is an elevator mechanic apprentice working under the direct and immediate field supervision of a licensed elevator mechanic.

(2) To ensure that no work requiring a permit or a variance in accordance with 524 CMR is performed by any person working on behalf of the contractor prior to obtaining a permit or variance.

(3) To ensure that all necessary variances from 524 CMR that are reasonably foreseeable have been obtained prior to filing a permit, and to submit variance approval along with the permit application.

(4) To ensure that all required permits and variances are posted all times where work is performed.

(5) To include its Office-issued elevator contractor registration number and the signature of an authorized individual on all applications and correspondence filed with the Board and/or the Office.

(6) To ensure that adequate and proper personnel timely appear for all periodic tests, fire tests, and other inspections scheduled with the Office.

(7) To notify the building owner of an upcoming inspection within two weeks of scheduling by the Office, including the need for the fire alarm company and/or emergency generator contractor if required.

(8) To adequately prepare an elevator for an inspection, which shall include but not be limited to adequate pre-testing of all equipment prior to scheduled inspection and proper notification to building owner pursuant to 524 CMR 5.03(6).

(9) To cure all code violations subject to a work order issued by the Office within the timeframe allotted, ensuring that the elevator is adequately prepared for re-inspection. For all work orders issued by the Office not requiring re-inspection, all work and proper documentation shall be completed and filed within the timeframe allotted.

(10) To ensure that any licensed elevator mechanic assigned to complete work not requiring re-inspection is provided with the work order.

(11) To certify that an elevator has been pre-tested prior to periodic inspection.

(12) To provide accurate owner information to the Office.

(13) To ensure that all submittals to the Office or the Board are truthful and accurate.

(14) To ensure that any elevator under contract for repairs or service is registered with the Office.

(15) To timely file applications for periodic inspections if given the authority to file those applications by the building owner.

(16) To obtain an elevator owner's express consent to file any form on his or her behalf with the Office prior submitting the form.

5.03: continued

(17) To ensure work performed and actions taken meet all applicable provisions in 524 CMR, including those codes adopted by reference therein, and M.G.L. c.143.

5.04: Discipline

(1) Complaints. Any person may file a complaint against a registered elevator contractor. All complaints relative to a registrant shall be in writing on a form provided by the Board. All complaints shall be received by the Board within one year of the date of the alleged wrongdoing. The Board may itself initiate a complaint at any time.

(2) Basis of Complaint. A complaint shall allege wrongdoing by a registrant in the form of a violation of 524 CMR 5.00 or M.G.L. c. 143.

(3) Review and Investigation of Complaints. The Board may, in its discretion, investigate a complaint to determine whether a hearing will be held.

(4) Notice of Hearing. If the Board determines that a hearing shall be held to resolve a complaint, reasonable notice shall be provided to the complainant and the registrant. Mailing of notice to the address on record with the Board, and emailing the notice to the contact person identified by the registrant on the application for registration, shall be deemed satisfactory notice. The notice of hearing shall contain:

(a) The name of the complainant (if provided).
(b) The date, time, and place of said hearing.
(c) The location of the incident giving rise to the complaint.
(d) A description of the situation giving rise to the complaint.
(e) A copy of the complaint filed with the Board.

(5) Hearing. Hearings convened pursuant to 524 CMR 5.00 shall be presided over by the Board and conducted pursuant to 801 CMR 1.02: *Informal/Fair Hearing Rules* and M.G.L. c. 30A. Any party may be represented by legal counsel.

(6) If an elevator contractor, or a designee, does not appear for the hearing, the hearing may proceed in their absence and a decision rendered based upon the evidence presented, but only after a finding is made that the registrant was provided notice as required by 524 CMR 5.04(4).

(7) Subpoenas. The Board may issue a subpoena in accordance with M.G.L. c. 30A, § 12 requiring the attendance and testimony of witnesses and the production of any evidence, including books, records, correspondence or documents, relating to any matter in question in the proceeding.

(8) Decisions and Discipline of Registrants. The Board shall issue a written decision after the hearing in a reasonably prompt manner. If the Board, acting on behalf of the Office, determines that a registrant has violated any provision of 524 CMR 5.00 or M.G.L. c. 143, it may suspend a registration for a fixed period of time, revoke a registration permanently, or issue a reprimand to the registrant. In reaching the decision the Board shall consider any history of disciplinary issues, the severity of the offense, and any remedial action taken by the contractor. Further, the Board may impose any terms and conditions upon a registrant which are reasonably calculated to ensure future compliance with 524 CMR and M.G.L. c. 143 by the registrant.

(9) Appeals. Any person aggrieved by a decision of the Board may appeal such decision to the Board of Elevator Appeals in conformance with M.G.L. c. 143, § 70(b).

REGULATORY AUTHORITY

524 CMR 5.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 8.00: PRACTICAL TESTS AND INSPECTIONS

Section

8.01: General

524 CMR 8.00 prescribes the practical tests and inspections for elevators and supplements testing and inspection requirements of ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*. Where 524 CMR 8.00 requirements conflict with ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators* requirements, the provisions of 524 CMR 8.00 shall prevail.

8.02: Requirements

Practical tests and inspections of elevators, as required by M.G.L. c. 143, §§ 62A, 63 and 64, are subject to the following requirements:

(1) All practical tests and inspections shall be performed by a Massachusetts licensed elevator mechanic under the supervision of a state elevator inspector.

(2) Pursuant to M.G.L. c. 143, § 64 the state elevator inspector has discretion to order a practical test or inspection as he or she deems necessary, independent of other tests and inspections required by M.G.L. c. 143.

(3) A periodic inspection required by M.G.L. c. 143, § 64 shall entail a practical test with no contract-load of all safety devices and equipment to determine that they function as required by the applicable codes. It is further required that every fifth periodic inspection shall entail a full-load safety test. (Refer to 524 CMR 11.00: *Elevators Placed out of Service or Decomissioned* for elevators placed out of service.)

(4) A biennial inspection required by M.G.L. c. 143, § 64 shall entail a practical test with no contract-load of all safety devices and equipment to determine that they function as required by the applicable codes. It is further required that every third biennial inspection shall entail a full-load safety test.

(5) Car and counterweight safeties and governors shall be tested as follows: Governor operated instantaneous type safeties or sliding type safeties of elevators shall be tested at rated speed by tripping the governor. The governor shall be separately tested for tripping speed.

(6) Each governor shall be sealed directly after testing by the state elevator inspector conducting the test. No person other than a state elevator inspector shall break or remove the seal.

(7) The application of a safety having no speed governor shall be obtained by a free drop test which may be made without detaching the ropes.

(8) Car and counterweight oil buffers, if any, shall be tested periodically as required by M.G.L. c. 143, § 64 with no load on the platform at rated car speed, and with a full contract load every fifth periodic inspection.

(9) Contract Load Test for Hydraulic Elevators. A contract load test shall be made of every hydraulic elevator or dumbwaiter before the equipment is placed in regular service.

(a) The test shall be made with no load and a test with full rated load on the car in order to determine the car speed under each specified condition of loading in both the up and down directions.

(b) A test check of the working pressure including, in case of pressure tanks, a check of the accuracy of the tank pressure gauge.

(c) A test of the relief valve by-pass pressure shall be made in accordance with ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*.

8.02: continued

(d) After the test of the relief valve setting and system pressure test, the following test shall be performed and witnessed by a Massachusetts licensed elevator inspector employed by the Office. Cylinders that are not exposed shall be tested as follows:

1. Note the amount of oil in the pit and seal leak collection container.
2. Park the elevator at a convenient location and open the main line disconnect.
3. Mark the level of the oil in the tank.
4. Wait at least 15 minutes and measure the amount that the car has moved down.
5. Compute the volume of oil loss as a result of the car movement as follows:

$$V = 3.1416 \times R^2 \times L$$

Where:
V = volume of oil in cubic inches
R = radius of plunger (in.)
L = movement of car (in.)

6. Compare this to the change in volume in the pit seal collection container and the tank.

Example: 1 = 7", Plunger diameter = 6"
$V = 3.1416 \times 9 \times 7 = 198$ in^3
(Note: 231 in^3 = 1 U.S. gallon)

7. If necessary, continue the test to verify the source of the leak.
8. If it is determined that a leak exists underground, the unit shall immediately be taken out of service.

(10) All escalators will be tested with contract load at the time of acceptance and will have a brake data plate installed. All escalators with brake date plates may be tested thereafter by verifying the brake torque. If the environment in which a unit is operating makes the stopping capability of the brake questionable, a weight test will be used to reconfirm the torque setting of the brake.

(11) All existing escalators without brake data plates or units with more than one driving machine shall be tested with contract load every fifth periodic inspection and whenever the stopping capability of the brake is questionable.

(12) All escalators will require annually a step/skirt performance index test complying with ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*.

REGULATORY AUTHORITY

524 CMR 8.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 9.00: OPERATION OF NON-AUTOMATIC ELEVATORS

Section

9.01: License Required

No person, owner, lessee, employer or his or her agent shall operate or permit to be operated any non-automatic elevator except by a person duly licensed pursuant to M.G.L. c. 143, § 71G by the Commissioner, except:

(1) In case of emergency, such operation by a competent unlicensed person may be permitted for a period not exceeding two consecutive days, provided the Office is immediately notified. Such periods may be extended by the Office where necessary to avoid undue hardship, but no single extension shall exceed a period of more than seven consecutive days.

(2) Licensed operators are not required for automatic operation or continuous pressure operation passenger or freight elevators or existing shipper rope elevators, when equipped with the proper safeguards. Where an operator has been designated to be in permanent charge of such elevators or where a car switch is employed, said operator shall be licensed.

(3) An operator's license shall not be required of an elevator contractor or of a qualified mechanic engaged in the construction, maintenance, or repair of elevators or elevator hoistways, or of an inspector having authority to inspect elevators.

9.02: Granting of Licenses

(1) Whoever desires to act as operator of elevators shall make application to the Office. A license shall not be granted to a person younger than 18 years old.

(2) The applicant shall be given a practical examination as to his or her knowledge of the operation of elevators, particularly as to the safeguarding of passengers and the requirements of 524 CMR 9.00, by an inspector or examiner having jurisdiction, and if found competent shall be granted a license by the Office.

(3) Pursuant to M.G.L. c. 143, § 71G, licenses shall be issued until the date of birth of the licensee occurring more than 12 months but not more than 24 months after the effective date of such license. If any such license or the renewal thereof expires in an even year, any subsequent renewal shall expire on the next anniversary of the licensee's date of birth occurring in an even year. If any such license or renewal thereof expires in an odd year, any subsequent renewal shall expire on the next anniversary of the licensee's date of birth occurring in an odd year. A license issued to a person born on February 29th shall, for the purposes of 524 CMR 9.02(3), expire on March 1st. If a license has not been renewed within three years from the date of issuance, a re-examination shall be required.

(4) Should a license become lost, a duplicate thereof shall be granted upon application to the Office.

(5) The applications and a record of the licenses issued shall be kept by the Office.

9.03: Display of Licenses

A licensed operator shall at all times when operating an elevator be prepared to display his or her license on demand of the owner or tenant of the building, or of any person authorized to inspect the elevator, or of any police officer.

9.04: Revocation and Suspension of Licenses

(1) A willful falsification in an application shall be deemed sufficient cause for the revocation at any time of a license.

(2) Pursuant to M.G.L. c. 143, 71G, a license may be suspended or revoked by the Commissioner if the holder is incompetent, untrustworthy or fails to comply with 524 CMR or M.G.L. c. 143, §§ 62 to 71G, as applicable.

9.05: Instructions to Operators

Operators are required to learn these instructions thoroughly and are advised to keep a copy available for use at all times:

(1) Always open the service switch or lock the operating mechanism when placing the elevator out of service.

(2) Be sure the operating mechanism is in the "STOP" position before closing the service switch.

(3) Report any defects promptly to the person in charge.

(4) Do not attempt to make any repairs.

(5) Carry no passengers or freight while inspections, repairs, or adjustments are in progress, and operate the car only in response to directions from the inspector or person in charge. Do not move the car when anyone is in the pit or on top of the car except as the inspector or person in charge may direct.

(6) When in the opinion of the operator an excess load is to be carried, do not ride or allow others to ride on the elevator.

(7) Hoistway doors or gates shall always be closed and locked before the car is started. The car shall be brought to a stop at the landing level before either the car door or car gate where provided or the hoistway door or hoistway gate is opened manually.

(8) Keep car gates closed while car is running, and where no car gates are provided, keep passengers away from the open edge of the car platform.

(9) Limit the number of passengers or load to the contract capacity of the car and do not permit crowding or overloading.

(10) Do not reverse the operating device suddenly; stop the car before reversing.

(11) Move operating device to the stop position on approaching the terminal landings. Do not depend on the terminal stops in the ordinary operation of the car.

(12) Should the power go off while the car is in motion, move the operating device to the "STOP" position and start the car in the usual manner upon return of the power.

(13) Familiarize yourself with the emergency devices, understand their function, and know how to operate them.

(14) Should the car stop suddenly, shut off the power, call for the person in charge and operate the elevator only at his or her direction. While waiting, keep calm. Do not attempt to release any safety device; remember that it is safer to stay in the car until help arrives than to try to get out, and so instruct your passengers.

(15) Should the car refuse to stop, do not attempt to jump off.

9.05: continued

(16) Before loading or unloading elevators with hand-rope type operation, lock the operating mechanism in the "STOP" position.

(17) Never leave the car in the ordinary course of operation nor leave the operating mechanism unprotected. When going off duty for any reason, even for a few minutes, be sure that the power is disconnected or that the operating mechanism is locked and the hoistway doors are closed.

(18) Always leave a hydraulic elevator operated by a lever at the lower landing with the lever in the position for down motion.

(19) In running a belt-driven elevator, be sure to pull the hand-rope as far as possible when starting the car. In doing so, you throw the belt full on the tight pulley, and thus prevent it from slipping. In stopping, use the centering rope.

(20) Never allow anyone to scuffle or fool on the elevator. It is always dangerous.

(21) Never, under any condition, allow anyone to get on or off the car while it is in motion.

(22) Keep your mind on your work. Always remain at your post while the car is moving, so that you can stop it quickly in an emergency.

(23) An operator who witnesses or has knowledge of an accident, whether it be a serious mechanical failure, serious injury or minor injury, must make a report in conformance with 524 CMR 4.00: *Accident and Injury Reporting Requirements*.

REGULATORY AUTHORITY

524 CMR 9.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 10.00: REQUIREMENTS FOR PERMITS AND INSPECTIONS OF EXISTING ELEVATORS UNDERGOING ALTERATIONS AND REPLACEMENTS

Section

10.01: General

(1) 524 CMR 10.00 describes those activities for which an elevator permit is required, those activities for which a permit and follow-on testing are required, and for which a permit, testing, and an upgrade of unrelated components to the current edition of 524 CMR are required. For permit and permit inspection purposes, 524 CMR 10.00 replaces the applicable portions of ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, Parts 8.6, 8.7, 8.8, and 8.10.

(2) Pursuant to M.G.L. c. 143, §§ 71B through 71D, no person shall perform construction, maintenance, repair, alteration, or replacement on an elevator unless he or she holds a license therefor granted by the Board.

(3) Any alteration listed in 524 CMR 10.02 through 10.04 shall conform to the requirements of ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, Part 8.7 as modified by 524 CMR, and be inspected pursuant to the version of 524 CMR in effect at the time the permit for said alteration was filed.

(4) Replacements of elevator parts or components as part of routine maintenance and general repair as described in ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, Part 8.6 as modified by 524 CMR with identical older, discontinued, or refurbished parts or components still suitable for use is expressly allowed and, where installed by a licensed elevator mechanic, shall be permitted and inspected under the version of 524 CMR in effect at the time that the original part or component was installed.

10.02: Alterations and Replacements Requiring a Permit

(1) Alterations of or to any of the following elevator systems, parts or components thereof governed by 524 CMR, shall require a permit:

(a) hoistway door locking devices;
(b) car door or gate locking devices;
(c) rope equalizers;
(d) rope fastening devices;
(e) hoistway door operating devices;
(f) roller guide shoes;
(g) car enclosures;
(h) car floors and coverings;
(i) interior panels;
(j) escalator deck barricades; and
(k) hoistway and machinery space ventilation.

(2) Replacements of any of the following elevator systems, parts or components thereof governed by 524 CMR, shall require a permit:

(a) car fixtures;
(b) hall fixtures;
(c) hoistway door(s);
(d) car door(s);
(e) more than three consecutive damaged steps;
(f) ropes;
(g) step or drive chains; and
(h) guide rails.

10.03: Alterations and Replacements Requiring a Permit and Test

(1) Alterations of or to any of the following elevator systems, parts or components thereof governed by 524 CMR, shall require a permit and an acceptance test witnessed by a state elevator inspector:

(a) increase in dead weight of car;
(b) fire fighter emergency operations controls;
(c) hoistway access switches;
(d) car top operating devices;
(e) truck zoning devices;
(f) change in type of operation or control;
(g) change in type of car;
(h) change in type of counterweight safety;
(i) increase in dead weight of counterweight; and
(j) car door operating devices.

Note: alterations listed in 524 CMR 10.03(b), (c), (d), and (j) shall not require a contract load test at governing tripping speed.

(2) Replacements of any of the following elevator systems, parts or components thereof governed by 524 CMR, shall require a permit and an acceptance test witnessed by a state elevator inspector:

(a) car or counterweight safeties;
(b) driving machine with a new machine;
(c) controller with a new controller;
(d) brake assembly;
(e) brake shoes;
(f) hydraulic control valves;
(g) overspeed valves;
(h) hydraulic plungers;
(i) hydraulic cylinders;
(j) hydraulic supply lines;
(k) complete jack units;
(l) decrease in operating speed; and
(m) decrease in operating capacity.

(3) In addition to 524 CMR 10.02 and 524 CMR 10.03(1) and (2), once alterations or replacements are made to the controller, door operating equipment, and signal fixtures, a full upgrade of all elevator equipment to the version of 524 for new installations in effect at the time of the last such alteration or replacement is required. The requirement to fully upgrade all elevator equipment is triggered by the last such alteration or replacement, regardless of whether it is to the controller, door operating equipment or signal fixtures, and regardless of when the other alterations or replacements were made.

10.04: Alterations and Replacements Requiring Plans, Permit, Test, and Complete Installation Upgrade

(1) Any one of the following alterations to an elevator system governed by 524 CMR shall require that the complete installation comply with the version of 524 CMR for new installations in effect at the time the permit is filed. The complete installation incorporates all elevator related systems including, but not limited to, ventilation, electrical supply, hoistway structures, machine rooms, machine room access, lighting and fire alarm systems.

(a) The speed of the elevator is increased;
(b) The capacity of the elevator is increased;
(c) The travel of an existing elevator is extended;
(d) The machine room of an existing elevator is relocated;
(e) The classification of an elevator is changed from freight to passenger; and
(f) The loading classification of an existing freight elevator is changed.

10.04: continued

(2) In addition to the required permit, full plans as required in 524 CMR 35.00: *Safety Code for Elevators and Escalators and A17.1-2013 and the Massachusetts Modifications of That Code*, Parts 2.28 and 3.28 whichever section is applicable, shall be submitted and approved by the Office prior to the commencement of any work.

REGULATORY AUTHORITY

524 CMR 10.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 11.00: ELEVATORS PLACED OUT OF SERVICE OR DECOMISSIONED

Section

11.01: Scope

524 CMR 11.00 sets minimum requirements for elevators taken out of service, decommissioned or both, and with or without intention to demolish said elevators.

11.02: Elevators Placed Out of Service

All elevators placed out of active service for a period not exceeding one year shall comply with the following:

(1) The owner or his or her agent shall notify the Office in writing, giving the date when the elevator will be placed out of service, the reason for removal from service, and the date of return to service. A current inspection certificate shall be required in accordance with M.G.L. c.143, § 65 when placing it back in service during that year.

(2) The elevator main line disconnects shall be secured in an off position with the fuses removed. The registered elevator contractor shall certify to the Office in writing that the elevator was properly placed out of service by securing the main line disconnects in an off position and removing the fuses.

(3) At the expiration of the one year period, the owner shall either decommission the elevator in accordance with 524 CMR 11.03 or file a variance application with the Board.

11.03: Decommissioning

All elevators not in operation or properly placed out of service in accordance with 524 CMR 11.02 shall be decommissioned. Decommissioning shall consist of the following, where applicable:

(1) A decommissioning permit shall be required.

(2) The car and counterweight shall be lowered to the lowest landing.

(3) All ropes removed.

(4) Main line fuses removed.

(5) Service switch opened and the cabinet sealed with a padlock.

(6) Where landing doors remain in place, the doors shall be bolted securely in the closed position from the hoistway side.

(7) When landing gates are in place, the landing openings shall be totally enclosed and strongly reinforced.
EXCEPTION: The lowest landing door shall be locked from the landing side.

(8) When a hydraulic elevator is decommissioned the oil pipe line from the hoistway to the power unit, and the oil in the tank will be removed from the premises. The supply wires shall be disconnected at the main line switch and at the power unit.

11.03: continued

(9) Any escalator which is permanently removed from service shall have the electrical power supply disconnected by removing the fuses and disconnecting the wiring on the load side of the disconnect switch. A permanent barricade shall be erected at each landing of said escalator to prevent access. Means in addition to the brake shall be employed to permanently prevent escalator movement.

11.04: Inspection Required

Following decommissioning as described in 524 CMR 11.03, the decommissioned elevator shall be inspected by a state elevator inspector to ensure that the components in the machine room and hoistway have been safely decommissioned.

REGULATORY AUTHORITY

524 CMR 11.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 26.00: CERTAIN ELEVATOR EQUIPMENT USED AS MOTOR VEHICLE PARKING DEVICES

Section

26.01: General

524 CMR 26.00 has been developed in response to demands for a separate section of 524 CMR to cover the installation of certain elevator equipment used exclusively for the parking of motor vehicles.

26.02: Reference to Safety Codes

Installations shall be in accordance with accepted standards of engineering practice and, except as provided in 524 CMR 26.00, shall conform to the minimum requirements of 524 CMR, as applicable.

26.03: Scope

524 CMR 26.00 applies only to elevators used exclusively for the parking of motor vehicles, such as elevators where, during the parking process, each motor vehicle is moved either under its own power, or by means of a power driven parking device onto and off the elevator directly into parking spaces or cubicles in line with the elevator, as well as devices used exclusively for the raising or lowering of motor vehicles for storage on the device itself.

EXCEPTION: 524 CMR 26.00 does not apply to the design of the structure of a crane or similar device on which the elevator may be mounted, or the design of any motor vehicle parking dolly or mechanism, except the interlocking of the control of such device with the elevator control.

26.04: Classification

Elevators subject to 524 CMR 26.00 shall be classified as follows:

(1) Class I. Elevators on which, during the parking process, one attendant rides for the purpose of operating the elevator and a power driven parking device or dolly to move the motor vehicle onto and off the elevator, but is not required to get off the elevator.

(2) Class II. Elevators on which, during the parking process, one attendant rides for the purpose of operating the elevator and driving the motor vehicle, under its own power, onto and off the elevator.

26.04: continued

(3) Class III. Elevators operated from a central dispatching station or stations and on which the garage attendants do not ride during the parking process, and the operation of the elevators and the entire process of parking the motor vehicle is automatically controlled.

26.05: Construction of Hoistways and Hoistway Enclosures

Hoistway and hoistway enclosures shall be constructed as follows:

(1) Where hoistway enclosures are provided, regardless of classification under 524 CMR 26.04, they shall be provided at all portions of the hoistway accessible to the public, including but not limited to all floors at which the customer delivers or receives his or her motor vehicle.

Note: Enclosures may be perforated for their entire height and need not be higher than six feet.

(2) For hoistway opening protection at floors where patrons deliver or receive motor vehicles, hoistway gates conforming to 524 CMR 26.06 shall be provided at each hoistway opening.

26.06: Hoistway Gates in Non-fire-resistive Hoistways

Hoistway gates in non-fire-resistive hoistways shall conform as follows:

(1) Gates shall be power operated, or they may be opened under power and may close by gravity if means are provided to limit the closing speed. Power opening and closing devices shall conform to the requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

(2) Gates may be perforated for their entire height, and need not be higher than six feet.

(3) Hoistway gates on shall be provided with interlocks, mechanical locks and contacts, or separate mechanical locks.

EXCEPTION: Locking devices are not required on vertically sliding gates for which the unbalanced weight is 65 lbs. or more when the car is not at the landing.

(4) Means shall be provided to prevent movement of the car in either the vertical or horizontal direction away from a landing unless the gate at that landing is in the closed position.

EXCEPTION: The means provided may permit horizontal movement of the car with the gate open in a zone of not more than two feet in either direction, provided that protective guards not less than six feet high and the width of the zone are installed on each side of the tower.

(5) For cars having more than one hoistway or runway opening at a given loading position, a separate closing means shall be provided for each car door or gate and its corresponding hoistway or runway door or gate.

(6) The vertical clearance beneath the lower edge of the gate and the landing shall be not more than eight inches.

26.07: Protection at Other Levels

At levels other than floors where patrons deliver or receive motor vehicles, hoistway opening protection shall conform to the following:

(1) Adequate means shall be provided to retain the motor vehicles in the parking cubicles against the force of the wind or of gravity.

(2) Ropes or other dividers not less than 42" high shall be provided between the parking cubicles.

26.08: Guide Rails, Guide Rail Supports, and Fastenings

Guide rails, guide rail supports and fastenings shall conform to 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

26.09: Car and Counterweight Buffers, Counterweights

(1) Car and counterweight buffers shall conform to the following:

(a) For Class I and II elevators, the car and counterweight buffers shall be installed in accordance with the requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

EXCEPTION: Spring buffers may be used under the following conditions:

1. For electric elevators whose rated speed is not more than 300' per minute.
2. For hydraulic elevators whose maximum speed in the down direction with rated load is not more than 300' per minute.
3. The stroke of spring buffers for car speeds exceeding 200' per minute shall be equal to or greater than the following:
   a. 201 to 250 ft. per min.: 6¼"
   b. 251 to 300 ft. per min.: nine inches

(b) For Class III Elevators, the car and counterweight buffers shall be required only where there are occupied spaces or passageways underneath the hoistway, in which case both car and counterweight buffers shall be installed in accordance with the requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code* provided that such buffers may be located at each side of the car frame.

(2) Counterweights, where provided, shall conform to 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

26.10: Car Frames and Platforms

In Class I, II, and III elevators, car frames, car platforms, and their guiding members shall conform to the requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

EXCEPTIONS:

(a) The flooring may be of Class I, II, and III elevators perforated provided that the openings will reject a ball having a diameter of two inches or more.

(b) Where a parking dolly is used, the portion of the floor where the dolly travels may be depressed.

(c) Four corner suspension roped hydraulic elevators are not required to have car crossheads.

26.11: Car Enclosures and Car Gates

(1) Cars shall be enclosed on all sides not used for entrance and exit, with enclosures conforming to 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code* provided that the enclosure need be only six feet high, may be of openwork construction for its entire height, and no car top shall be required.

EXCEPTIONS:

(a) For Class I and II Elevators the enclosures may be omitted, provided that:

1. The car can be operated from the car only, and the car operating device is permanently located and will return automatically to the stop position.
2. The operator's station is protected on the outside with an openwork metal enclosure at least six feet high which will reject a ball 1½" in diameter, and, where no car gate is provided, the enclosure is located not less than four feet from the nearer end of the platform.
3. A metal railing at least 42" high is provided, on the sides of the car not used for entrance and exit.

(b) For Class III Elevators the enclosure specified may be omitted if a metal railing at least 42" high is provided on the sides of the car not used for entrance and exit.

26.11: continued

(2) A car gate shall be provided at each car entrance and shall be equipped with means to prevent the movement of the car in either the vertical or horizontal direction away from a landing unless the gate is in the closed position.

EXCEPTIONS:

(a) The means provided to prevent movement of the car may permit horizontal movement of the car with the gate open in a zone of not more than two feet in either direction provided that protective guards not less than six feet high and the width of the zone are installed on each side of the tower.

(b) The car gate may be omitted provided the following conditions are met:

1. Where a dolly is used, means are provided to prevent operation of the elevator unless the dolly is properly positioned on the car platform.

2. When the motor vehicle is on the car platform means are provided to prevent operation of the elevator, unless the motor vehicle is properly centered on the platform so that no portion of the vehicle projects beyond the platform.

3. For Class I and II elevators where the elevator can be operated from the car only by means of a permanently located operating device that will return automatically to the stop position.

26.12: Car and Counterweight Safeties and Speed Governors

(1) Car safeties conforming to 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code* shall be provided. All operating parts of the safety shall be protected from the elements.

EXCEPTIONS:

(a) Car safeties may be omitted on:

1. Direct plunger elevators.

2. Class III elevators where there is no occupied space or passageway underneath the hoistway.

(b) The car safety device may be located in the upper part of the car frame instead of beneath the platform, provided that the car frame, car platform, car safety and the guide rails and their supports are designed to withstand the forces from loading and unloading, and from application of the car safety at governor tripping speed with rated load on the platform within the stresses and deflections permitted by 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

(2) Counterweight safeties shall be provided where there is an occupied space or passage underneath the hoistway.

(3) Car or counterweight safeties, where required or used, shall be operated by speed governors conforming to 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

EXCEPTIONS: The tripping speed of speed governors for roped hydraulic elevators shall be based on the maximum speed attained by the elevator car in the down direction with rated load on the platform instead of on rated speed.

26.13: Driving Machines

Electric driving machines shall conform to the requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*. Hydraulic driving machines, valves, piping, connections and tanks shall conform to the requirements of 524 CMR 35.00.

EXCEPTION: Roped hydraulic driving machines may be used provided that they conform to the applicable requirements of 524 CMR 26.14.

26.14: Roped Hydraulic Elevators

(1) Piston rods of roped hydraulic elevators shall be so constructed and so roped that the piston shall be stopped before the car can be drawn into the overhead structure. Travel limiting stops of ample strength shall be provided in the cylinder to bring the piston to rest under full pressure without damage to the cylinder assembly or hydraulic system. Such stops shall be of the solid metal to metal type.

(2) Traveling sheaves of roped hydraulic elevators shall be guided in metal guides. Sheave frames, where used, shall be of structural or forged steel having an elongation of not less than 14% in a length of two inches and shall be designed and constructed with a factor of safety of at least eight. A single continuous strap shall not be used for the sheave frame.

(3) Cylinders, valves, piping, connections and tanks shall conform to the requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*. Piston rods of roped hydraulic elevators shall conform to the following:

(a) Piston rods in compression shall be designed and constructed in accordance with the applicable formula for plungers.

(b)

Piston rods in tension shall be designed and constructed in accordance with the following formula:

$$W = 7500A$$

Where: W =Allowable gross load, pounds applied to piston rod
A = Net cross sectional area at root of threads in square inches

(c) Means shall be provided to prevent eccentric loading on piston rods and to equalize loading on piston rods where two or more are used.

26.15: Requirements for Capacity and Loading

(1) The capacity and loading requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code* shall be met, provided that the minimum rated load shall be based on the maximum weight of the motor vehicles to be parked and shall in no case be less than 5,000 lbs. per vehicle to be carried.

(2) In addition to the information required by 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*, the crosshead data plate or a separate plate attached to the crosshead shall indicate the maximum speed of the car in the down direction with rated load on the platform for which the elevator is designed.

26.16: Terminal Stopping Devices and Operating and Control Devices

(1) Terminal stopping devices shall conform to the requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code* for hydraulic elevators, provided that roped hydraulic elevators shall have a separate automatic stop valve that is both independent of the normal control valve and mechanically operated directly by the movement of the car.

(2) Operating and control devices shall conform to the requirements of 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code* for electric elevators and for hydraulic elevators in addition to the following:

(a) Roped hydraulic elevators may have lever type operating devices provided that they are self-centering when released by the operator.

(b) The following types electrical protective devices shall not be required:

1. Top of car operating device.
2. Stop switch on top of a car.
3. Hoistway door interlocks or electric contacts.
4. Car door or gate electric contacts.
5. Stop switch in pit.
6. Car emergency stop switch for roped hydraulic elevators with lever type operating devices.

26.16: continued

(3) Class III elevator cars shall be provided with a constant pressure operating device for operating the car for inspection, maintenance, and during emergencies, which shall be operative only when the operating device at the control dispatching station is inoperative. Means shall be provided at the central dispatching station for disconnecting the normal operating device and for making the constant pressure operating device in the car operative.

26.17: Requirements for Suspension Means

The suspension means for electric and hydraulic elevators shall conform to 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*. Car platforms may be suspended by wire ropes attached to each corner of the platform, subject to the following:

(1) A center car frame conforming in all respects to 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code* shall be provided except that the car crosshead may be omitted, providing:

(a) The car frame stiles extend partly above and partly below the car platform so that the vertical distance between the top and bottom guide shoes on the car frame is not less than 40% of the distance between guide rails or of the length of the car platform, whichever is greater.

(b) Guiding members or rope connections are so designed and installed as to prevent binding of the car frame in the guide rails when the car is raised and lowered.

(2) The car safety required by 524 CMR 26.12 is mounted on the center car frame located as required in 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

(3) The car safety shall be operated by a speed governor.

26.18: Inspection, Tests, Maintenance, and Alterations

Inspections, tests, maintenance and alterations shall conform to the requirements of 524 CMR and M.G.L. c. 143, § 64.

26.19: Members of the Public Not Allowed Above Receiving Level

No person other than those whose services are necessary for the operation, maintenance, or safety of the premises shall be permitted on an elevator or on any level other than the receiving level.

26.20: Class I and II Operators to Be Licensed

No person shall operate, and no owner, lessee, employer or his or her agent shall cause or permit any Class I or II elevator to be operated except by a person duly licensed for such service by the Office in accordance with 524 CMR 9.00: *Operation of Non-automatic Elevators*.

REGULATORY AUTHORITY

524 CMR 26.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 29.00: STAGE, ORCHESTRA, AND ORGAN CONSOLE ELEVATORS

Section

29.01: Hoistway Construction

The complete surface of the hoistway within the limits of travel shall be of smooth finish, devoid of surface roughness, and without any projections or recesses except for landing entrances, guides, and guide brackets, vertical slots where required for concealed guides, junction boxes, and conduit or wiring. All projections or recesses at landing entrances shall be beveled on the underside or shall be guarded with metal plates. The angle of such bevels or guard plates shall not be less than 75 from the horizontal.

29.02: Clearance and Pits

A pit shall be provided at the bottom of every hoistway of such depth that when the platform is at its lowest limit of travel, the distance between the lowest point of the underside of the platform framing, shall have a clear vertical distance between the underside of the car platform or between the underside of any equipment attached thereto, exclusive of the car frame channels, car safety blocks, guide shoes and any aprons or guards attached to the car sill, and the pit floor when the car rests on the fully compressed buffer shall not be less than two feet. In measuring this clearance, the depth of any trenches or depressions in the pit shall not be included.

29.03: Machine Rooms, Sheave Rooms, and Secondary Levels

All machine rooms shall be located above or below or contiguous to any side of the hoistway.

EXCEPTIONS: Oil hydraulic machine rooms and entrances to machine rooms shall be located not more than ten feet from any side of the hoistway.

29.04: Hoistway Doors

The bottom landing openings of hoistways shall be protected by sliding or swinging doors of 1½ hour fire resistive construction.

29.05: Railings and Toe Boards

Railings and toe boards shall be provided at floor levels.

29.06: Guide Rails

Where used, guide rails shall be steel.

29.07: Door Interlocks

All hoistway landing doors shall be equipped with interlocks as described in 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

29.08: Lifting Capacities and Speed

(1) The lifting capacity of an orchestra or organ console elevator shall be equal to a live load of not less than 25 lbs. per square foot of floor area of the platform. All railings, aprons, and wiring conduits shall all be considered as part of moveable platforms.

(2) The lifting capacity of a stage elevator shall be equal to a live load of not less than 75 lbs. per square foot of floor area of that platform.

(3) Speed. Stage, orchestra, and organ console elevators shall not exceed a speed limit of 15 feet per minute.

29.09: Control Apparatus

(1) Operating switches shall be provided in a suitable location in sight of the platform.

(2) An emergency stop switch, which will cut off the sources of power, shall be provided in the car adjacent to the operating device and shall be red in color.

(3) Emergency stop switches may be operated by buttons or levers but shall be of the manually opened and closed type so installed that when opened gravity will not tend to close the switch.

(4) An emergency stop switch shall be installed in the pit.

(5) A manually operated multiple disconnecting switch shall be installed in the main line of each elevator or motor generator set machine.

(6) The disconnect switch shall be located adjacent to and visible from the elevator machine or motor generator set to which it is connected and shall, where practicable, be located in the machine room at the lock jam side of the entrance door.

29.10: Driving Machines

(1) Where elevating screws are used they shall be of the direct connected type, either worm or beveled gears, and all gears shall be enclosed in a protective housing.

(2) Where an elevator is not supported or operated by screws, plungers or similar means, car safeties shall be provided under the platform capable of stopping and holding the platform with full rated load at any point of its travel.

29.11: Control and Operating Devices and Systems

Motor controller requirements are as set forth in 524 CMR 29.11(1):

(1) Motor Controller. A suitable lighted room shall be provided outside of the hoistway for the motor controller and brake unless the motor and controller and brake are located in the pit in which case masonry piers or columns shall be provided of sufficient strength to take the impact of a full loaded car.

(2) Location of Motor and Controller. Where the motor and controller are located in a hoistway pit or in a pit adjacent to the lifting platform, access to same shall be provided by means of a door entirely below the bottom of the platform when the platform is at its lowest limit of travel. This door shall be of sufficient width and height to make the entrance readily accessible.

(3) Terminal Limit Switches. Enclosed terminal limit switches located in the hoistway shall be provided and arranged to automatically bring the car platform to rest as it approaches either terminal landing.

29.11: continued

(4) Final Limit Switches. Enclosed final limit switches shall be provided at the top and bottom of the hoistway arranged to cut off the current and stop the platform if it should travel beyond the terminal limit switch. Electric power elevators having winding drum machines shall have the stopping switches on the machines and also in the hoistway operated by the movement of the car.

29.12: Safety Factor and Hoistway Requirements

(1) Elevator Platform Construction. The platform shall be of steel frame construction designed with a safety factor of not less than six based on the rated load, uniformly distributed. All other parts of the equipment shall have a safety factor as required by 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code.*

(2) Installations in the Same Hoistway. When installations are in the same hoistway the adjacent sides shall be provided with solid dividing wall partitions with not less than ¾ hour fire resistive construction.

(3) When travel extends above the top of the hoistway enclosure, aprons of substantial construction shall be provided on the platform of sufficient depth to enclose the space between the top of the hoistway enclosure and the underside of the platform plus three inches when the platform is at its limit of travel.

(4) The lower edge of the aprons shall be beveled at an angle of at least 75 with the horizontal.

REGULATORY AUTHORITY

524 CMR 29.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 31.00: CASKET LIFTS INSTALLED IN LICENSED FUNERAL HOMES, MEMORIAL CHAPELS, OR PREPARATION ROOMS

Casket lifts installed in licensed funeral homes, memorial chapels, or preparation rooms on or after June 1, 2018 shall conform to 524 CMR 32.00: *Vertical Reciprocating Conveyors*.

Casket lifts installed prior to June 1, 2018 shall conform to the version of 524 CMR in effect at the time they were installed.

REGULATORY AUTHORITY

524 CMR 31.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 32.00: VERTICAL RECIPROCATING CONVEYORS

Section

32.01: Scope and Application

(1) The standards in 524 CMR 32.00 shall apply to the new installation, alteration, and maintenance of power driven Vertical Reciprocating Conveyors (VRCs) as defined in 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*. A registered design professional shall indicate conformance to these requirements verifying a safety factor of three for all structural components.

(2) Inspection and Existing Installations.

(a) Vertical Reciprocating Conveyors shall be subject to inspection as provided in 524 CMR 32.00.

(b) Existing vertical reciprocating conveyors installed prior to April 15, 2009, shall be subject to the following requirements:

1. Top and bottom limits;
2. Backstops;
3. Signage;
4. Safeties (instantaneous or valve overspeed);
5. Safety operated switches required on safeties;
6. Suitable enclosure for machinery;
7. Electrical and mechanical interlocks shall be provided;
8. Interlocks cannot be accessible from outside the hoistway;
9. Corridor push button with stop switches;
10. Car light;
11. Unsafe conditions as deemed such by an inspector.
12. Alterations for any component or system not included in 524 CMR 32.01(3)(b)1. through 10. shall comply with 524 CMR 32.00.

(3) Vertical Reciprocating Conveyor wiring and electrical equipment shall be installed in accordance with 527 CMR 12.00: *Massachusetts Electrical Code (Amendments).*

(4) No riders shall be permitted on Vertical Reciprocating Conveyors while the lift is in operation.

(5) Individuals performing work relative to the construction, maintenance, or repair of Vertical Reciprocating Conveyors within the Commonwealth shall be subject to the licensing requirements of M.G.L. c. 143, § 71B.

32.02: Hoistway Enclosure

(1) The hoistways of all VRCs that penetrate any fully enclosed solid floor above the bottom landing shall be enclosed throughout their height and constructed in accordance with 780 CMR: *State Board of Building Regulations and Standards* in effect at that time of installation.

32.02: continued

(2) Where 524 CMR 32.03(1) does not apply, hoistway enclosures shall be constructed at each landing according to the following standards:

(a) The enclosure height of the hoistway shall be not less than 96 inches (2,440 mm). Where a car gate is not used, the hoistway shall be fully enclosed on the open end(s) of the car.

(b) Enclosures shall be constructed with material having the ability to withstand a 100-pound lateral force without deflection and reject a ball two inches (50 mm) in diameter.

(c) Where the VRC is adjacent to a stairway, the enclosure shall be of solid or perforated construction and shall not be less than 96 inches (2,440 mm) above any step. Perforated construction shall reject a ball one inch (25 mm) in diameter.

32.03: Backstops

(1) Where a double ended platform is not accessible from both sides at a landing, the enclosure shall be provided with a backstop located on the hoistway enclosure opposite the landing opening, regardless of whether or not car gates are provided.

(2) Enclosures shall be constructed with material having the ability to withstand a 100-pound lateral force without deflection and reject a ball two inches (50 mm) in diameter.

(3) The backstop shall extend to the height of the tallest rated load and not less than two inches (50mm) below the platform or to floor level, as measured with the lift at floor level. The width of the backstop shall be not less than the clear opening.

(4) The distance measured horizontally from the platform to the backstop shall not exceed 1½ inches (38mm).

32.04: Machine Rooms

Machine rooms or suitable enclosures around machinery and control equipment shall be required and shall meet the requirements of ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, Section 2.7 as modified by 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

32.05: Hoistway Doors and Gates

(1) The openings at each landing shall be provided with gates or doors that guard the full width and height of the opening and prevent entry to any hoistway area during VRC operation. Hoistway gates or doors shall extend vertically not more than two inches (50 mm) from the landing threshold.

(2) The horizontal running clearance between the platform and landing threshold shall not be less than ½ inch (13 mm) nor greater than 1½ inches (40 mm).

(3) The horizontal clearance between the landing edge and the nearest portion of the hoistway door shall not exceed five inches (130 mm).

(4) Each hoistway gate or door shall have an electromechanical interlock or combination mechanical door lock and contact to prevent the door from opening while the VRC platform is not within the landing zone and to prevent the VRC from operating if a door or gate is open at any landing. The interlock shall be located so it is not accessible from the landing side when the hoistway doors are closed. Access to the interlock through use of special tool is permitted provided the interlock is located not more than 84 inches (2,130mm) from floor level.

(5) There shall be a sign on each landing door or gate reading "NO RIDERS." Letters on the sign shall be a minimum of two inches (50 mm) high and be a contrasting color to the surrounding background.

32.05: continued

(6) Power doors, when provided, shall conform to the following:
(a) Swing door closing force shall not exceed ten lbf (45 N).
(b) Horizontal sliding or vertical operating doors closing force shall not exceed 30 lbf (133 N).
(c) The maximum closing speed for doors shall not exceed one ft./sec (0.305 m/s).
(d) The control device to open and close the door shall be within sight of the hoistway door it controls. Door control shall be of the constant pressure type and shall not be controlled automatically.

32.06: Car Enclosures

(1) The enclosure on the sides not used for loading and unloading shall be constructed to prevent material from falling into or against the hoistway enclosure during operation and will be constructed to reject a two inches (50 mm) ball. The enclosure shall match the height of the tallest rated load.

(2) Car Gates Not Required. Where provided, however, car gates shall be a minimum of 43 inches (1,100 mm) high and provided with a gate switch contact to prevent operation of the lift unless the car gate is in the closed position.

(3) A snap chain, drop bar or similar device may be installed across all loading sides of the lift platform.

(4) A capacity sign shall be installed on conveyor and clearly visible showing the maximum rated capacity. The capacity sign lettering shall not be less than ¾ inch high.

(5) A "NO RIDERS" sign shall be installed on the conveyor. The lettering shall not be less than ¾ inch high.

(6) Conveyors shall be equipped with an electric light or lights; not less than two lamps shall be provided. The minimum illumination at the landing edge of the conveyor platform when the landing doors are open shall not be less than five foot candles.

(7) A car light switch is not required on the conveyor, but it shall be required in the machine room.

32.07: Driving Machines and Control Equipment

(1) Driving machines, pump units, and other equipment shall be permanently secured in place and shall not be supported by hooks, cables, chains, similar devices or configurations. Chain hoists, rope falls or similar hoisting devices are prohibited from use as the main driving machine. Portable hoists are prohibited.

(2) The diameter of drive sheaves for traction machines and drums shall not be less than 30 times the diameter of the hoisting cables. The diameter of all other sheaves shall not be less than 21 times the diameter of the hoisting cables.

(3) The controller, driving machine and other equipment requiring periodic service and repair shall be readily accessible. Where machines are located in the hoistway, a safe means of access shall be provided from outside or from the car when secured in position at the top landing to facilitate maintenance and repairs. Access panels shall be not less than 30" x 30". Where equipment access panels are located more than 72 inches (1,830 mm) above floor level, stairs or fixed ladders shall be provided. Stairs and fixed ladders shall comply with of ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, Section 2.7.3.3.1.

32.07: continued

(4) Illumination of work areas containing machines and controls shall be provided with an electric light or lights; not less than two lamps shall be provided. The minimum illumination of not less than ten foot candles as measured at a point in front of the equipment. An electrical outlet conforming to 527 CMR: *Board of Fire Prevention Regulations* shall be provided within 72 inches of the control equipment.

(5) Controllers shall not be accessible from the hoistway and shall be located in a locked enclosure.

(6) Machine rooms and/or control rooms shall meet the requirements of ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, Section 2.26 as modified by 524 CMR 35.00: *Safety Code for Elevators and Escalators A17.1-2013 and the Massachusetts Modifications of That Code*.

(7) Machines located in a hoistway shall not be hydraulic and shall have:
(a) a disconnect that will remove power from the motor and brake within sight of the machine;
(b) a red stop switch that interrupts the safety circuit; and
(c) a 110-volt light and GFI (ground fault interrupter) receptacle.

(8) By pass pressure on hydraulic units shall be set not to exceed 150% of working pressure and shall be sealed.

(9) An overspeed valve (rupture valve) shall be installed in the oil line of hydraulic units between the control valve and the jack. Only threaded or welded pipe may be used between the control valve and the jack.

32.08: Operating Protective Devices

(1) Each conveyor suspended by wire ropes, chains or similar means shall be equipped with car safeties. The car safety shall be capable of stopping the car and sustaining the car with 125% of its rated load. Upon activation of the car safeties, an electric manual reset safety switch shall be provided that will cause the power to be disconnected from the main driving means.

(2) Each lift shall be provided with top final limit switches or physical stops, including the floor at the bottom landing.

(3) Control stations shall be permanently installed on the outside of each landing. The control stations shall be in view of the hoistway and shall have an emergency mechanical set reset type stop switch. The control stations shall be located at a point outside the hoistway so it is not possible for the same person to operate the control and ride the lift.

(4) A lift with a winding drum machine shall be provided with a slack rope switch or slack chain that will cause the main power to be removed from the driving machine. The device shall be of the manually reset type.

32.09: Practical Tests and Inspections

Before a conveyor is allowed to operate, the requirements of 524 CMR 8.00: *Practical Tests and Inspections* shall be met, where applicable.

32.10: Controlled Access Facility

All employees who intend to use a VRC in a controlled access facility shall be trained as to its safe operation. A record shall be kept on file by the facility documenting the individuals who have received such training. No employee of said facility may operate a VRC unless he or she has been trained on its safe operation.

32.11: Non-controlled Access Facility

VRCs shall not be operated by the general public. If a VRC is located in a non controlled access facility, the area surrounding the VRC shall be secured so that members of the public do not have access to the unit. There shall be a sign on or adjacent to the unit reading "NO RIDERS." Letters on the sign shall be a minimum of two inches (50 mm) high and be a contrasting color to the surrounding background.

REGULATORY AUTHORITY

524 CMR 32.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 35.00: SAFETY CODE FOR ELEVATORS AND ESCALATORS A17.1-2013 AND THE MASSACHUSETTS MODIFICATIONS OF THAT CODE

Massachusetts incorporates by reference ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators* with the following modifications for new and existing elevators regulated by 524 CMR and where permittable construction, installation, relocation, alteration, replacement, decommissioning or classification change is proposed.

CSA B44.1-14/ASME A17.5-2014: *Elevator and Escalator Electrical Equipment*, ASME A17.6-2010: *Standard for Elevator Suspension, Compensation, and Governor Systems*, and other Referenced Standards identified in ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, Section 9 are accepted to the degree that such are not in conflict with express requirements of 524 CMR or the specialized codes as set forth in M.G.L. c. 143, § 96.

524 CMR does not adopt ASME A17.2-2014: *Guide for Inspection of Elevators, Escalators, and Moving Walks*, ASME A17.3-2015: *Safety Code for Existing Elevators and Escalators*, ASME A17.4-2015: *Guide for Emergency Personnel* or ASME A17.7-2007/CSA B44.7-07: *Performance-based Safety Code for Elevators and Escalators*.

PART 1
GENERAL

SECTION 1.1 SCOPE

1.1.2 Equipment Not Covered by This Code

Add a new first paragraph that reads:

Although equipment identified in 1.1.2(a) through (u) is not covered by ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, 524 CMR addresses the following subject matters: 524 CMR 26.00: *Certain Elevator Equipment Used as Motor Vehicle Parking Devices*; 524 CMR 29.00: *Stage, Orchestra, and Organ Console Elevators*; 524 CMR 31.00: *Casket Lifts Installed in Licensed Funeral Homes, Memorial Chapels, or Preparation Rooms*; 524 CMR. 32.00: *Vertical Reciprocating Conveyors*; 524 CMR 36.00: *Personnel Hoists and Employee Elevators on Construction and Demolition Sites*; 524 CMR 37.00: *Safety Requirements for Material Hoists*; and 524 CMR 38.00: *Safety Standards for Platform Lifts and Stairway Chairlifts*.

1.1.3 Application of Parts. Add additional sentence that reads:

Where parts of ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, other adopted national model codes or referenced standards conflict with specific requirements of 524 CMR, the provisions of 524 CMR shall prevail.

SECTION 1.3 DEFINITIONS

In addition to definitions contained in ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, Section 1.3 of the following defined terms are to be included. Where any definitional conflict exists, the following definitions shall prevail:

Accident. An incident occurring on or caused by an elevator which results in serious mechanical failure of the elevator, injury or both.

Apron. An enclosure of solid construction to enclose the space between the top of the hoistway enclosure and the underside of the platform when the platform extends above the top of the hoistway enclosure.

Authority Having Jurisdiction. The organization, office or individual responsible for enforcement of 524 CMR. Where compliance with 524 CMR has been mandated by legislation or regulation, the "authority having jurisdiction" is also the regulatory authority.

Board. The Board of Elevator Regulations.

35.00: continued

Chief. The Chief of the Division of Inspections, Elevator of the Office of Public Safety and Inspections.

Commissioner. The Commissioner of the Division of Professional Licensure.

Control Space. *See* control room.

NOTE: Control spaces shall satisfy the requirements for control rooms. The controller and motor controller shall be located in a control room.

Controlled Access Facility. Any facility where the use of facility and access thereto is restricted only to persons leasing or otherwise using space.

Division. The Division of Inspections, Elevator of the Office of Public Safety and Inspections.

Doubled-ended Platform. A lift that is capable of being loaded and unloaded from more than one side of the platform.

Electromechanical Interlock. A device that prevents the operation of the VRC unless all hoistway doors and car gates (when provided) are closed and locked when locking is possible when the lift is away from landing.

Elevator. The term elevator shall include escalators, moving stairways, moving walks, dumbwaiters and material lifts (with or without automatic transfer devices), wheelchair lifts, automatic people movers, vertical reciprocating conveyors, orchestra lifts, car lifts, limited use elevators or limited application elevators, freight elevators, including those subject to St. 1962, c. 288, and other associated devices within the elevator industry, except inclined stair lifts located and installed in residential homes.

Elevator Personnel. A Massachusetts-licensed elevator mechanic.

Final Limit Switch. An electromechanical switch, device or system actuated by position of the car causing the main drive power to be disconnected from the driving machine when the lift reaches floor level or if the lift travels beyond the terminal landings.

Inspector. An elevator inspector employed by the Office.

Minor Injury. Bodily harm which may or may not require first aid or significant treatment, but cannot be otherwise classified as a serious injury.

Moving Stairway. *See* escalator.

Office. The Office of Public Safety and Inspections.

Orchestra Elevator. A platform for raising and lowering musicians of an orchestra in a substantially vertical direction.

Organ Console Elevator. A platform for raising and lowering an organ console, including the organist, in a substantially vertical direction.

Owner. The owner of an elevator or the owner's agent or designee.

Qualified Elevator Inspector (QEI). *See* inspector.

Serious Injury. A personal injury/illness that results in death, dismemberment, significant disfigurement, permanent loss of the use of a body organ, member, function, or system, a compound fracture, or other significant injury/illness.

Serious Mechanical Failure. Events in which the elevator experiences measurable damage, loss of function or both and where safety of the public or workers is potentially at risk.

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Stage Elevator. A platform consisting of a section of the stage arranged to be raised and lowered to or above and below the stage level in a vertical direction.

Travel Limit Switch. A device that mechanically limits the travel of the lift when the platform arrives or travels beyond the terminal landings. This device may be used in conjunction with a final limit device or system.

Vertical Reciprocating Conveyor (VRC). A power driven stationary conveyance permanently installed, and comprised of a car or platform that serves two or more floors or landings and travels in a vertical or inclined direction. It is an isolated self contained lift, and is not part of a mechanized conveyor system.

PART 2
ELECTRIC ELEVATORS

SECTION 2.1 CONSTRUCTION OF HOISTWAYS AND HOISTWAY ENCLOSURES

2.1.3 Floor Over Hoistway.

2.1.3.4 Area to Be Covered by Floor. Delete and replace with:

2.1.3.4 Area to Be Covered by Floor. Where a floor over a hoistway is required by 2.1.3.1, the floor shall extend over the entire area of the hoistway and cover the entire machine room.

2.1.5 Windows and Skylights. Delete and replace with:

2.1.5 Windows and Skylights. Windows in hoistway walls or elevator cars are prohibited. If the elevator hoistway is completely outside the general outline of the building, the rear wall of the car and the related hoistway wall can be of laminated safety glass with a maximum window frame depth of two inches. Curtain walls or window walls cannot enclose the hoistway. Windows and skylights and their frames and sashes in machine rooms shall conform to the requirements of 780 CMR: *State Board of Building Regulations and Standards* and 527 CMR: *Board of Fire Prevention Regulations*.

2.1.6 Projections, Recesses, and Setbacks in Hoistway Enclosures

2.1.6.2. Amend as follows:

2.1.6.2(a) Delete: "100 mm (4 in.)" and replace with: "50 mm (2 in.)".
2.1.6.2(c) Delete: "100 mm (4 in.)" and replace with: "50 mm (2 in.)".

SECTION 2.2 PITS

2.2.4 Pit Access

2.2.4.4 Delete and replace with:

2.2.4.4 Pits shall be accessible only to licensed elevator mechanics, authorized personnel accompanied by a licensed mechanic, and to other authorized personnel only after the equipment has been made safe by a licensed elevator mechanic. When access to the pit is *via* a pit door, signage reading "DANGER - ACCESS ONLY ALLOWED WHEN ACCOMPANIED BY A MASSACHUSETTS-LICENSED ELEVATOR MECHANIC" shall be placed on the public side of the locked pit door. The signage letter size shall be a minimum of ¾ inch high and shall be of a contrasting color with that of the background.

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

2.7.3.4 Access Doors and Openings

2.7.3.4.1 Add a new (d):

(d) identified with a sign that reads "ELEVATOR MACHINE ROOM - NO STORAGE ALLOWED" and on separate lines: "DANGER - ACCESS ONLY ALLOWED WHEN ACCOMPANIED BY A MASSACHUSETTS-LICENSED ELEVATOR MECHANIC." The letter size shall be a minimum of ¾ inch high and shall be of a contrasting color with that of the background.

2.7.3.4.1 Add a new (e):

(e) Per M.G.L. c. 143, § 71B, only Massachusetts-licensed elevator personnel are allowed in machine rooms and control rooms. Where unauthorized personnel, for maintenance and other reasons, shall access such areas, they are statutorily required to be accompanied by Massachusetts-licensed elevator personnel.

2.7.3.4.4 Delete and replace with:

2.7.3.4.4 Access doors for control spaces outside the hoistway shall conform to width and height requirements of Section 2.7.3.4.2.

2.7.6 Location of Machinery Spaces, Machine Rooms, Control Spaces, Control Rooms, and Equipment

2.7.6.1 Location of Machine Rooms and Control Rooms. After the last sentence add:

A permanent sign shall be mounted on the head jamb of the main floor elevator entrance, which shall read "MRL CONTROL ROOM LOCATED ON [ ] FLOOR," with the applicable floor listed. The letter size shall be a minimum of ¾ inch high and shall be of a contrasting color with that of the background.

2.7.6.3.2 Delete and replace with:

2.7.6.3.2 The motor controller shall be located in a control room.

2.7.9 Lighting, Temperature, and Humidity in Machinery Spaces, Machine Rooms, Control Spaces, and Control Rooms

2.7.9.1 Lighting. In (b) delete the phrase "where practicable" as shown below:

(b) for machine rooms and control rooms, inside the room and on the lock-jamb side of the access door.

2.7.9.1 Lighting. Add new paragraph after (b):

Motion or heat detecting devices used to turn (on or off) the lights in the machine room, pit, car, or the car top are prohibited.

2.7.9.2 Temperature and Humidity. Replace the first sentence as follows but otherwise retain the paragraph:

Machinery spaces, machine rooms, control spaces, and control rooms shall be provided with natural or mechanical means to keep the ambient air temperature in the range of 50°F to 90°F and humidity in the range specified by the elevator equipment manufacturer to ensure safe and normal operation of the elevator.

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

2.8.1 Equipment Allowed. Add after the first sentence:

Should any access to these areas be necessary for any reason, all personnel shall be accompanied by a Massachusetts-licensed elevator mechanic.

2.8.3 Pipes, Ducts, Tanks, and Sprinklers

2.8.3.3 Delete and replace with:

2.8.3.3 Sprinklers shall not be permitted in power passenger or freight elevator hoistways, pits, machine rooms or control spaces.

2.8.3.3.1 through 2.8.3.3.4 Delete.

SECTION 2.11 PROTECTION OF HOISTWAY OPENINGS

2.11.1.2 Emergency Doors in Blind Hoistways. Delete (h) and replace with:

(h) The locking system shall consist of the 3502 key and cylinder and fire service shall only be activated with the use of the 3502 key and cylinder. The possession of the Massachusetts firefighter key number 3502 shall be limited to fire department personnel, Massachusetts licensed elevator mechanics, and state elevator inspectors employed by the Office. This key shall not be a part of a building master key system.

2.11.1.4 Access Openings for Cleaning of Car and Hoistway Enclosures. Delete entire paragraph and replace with:

2.11.1.4 Access openings for cleaning of car and hoistway enclosures are prohibited.

2.11.2 Types of Entrances

2.11.2.1 Delete (d).

2.11.6 Opening of Hoistway Doors

2.11.6.2 Add new (e) and (f) that read:

(e) any exit leading from any elevator hoistway door to the outside of the building.
(f) Confined Space Egress. No elevator landing shall comprise of, or lead to, a confined locked space of over four inches without either:
1. the installation in the space of a means to recall the elevator; or
2. provision of a means to keep the elevator at the landing with the car and landing doors in the open position until egress from the confined locked space is achieved.

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

2.12.6 Hoistway Door Unlocking Devices

2.12.6.1 General. Delete and replace with:

2.12.6.1 General. Hoistway door unlocking devices shall be provided for use by Massachusetts-licensed elevator mechanics and trained firefighters at every landing where there is a passenger entrance. The types of hoistway door unlocking devices are subject to prior approval of the Board. The use of unlocking device special tools by anyone other than Massachusetts-licensed elevator mechanics and trained firefighters is prohibited.

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2.12.6.2.3 through 2.12.6.2.5 Delete.

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

2.14.2.6 Access Panels. Delete.

2.14.3 Freight-Car Enclosure

2.14.3.1 Enclosure Material. Delete and replace with:

> 2.14.3.1 Enclosure Material. Cab enclosure walls and the car top shall be made of metal without perforations, except for car gate(s) and the area above them.

2.14.4 Passenger and Freight Car Doors and Gates, General Requirements

2.14.4.5.1 Delete (d).

2.14.4.7 Vertically Sliding Doors and Gates

2.14.4.7.2 Delete and replace with:

> 2.14.4.7.2 Gates shall be constructed of metal, and shall be of a design that will reject a ball 50 mm (2 in.) in diameter, except that if multisection vertical lift gates are used, the panel shall be designed to reject a ball 10 mm (0.375 in.) in diameter.

SECTION 2.16 CAPACITY AND LOADING

2.16.4 Carrying of Passengers on Freight Elevators

2.16.4.1 Delete and replace with:

> 2.16.4.1
> (a) Freight elevators shall be used only by those persons required for handling freight.
> (b) It shall be allowable at stated hours to carry employees, but not the general public, on a freight elevator, provided that the freight elevator conforms to the load carrying requirements for passenger elevators and a special permit is granted by the enforcing authority subject to the following:
> 1. Car switch operated elevators and continuous pressure operated elevators shall be in charge of a licensed operator when used to carry employees at stated hours.
> 2. Stated hours shall be determined by the enforcing authority.

2.16.5 Signs Required in Freight Elevator Cars

2.16.5.1.3 Delete.

SECTION 2.26 OPERATING DEVICES AND CONTROL EQUIPMENT

2.26.2 Electrical Protective Devices

2.26.2.21 In-Car Stop Switch. In the second sentence, change "Group 1 Security" to "Group 2 Security".

2.26.4 Electrical Equipment and Wiring

2.26.4.1 After the paragraph, add new (a) through (d) that read:

> (a) The main line disconnect switch or circuit breaker shall be located inside the machine room door or control room door. The operating handle shall be positioned on the side of the disconnect closest to the lock jamb and not more than 450 mm (18 inches) horizontally from the lock jamb. The handle shall be at a height of not more than 1700 mm (66 inches) above the finished floor at its highest point. In the case of multi-car machine rooms, the switches shall be grouped together as close as possible to that location.

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(b) In the case of a machine room with double swing doors, the doors shall swing out and the switch(es) shall be on the wall adjacent to the hinge side of the active door panel.
(c) The switches shall be so designed that they may be locked out and tagged in the open position.
(d) If the fused disconnect switch or circuit breaker is not visible from the elevator machine to which it is connected, a second disconnect switch shall be installed that is visible from the machine.

SECTION 2.27 EMERGENCY OPERATION AND SIGNALING DEVICES

2.27.2 Emergency or Standby Power System

2.27.2.4.5 Add a final paragraph that reads:

Where an emergency or standby system is required by 780 CMR: *State Board of Building Regulations and Standards*, said system shall operate the elevator or elevators in the event of normal power failure, and the requirements of 2.27.2.1 through 2.27.2.5 shall be met. If an emergency or standby system is not required by 780 CMR but exists and operates the elevator or elevators, the requirements of 2.27.2.1 through 2.27.2.5 shall be met. If fewer than all cars can be run at the same time, all cars shall be sequenced one or more at a time to the fire recall floor automatically, after which the selector switch located at that floor can designate a preferred car.

2.27.3 Firefighter's Emergency Operation: Automatic Elevators

2.27.3.1 Phase 1 Emergency Recall Operation

2.27.3.1.1 Add a new (d) that reads:

(d) The phase 1 hall key switch shall be marked with the off position vertical and in the center. The key shall be inserted with the cut side facing up.

2.27.3.1.6 Delete (j) and replace with:

(j) When an elevator(s) has gone to the alternate level due to the activation of a fire alarm initiating device at the designated level, the manual activation of the fire-recall switch at the designated level shall cause the car to recall to that level.

2.27.3.3 Phase II Emergency In-Car Operation. Delete first sentence of the second paragraph and replace with:

The key shall be removable in each position. The hold position in the center shall be vertical. The key shall be inserted with the cut side facing up.

2.27.3.3.7 Delete the first sentence of the second paragraph and replace with:

For all installations performed under ASME A17.1-2013/CSA B44-13: *Safety Code for Elevators and Escalators*, the firefighters' operation panel cover shall be openable with the use of a 3502 key. The key switch grooves shall be constructed and installed with the cut side facing up.

2.27.7 Firefighter's Emergency Operation: Operating Procedures

2.27.7.4 Delete.

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2.27.8 Switch Keys. Delete and replace with:

2.27.8 Switch Keys. Firefighter's Emergency Operation shall only be activated with the use of the 3502 key and cylinder. The possession of the Massachusetts firefighter key number 3502 shall be limited to fire department personnel, licensed elevator mechanics, and elevator inspectors, and it shall be used only in the performance of their official duties. This key shall not operate any other switch unless specifically described in 524 CMR and shall not be a part of a building master key system.

2.27.9 Elevator Corridor Call Station Pictograph. Delete and replace with:

2.27.9 Fire Emergency Hall Buttons Signs. There shall be a sign securely fastened to the wall over every hall button station. The minimum size shall be 3¼" x 2¼". The lettering shall be impressed or engraved on a contrasting background, and shall read and be sized as follows:

SIGNAGE	LETTERING SIZE	LETTERING COLOR
In Case of	⅛ inch equals 14-point lettering	Color: Black
Fire	⅜ inch equals 30-point lettering	Color: Red
In This Building	⅛ inch equals 14-point lettering	Color: Black
Use Exit Stairways	$^{3}/_{16}$ inch equals 16-point lettering	Color: Red
Do Not Use This Elevator	⅛ inch equals 14-point lettering	Color: Black

Add a section:

2.27.12 Medical Emergency Elevators.

(1) Medical Emergency Elevators.

(a) All new buildings or complete new additions to existing buildings in which an elevator is being installed shall be provided with at least one passenger elevator designed to accommodate the loading and transportation of an ambulance gurney or stretcher (24" wide by 84" long with 5" radius corners) in its horizontal position. Complete new additions to existing buildings shall mean a hoistway constructed outside the confines or footprint of the existing building.

(b) The hoistway and car shall be provided with power operated passenger type horizontally sliding doors, minimum size to be 42" wide by 78" high. When center opening doors are used they shall be located on the narrow end of the car or car size and/or the door size will be altered to comply with 2.27.12(1)(c).

(c) Elevator capacity, platform size, and entrance configuration of medical emergency elevators shall be capable of accommodating the designated gurney or stretcher with equivalent ease.

(2) Medical Emergency Key Switches and Markings.

(a) This elevator shall be controlled by a two position key switch at the main floor of a building and by a similar key switch in the car operating panel. The lock and key shall be that manufactured by Medeco Security Locks, Inc. and the key number shall be 65W 2650 T101 26 R7. The lock shall be arranged so that the switch shall be off when the key is in a vertical position and it shall be on when the key cut is facing approximately 90 to the right of the vertical. The key shall only be removable in the off position.

(b) Only elevator companies or manufacturers authorized by the Division may order this lock.

(c) Only personnel authorized by the Division may purchase this key.

(d) Both locks shall be identified with the words "MEDICAL EMERGENCY" engraved adjacent to the lock. The lettering shall be a minimum of 14 points with lettering or background color blue.

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(3) Medical Emergency Operation.

(a) When the main floor key is turned to the on position, it shall activate a continuous audible signal in the car which can be the same signal used for fire service. It shall also activate a visual signal in the car and at the main floor key call station that reads "Medical Emergency." All car calls shall be canceled and be unable to be re registered. The car shall not accept any hall calls after this service is activated.

(b) When the car is in motion, the in-car stop switch shall be de activated.

(c) When the car is moving toward the main floor it shall return non stop and open its doors on arrival. It shall not comply with 2.27.12(3)(b) until the car begins to move.

(d) When the car is moving away from the main floor it shall reverse direction at the next available floor without opening its doors and return non stop to the main floor.

(e) When the car is at a floor, other than the main floor with its doors open, they shall close without delay, and the car return to the main floor.

(f) The car shall return to the main floor after being called by the EMS main floor switch and open its doors even if the main floor EMS key switch has been returned to the off position during travel. On arrival at the main floor the audible signal in the car shall cease.

(g) Upon arrival at the main floor the doors shall open and if the main floor EMS key switch is "on" they shall remain open until that switch is turned "off." If the main floor EMS key switch is "off" the visual signals shall remain illuminated for a minimum of 60 seconds. During this delay the EMT shall insert his key into the car control panel and turn it to the "on" position to retain control of the car. Upon expiration of the delay, without the key in the car being turned on the car shall return to normal service.

(h) If the elevator is an automatic car with attendant or independent service operation it shall activate its audible and visible signal and if on attendant service shall return to automatic operation after a minimum of 15 seconds and a maximum delay of 60 seconds and then proceed to the main floor.

(4) Car Operation.

(a) Upon entering the car it shall not accept a car call until the in car EMS key switch is turned to the on position. After turning that key on and registering a call, the car shall automatically close its doors and proceed to the call. All door zone detection devices shall be operative. If more than one call is registered, it shall stop at the first call and cancel all others at which time a second choice can be made.

(b) Upon arriving at the desired floor, the doors shall open automatically and the EMT shall remove his key when the switch is in the off position, the car shall then remain at that floor and will not accept a call or move away from that floor until the key is again turned on.

(c) The car shall be returned to the main floor on EMS service and the key removed in its off position before returning the car to normal operation.

(d) If the car is on any form of special service such as inspection, firefighters, or similar, when EMS service is initiated the audible and visible signals in the car shall be activated but the car shall not respond to the main floor EMS call.

(e) If the car has responded to a medical emergency call prior to a call for fireman's service, the EMT call for service shall not be overridden by firefighters service call until it returns to the main floor but the fire service audible and visible signals shall be activated.

(5) Designation. Medical emergency service shall be identified as follows:

(a) At the main floor this elevator shall be identified by the national medical symbol (star of life), shown below.

(b) These symbols (two) shall be permanently attached to the hoistway door frame on each side of that frame at right angles to the sill at a height not less than 66" and not more than 78" above the floor level at the sill.

(c) The symbol shall be blue in color with contrasting background, the staff and serpent shall be white.

(d) The symbol itself shall be two to three inches in height.

EXCEPTIONS: The following elevator installations need not comply with 2.27.12:

(a) Elevators in structures such as rock quarries, steel towers, dams, storage bins, smoke stacks, tanks (and other special industrial installations) where the elevators are used only by maintenance and operating personnel, or in hospitals where the normal services of an EMT are available.

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(b) Elevators in buildings or structures where each landing is at ground level or is accessible to ground by a ramp.
(c) Elevators in buildings or structures equipped with stairs that extend no more than one floor above or below the building entrance grade and with a configuration that shall accommodate the carrying of a gurney or stretcher on said stair and when said stair conforms to 780 CMR: *State Board of Building Regulations and Standards* and is permitted by the authority having jurisdiction.

SECTION 2.28 LAYOUT DRAWINGS

2.28.1 Information Required on Layout Drawings. Add a new first sentence that reads:

For work requiring an elevator permit, permit applications, and elevator layouts shall be filed and approved by the inspector before any work can begin. All of the following requirements shall be satisfied in permit applications.

2.28.1 Information Required on Layout Drawings. Add (k) through (x) that read:

(k) all plans for elevator installations shall be signed by a registered professional engineer or a registered architect and shall bear his or her registering stamp certifying that he has examined the plans and finds that the building will structurally support the elevator contract load plus its tare as they are shown on the elevator drawing. The architect or engineer shall not be responsible for any material on the elevator drawing. The complete installation shall comply with 524 CMR at the time of filing;
(l) type of hoistway material to be used;
(m) height of hoistway in regard to roof of building;
(n) registered design professional's stamped, written statement that ventilation complies with 524 CMR;
(p) type of hoistway doors, fire rating of doors shall be shown on the layout, filling around hoistway door frames and headers for proper fire rating, grouting of landing sills;
(q) type of approved interlock;
(r) buffers, type and rating;
(s) governor, type and name plate data depicting tripping speed of the governor and that of the overspeed switch, construction of material of governor rope and size;
(t) hoist rope, including size, number of, and breaking strength;
(u) type of safeties and location;
(v) type of drive machine, including speed and capacity;
(w) type of control, including voltage and current;
(x) base flood identification when applicable.

PART 3 HYDRAULIC ELEVATORS

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

Delete Section 3.7 "preamble" and replace with:

Hydraulic machines, motor controllers and/or motion controllers are not allowed in a hoistway or pit and shall be located in a machine room.

Add a section:

3.7.1.11 Location of Machine Rooms. When it is not possible to locate the machine room adjacent to the hoistway, in addition to all normal requirements, the following provisions shall apply:
(a) The oil pipeline, from where it leaves the machine room to where it enters the hoistway, shall have a minimum of schedule 80.
(b) The pipe shall have no fittings, bends or welding in it from the hoistway to the machine room.

35.00: continued

(c) The distance from the hoistway to the machine room shall not exceed three meters (ten ft.).
(d) The oil line pipe shall always be visible for inspection.
(e) Two-way voice communication shall be installed between the car and the machine room.

SECTION 3.19 VALVES, PRESSURE PIPING, AND FITTINGS

3.19.3.3.1 Delete (a) and replace with:

(a) not be installed between the jack and power unit, nor project into or through any wall. Installation shall be accomplished without introducing any twist in the hose, and shall conform with the minimum bending radius of SAE 100, R2 type, high pressure, steel wire reinforced, rubber-covered hydraulic hose specified in SAE J517.

3.19.3.3.1 Retain remaining requirements (b) through (f).

3.19.4.7 Overspeed Valves. Delete and replace with:

3.19.4.7 Overspeed Valves. Unless the hydraulic elevator is installed with a governor-operated safety, an overspeed (rupture) valve shall be provided and connections and attachments shall conform to 3.19.4.7.1 through 3.19.4.7.6.

3.19.4.7.3 Installation of Overspeed Valves. Add a new first sentence:

3.19.4.7.3 Installation of Overspeed Valves. On all hydraulic elevators the piping between the overspeed valve and the hydraulic jack shall be welded or threaded.

3.19.4.7.3 Installation of Overspeed Valves. Retain the remaining language and numbering scheme.

SECTION 3.26 OPERATING DEVICES AND CONTROL EQUIPMENT

3.26.4 Electrical Protective Devices. Delete the first paragraph of 3.26.4 and replace with:

3.26.4 Electrical Protective Devices. Electrical protective devices shall be provided in conformance with 2.26.2, and the following requirements, except the words "driving-machine motor and brake" in 2.26.2 shall be replaced with "hydraulic machine," and shall conform to 2.26.4 and 3.26.4.1 and 3.26.4.2.

3.26.10 Auxiliary Power Lowering Operation

3.26.10.3 Add a final sentence that reads:

The door open button shall remain operative.

SECTION 3.28 LAYOUT DATA

3.28.1 Information Required on Layout Drawing. Add a new first sentence that reads:

For any application for an elevator permit, elevator layouts shall be filed and approved before any work can begin.

3.28.1 Information Required on Layout Drawing. After 3.28.1(o), add (p) through (cc) that read:

(p) all plans for elevator installations shall be signed by a registered professional engineer or a registered architect and shall bear his registering stamp certifying that he has examined the plans and finds that the building will structurally support the elevator contract load plus its tare as they are shown on the elevator drawing. The architect or engineer shall not be responsible for any material on the elevator drawing. The complete installation shall comply with 524 CMR in effect at the time of filing;

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(q) type of hoistway material to be used;
(r) height of hoistway in regard to roof of building;
(s) registered design professional's stamped, written statement that ventilation complies with 524 CMR;
(t) location of machine room relative to the hoistway;
(u) type of hoistway doors, fire rating of doors shall be shown on the layout, filling around hoistway door frames and headers for proper fire rating, grouting of landing sills;
(v) type of approved interlock;
(w) buffers, type and rating;
(x) governor, type if any and nameplate data depicting tripping speed of the governor and that of the over-speed switch, construction of material of governor rope and size;
(y) hoist rope, including size, number of, and breaking strength;
(z) type of safeties, overspeed valve(s) and location;
(aa) type of valve unit, pressure relief setting, piston size and travel;
(bb) capacity and speed, voltage and current;
(cc) base flood identification when applicable.

PART 5
SPECIAL APPLICATION ELEVATORS

SECTION 5.2 LIMITED-USE/LIMITED-APPLICATION ELEVATORS

Section 5.2.1 Electric Limited-use/Limited-application Elevators

Add a prefatory section:

5.2.1 Electric Limited-use/Limited-application Elevators. All limited-use/limited-application elevators shall comply with the provisions of 521 CMR as applicable.

5.2.1.1.2 Delete (a) and renumber (b) and (c) as (a) and (b).

5.2.1.4.1 Bottom Car Clearance. Delete and replace with:

5.2.1.4.1 Bottom Car Clearance. Elevators shall conform to 2.4.1.

5.2.1.4.2 through 5.2.1.4.2.2 Delete.

5.2.1.11 Protection of Hoistway Landing Openings. Add a new (f), (g), and (h) that read:

(f) Landing door panels shall be a minimum of 915 mm (36 in.) wide, although a tolerance of 16 mm (⅝ in.) between doors is permitted.
(g) Landing doors shall be set no more than the following dimensions from the hoistway edge of the landing sill, and shall be rated in conformance with 780 CMR: *State Board of Building Regulations and Standards*.
1. For swing doors: 19 mm (¾ in.).
2. For horizontal sliding doors: 57 mm (2¼ in.), and they shall have sight guards.

(h) Vision panels shall be installed in all swing doors per 2.11.7.1, except 2.11.7.1.6. The inside face of the glass shall be substantially flush with the inside face of the door. If laminated safety glass is used, the Z97.1 marking on each piece of glass shall be visible after installation. Note that conformance to M.G.L. c. 143, §§ 3T, 3U, and 3V, as applicable, is also required.

5.2.1.13 Power Operation of Hoistway Doors and Car Doors and Gates. Delete and replace with:

5.2.1.13 Power Operation of Hoistway Doors and Car Doors and Gates. Power operation shall be as described in the applicable provisions of 521 CMR: *Architectural Access Board*.

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5.2.1.14 Car Enclosures, Car Doors, and Car Illumination. Delete (f) and replace with:

(f) Doors shall be of the horizontally sliding type and so arranged to reduce the possibility of pinching.

5.2.1.14 Car Enclosures, Car Doors, and Car Illumination. Add a new (n) that reads:

(n) Emergency battery operated lighting shall be provided in all limited-use/ limited-application elevators.

EXCEPTION: If an emergency generator provides emergency car lighting within ten seconds after power failure, a battery operated lighting unit is not required.

5.2.2.7 Valves, Pressure piping and Fittings. Delete and replace with:

5.2.2.7 Valves, Pressure piping and Fittings. Valves, pressure piping, and fittings shall conform to 3.19 except 3.19.3.3. A flexible hose is prohibited between the power unit and the jack.

SECTION 5.3 PRIVATE RESIDENCE ELEVATORS

5.3.1.1 Construction of Hoistway and Hoistway Enclosure. Delete and replace with:

5.3.1.1 Construction of Hoistway and Hoistway Enclosure. Hoistways and machine rooms shall conform to 2.1.1.1 and 2.7.1.1.

5.3.1.1.1 Delete and replace with:

5.3.1.1.1 Each residential elevator shall have its own machine room, control space, or control room. Such machine room, control space or control room shall meet the following requirements:

(1) it shall be enclosed with materials of the same fire rating as that required for the hoistway in the building in which they are installed;

(2) it shall be kept locked at all times when not being accessed by licensed or authorized personnel;

(3) it shall not be located within, or at the top of, the hoistway;

(4) it shall be provided with self closing, self-locking doors not less than 30 inches wide by six feet six inches high equipped with spring locks that can be opened by hand from the inside of the machine room, control space or control room;

(5) elevator controller and main line voltage disconnect equipment located within the control space shall conform to the version of NFPA 70 in effect at time of installation;

(6) it shall be located at a maximum distance of ten feet from the hoistway;

(7) minimum equipment clearances within 524 CMR and the National Electric Code may be calculated and obtained with the machine room, control space, or control room doors in the fully open position with flexible cords that adhere to NEC 400.4 to all external connections so equipment may be repositioned to meet the clear working space requirements of NEC 110.26(A);

(8) all doors shall be identified with a sign that reads "ELEVATOR CONTROL SPACE"; and,

(9) it shall have a light fixture(s) containing a minimum luminance of 19 foot candles measured at floor level.

5.3.1.7 Protection of Hoistway Openings

5.3.1.7.2 Clearance Between Hoistway Doors or Gates and Landing Sills and Car Doors or Gates. Delete: "75 mm (three in.)" and replace with: "19 mm (¾ in.)"

Delete: "125 mm (five in.)" and replace with: "75 mm (three in.)"

5.3.1.7.4 Locking Devices for Hoistway Doors and Gates. Delete and replace with:

5.3.1.7.4 Locking Devices for Hoistway Doors and Gates. Landing doors shall be provided with UL listed hoistway door interlocks.

35.00: continued

5.3.1.8.3 Light in Car. Add a new final sentence that reads:

Emergency battery operated car lighting shall be provided in all private residence elevators.

5.3.2 Private Residence Hydraulic Elevators

Add a section:

5.3.2.2.3: Flexible hose shall not be installed between the power unit (pump) and the jack. *See* 3.19.3.3.

SECTION 5.10 ELEVATORS USED FOR CONSTRUCTION

To the end of the preamble add additional paragraphs that read:

Devices included under the requirements of Section 5.10:

(1) Elevators used for construction and other workman's hoists, except as regulated by 524 CMR 36.00: *Personnel Hoists and Employee Elevators on Construction and Demolition Sites*, shall be considered temporary workman's elevators and shall be installed by a person holding a Massachusetts license for the construction, maintenance and repair of elevators. Either a Massachusetts-licensed elevator mechanic or a Massachusetts-licensed hoisting engineer only shall operate them.

(2) Overhead Protection. There shall be installed on all elevators used for construction and workman's hoists and similar devices, including open platforms, a roof to protect the workers from falling objects when a hoistway is open, or has an opening, due to construction activity. The roof shall be constructed of solid material. Debris netting or similar overhead protection may be used up to three floors or 30 feet, whichever is greater.

(3) Elevators used for construction and workman's hoists and other similar devices shall be equipped with one the following safety devices:

(a) a safety device, which acts on a wire rope, which is supported independently from the rigging used to support and hoist the working platform;

(b) a safety device, which grabs the wire rope, used to support and hoist the working platform;

(c) instantaneous safeties.

(4) Elevators used for construction, workman's hoists and other similar devices shall be provided with a 42" guard rail completely around the platform area and a 12" kick-plate completely around the platform area.

(5) Inspection and Load Tests. Once a piece of equipment has been approved and released by a private elevator contractor, it shall be re-classified and designated as a temporary workman's elevator and shall be inspected by a state elevator inspector. The state inspection shall consist of a load and safety test. No non-elevator construction personnel shall be transported on such equipment until the releasing elevator contractor has faxed an intended designation change to the Office. (Exception: non elevator trade persons may be conveyed to perform work in or around the elevator hoistway.) Once the designation change is date stamped submitted to the Office, the equipment may be operated prior to the state inspection to convey construction personnel for a period not to exceed 30 days, if operated by a duly licensed elevator mechanic. Once the designated equipment passes inspection, the state elevator inspector shall issue a temporary use certificate which shall be valid for 90 days.

(6) Inspection and load test is not required on open platforms used for the installation of elevators under construction or undergoing work pursuant to 524 CMR 10.00: *Requirements for Permits and Inspections of Existing Elevators Undergoing Alterations and Replacements*.

PART 6
ESCALATORS AND MOVING WALKS

SECTION 6.1 ESCALATORS

Add a section:

6.1.2.2 Escalator rooms shall be ventilated but venting need not be directly to the outside of the building.

35.00: continued

6.1.7 Lighting, Access, and Electrical Work

6.1.7.3.2 Add after the first sentence:

All access doors and side access panels shall be electrically contacted and render the escalator inoperative when open.

6.1.7.3.3 Delete the final sentence and replace with:

The key shall be of Group 1 Security (*see* 8.1). The key to side access panels shall be restricted to licensed elevator mechanics only.

6.1.7.4 Electrical Equipment and Wiring

6.1.7.4.1 Add a final sentence:

A fused disconnect switch or circuit breaker shall be installed and connected into the power supply line of each escalator. Disconnect switches or circuit breakers shall be of the manually closed multi-pole type and be located with the upper machinery space of the escalator. Where circuit breakers are used as a disconnecting means, they shall not be of the instantaneous type and shall not be opened automatically by a fire alarm system.

SECTION 6.2 MOVING WALKS

6.2.1 Protection of Floor Openings

6.2.2.1 Protection Required. Add a final paragraph that reads:

Moving walk rooms shall be ventilated but venting need not be directly to the outside of the building.

6.2.7 Lighting, Access, and Electrical Work

6.2.7.3.3 Delete the final sentence and replace with:

The key shall be of Group 1 Security (*see* 8.1).

6.2.7.3.3 Add a final paragraph that reads:

All access doors shall be electrically contacted and render the moving walk inoperative when open.

PART 8
GENERAL REQUIREMENTS

SECTION 8.1 SECURITY

8.1.2 Group 1: Restricted. Add new (x) through (dd) that read:

(x) Requirement 2.7.3.4.2, machine room and control room access doors.
(y) Requirements 2.7.3.4.3 and 2.7.3.4.4, machinery spaces and control spaces as specified.
(z) Requirement 2.11.1.4, access openings for cleaning of car and hoistway enclosures.
(aa) Requirement 2.14.2.6(b), access openings for cleaning of car and hoistway enclosure.
(bb) Requirement 3.19.4.1, access to manually operated shutoff valve.
(cc) Requirement 6.1.7.3.3, escalator side access door to interior.
(dd) Requirement 6.2.7.3.3, moving walk side access door to interior.

8.1.3 Group 2: Authorized personnel. Delete (a) through (d), (f), (i), and (k) and renumber remaining in list as (a) through (d).

35.00: continued

8.1.4 Group 3: Emergency Operation. Add new (e) that reads:

(e) Requirement 2.27.12(2), medical emergency key switches and markings.

SECTION 8.4 ELEVATOR SEISMIC REQIREMENTS

8.4.4 Car Enclosures, Car Doors and Gates, and Car Illumination

8.4.4.1 Top Emergency Exits

8.4.4.1.1 Delete and replace with:

8.4.4.1.1 The requirements specified in 2.14.1.5 shall apply except that the top emergency exit shall be so arranged that it can be opened from within the car by means of firefighter key number 3502 with a keyed spring-return cylinder-type lock and the top emergency exit shall opened from the top of the car without the use of a key. The possession of the firefighter key number 3502 shall be limited to trained fire department personnel and Massachusetts-licensed elevator mechanics. This key shall not be a part of a building master key system.

SECTION 8.6 MAINTENANCE, REPAIR, REPLACEMENT, AND TESTING

8.6.11.4 Cleaning of a Car and Hoistway Transparent Enclosure. Delete each instance of "authorized personnel" and replace with "licensed elevator personnel."

SECTION 8.10 ACCEPTANCE INSPECTIONS AND TESTS

8.10.1.1 Persons Authorized to Make Acceptance Inspections and Tests

8.10.1.1.1 Delete and replace with:

8.10.1.1.1 The acceptance inspection shall be conducted by Massachusetts-licensed elevator mechanics witnessed by an elevator inspector employed by the Office.

8.10.1.1.3 Delete.

8.10.1.2 Accreditation of Certifying Organizations. Delete.

SECTION 8.11 PERIODIC INSPECTIONS AND WITNESSING OF TESTS

8.11.1 General Requirements for Periodic Inspections and Witnessing of Tests

8.11.1.1 Persons Authorized to Make Periodic Inspections and Tests. Delete and replace with:

8.11.1.1 Persons Authorized to Make Periodic Inspections and Tests. Periodic inspections shall be made by Massachusetts-licensed elevator mechanics witnessed by an inspector employed by the Office.

REGULATORY AUTHORITY

524 CMR 35.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 36.00: PERSONNEL HOISTS AND EMPLOYEE ELEVATORS ON CONSTRUCTION AND DEMOLITION SITES

The Board incorporates by reference ANSI/ASSE A10.4-2016: *Personnel Hoists and Employee Elevators on Construction and Demolition Sites* with the following Massachusetts modifications for new and existing applicable elevators regulated by 524 CMR.

Note: The Board's incorporation by reference includes the definitions set forth in ANSI/ASSE A10.4-2016: *Personnel Hoists and Employee Elevators on Construction and Demolition Sites*, Section 3. In the event of any conflict between definitions as provided in said section 3 and those set forth elsewhere in 524 CMR, within 524 CMR 36.00 only, the standard's definitions shall control.

SECTION 3 DEFINITIONS

3.26 Hoist personnel. Delete and replace with:

Hoist Personnel. A person or persons who is licensed in accordance with M.G.L. c. 143, § 71B.

3.4 Authorized Personnel. Delete and replace with:

Authorized Personnel. A person or persons who is licensed in accordance with M.G.L. c. 146, § 53(a) or who is licensed in accordance with M.G.L. c. 143, § 71B.

3.48 Qualified Person. Add a final paragraph that reads:

Qualified Person. In Massachusetts, registered design professionals (RDPs) shall satisfy requirements set forth by the Massachusetts Division of Professional Licensure for architects and engineers; persons performing work regulated by any of the specialized codes as referenced in 524 CMR 1.05: *Applicability* and M.G.L. c. 143, § 96 shall be licensed accordingly; and personnel physically working on elevator machines and regulated accessories shall be Massachusetts-licensed elevator mechanics.

3.49 Qualified Elevator Inspector (QEI). Delete and replace with:

Qualified Elevator Inspector (QEI). *See* inspector.

SECTION 17 CAR ENCLOSURES

17.6 Car Top Emergency Access

Add a section:

17.6.5 Notwithstanding the requirements of 17.6.4, operation of the car with top emergency exit open is permissible only when a Massachusetts-licensed elevator mechanic is available to assist in the movement of the elevator. The car shall not be operated at a speed of more than 0.25 m/s (50 ft./min.) when properly opened by authorized personnel. The emergency exit shall be supplied with a firefighter key number 3502 that shall allow only emergency personnel and Massachusetts-licensed elevator mechanics to open the exit.

SECTION 24 OPERATING AND OPERATION DEVICES AND CONTROL EQUIPMENT

24.1.4 Wireless Control. Delete.

24.1.5 Design Principle for Wireless Control. Delete.

Add a section:

24.2.16 Emergency Control Operation (ECO). Emergency Control Operation (ECO) shall serve the purpose of supporting the fire department in an emergency situation only. Emergency Control Operation shall be installed when fire service phases I and II are not available and fully functional.

36.00: continued

Add a section:

24.2.16.1 Upon initial completion of installation and prior to placing each elevator used for construction into service, a representative of the installing company and the operating company shall meet with the fire department having jurisdiction to review the operation of each elevator. The fire department having jurisdiction will leave written proof of the review upon completion and this document will be needed for the elevator to pass the initial inspection as well as subsequent inspections with the Division.

Add a section:

24.2.17 Phase I Emergency Control Operation. A three position key-operated switch shall be installed in front of each elevator or bank of elevators and shall be at located at the level determined by the fire department having jurisdiction. The three-position switch shall be labeled "Emergency Control Operation" and its positions marked "RESET," "OFF," and "ON" (in that order), with the "OFF" position as the center position. The "Emergency Control Operation" letters shall be a minimum of 25.4 mm (1.0") high, red in color with a contrasting background.

Add a section:

24.2.17.1 The key used to operate the Phase I ECO switch shall be removable in the "ON" and "OFF" positions.

Add a section:

24.2.17.2 All Phase I ECO switches shall be provided with an illuminated visual signal to indicated when Phase I emergency recall operation is in effect. The visual signal shall maintain illumination until the elevator is returned to normal operation.

Add a section:

24.2.17.3 When an ECO switch is in the "ON" position, a visual beacon lamp, red in color, shall illuminate the elevator cab and an audible signal shall be provided to alert the attendant to return nonstop to the designated level. The visual beacon shall remain illuminated during the entire emergency operation procedure. A visual signal in the car operating panel shall read "EMERGENCY OPERATION - RETURN TO LEVEL [ ]" with the applicable level listed. The audible and COP visual signals shall remain in effect until the elevator is returned to the recall floor and phase II is enacted.

Add a section:

24.2.18 Phase II Emergency Control Operation. A two-position key operated switch, located in the car operating panel, shall override the operator's disable key (*see* 5.10.7.1) in the event that no operator is on site and/or the unit in not in operation. This two-position switch shall be labeled "Emergency Control Operation" and its positions marked "OFF" and "ON" in that order. The "Emergency Control Operation" letters shall be a minimum of 25.4 mm (1.0") high, red in color with a contrasting background. The key used to operate the Phase II ECO switch shall be removable in the "OFF" position only.

Add a section:

24.2.19 Switch Keys. The key switches required for ECO Phase I and Phase II shall be operable by the firefighter key number 3502 only (cut side up).

36.00: continued

Add a section:

24.2.20 Removing Elevator from Normal Operation. When not in use, the construction elevator shall be left at the designated fire control floor or floors and shall also be left with the operators disable key switch (5.10.7.1) in the off position state so that it may be commandeered by a trained firefighter for emergency purposes only. When a construction elevator equipped with emergency operation is inoperable and not able to be left in a disabled state of normal operation without elevator personnel on site, the fire department having jurisdiction shall be notified.

Add a section:

24.2.20.1 An operator's disable security key switch shall be installed in the car station labeled "OPERATION" and its position shall be marked "OFF" and "ON" in that order. The "Operation" letters shall be a minimum of 12.7mm (0.5") high with a contrasting background. When in the "ON" position, the unit shall run as intended. When in the "OFF" position, the unit shall be disabled. Each unit shall be left in the off position when not fully attended by a licensed elevator mechanic or operating engineer.

Add a section:

24.2.21 Return to Normal Operation. Upon completion of use in emergency operation, the responding fire department shall lock out/tag out the construction elevator(s) until a Massachusetts-licensed elevator mechanic arrives on site to review each elevator and is satisfied with the condition of each unit. The Massachusetts-licensed elevator mechanic may then reset the unit(s) and returning the construction elevator(s) to normal operation.

Add a section:

24.2.21.1. An "Emergency Control Reset" momentary reset switch shall be located in the elevator controller for the purpose of returning the elevator to normal operation. The "Emergency Control Reset" switch in the lobby shall be in the reset position for the "Emergency Control Reset" switch in the controller to reset the elevator to normal attendant operation. Only a Massachusetts-licensed elevator mechanic shall reset an elevator used for construction from Emergency Control Operation to normal operation.

SECTION 26 INSPECTIONS AND TESTS OF PERSONNEL HOISTS

26.1.2 Delete and replace with:

26.1.2 Persons Authorized to Witness New Installation and Acceptance Inspections and Load Tests. Inspections and load tests shall be performed as defined in 26.1.1 and shall be witnessed by a state elevator inspector employed by the Office. The following tests shall be witnessed by a state elevator inspector employed by the Office:

(1) Tests specified in Sections 26.2 and 26.3;
(2) Any tests which require the following:
    (a) Rendering of any safety devices or equipment temporarily inoperative.
    (b) Removal or resetting of devices or equipment.

26.4.2 Persons Authorized to Make Periodic Inspections and Tests. Delete and replace with:

26.4.2 Persons Authorized to Make Periodic Inspections and Tests. Periodic inspections and load tests shall be made by a state elevator inspector employed by the Office.

REGULATORY AUTHORITY

524 CMR 36.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 37.00: SAFETY REQUIREMENTS FOR MATERIAL HOISTS

The Board incorporates by reference, ANSI/ASSE A10.5-2013: *Safety Requirements for Material Hoists*, for new and existing applicable elevators regulated by 524 CMR.

Note: The Board's incorporation by reference includes the definitions set forth in ANSI/ASSE A10.5-2013: *Safety Requirements for Material Hoists*, Section 3. In the event of any conflict between definitions as provided in said section 3 and those set forth elsewhere in 524 CMR, within 524 CMR 37.00 only, the standard's definitions shall control.

SECTION 3 DEFINITIONS

3.20 Qualified Person. Delete and replace with:

Qualified Person. A person or persons who is licensed in accordance with M.G.L. c. 143, § 71B.

SECTION 4 REQUIREMENTS FOR HOIST TOWERS

4.3 Initial Inspection. Add a final sentence that reads:

Such inspections under 4.3 shall be performed in the presence of an inspector.

4.7 Inspection After Height Extension. Delete "as listed in 4.4" and replace with:

as listed in 4.6 and in the presence of an inspector.

SECTION 16 OPERATOR QUALIFICATION AND CONDUCT

16.3 Training. Replace "a qualified person" with:

the employer of the designated operator

16.4 Operation and Maintenance Manual. Replace "a qualified person" with:

the employer of the designated operator

REGULATORY AUTHORITY

524 CMR 37.00: M.G.L. c. 143, §§ 62 through 71G.

524 CMR 38.00: SAFETY STANDARDS FOR PLATFORM LIFTS AND STAIRWAY CHAIRLIFTS

The Board incorporates by reference ASME A18.1-2014: *Safety Standard for Platform Lifts and Stairway Chairlifts*, with the following Massachusetts modifications for new and existing applicable elevators regulated by 524 CMR.

Note: The Board's incorporation by reference includes the definitions set forth in ASME A18.1-2014: *Safety Standard for Platform Lifts and Stairway Chairlifts*, Section 1.3. In the event of any conflict between definitions as provided in said section 1.3 and those set forth elsewhere in 524 CMR, within 524 CMR 38.00 only, the standard's definitions shall control.

SECTION 1 INTRODUCTION

1.1.1 Equipment Covered by this Standard. Add a final paragraph that reads:

The requirements of 521 CMR shall be satisfied in order to utilize this standard.

Table 1.5-1 Reference Documents. Delete reference to QEI (latest edition).

SECTION 2 VERTICAL PLATFORM LIFTS

2.13 Code Data Plate. Add the requirement that state identification requirements of 524 CMR 1.07: *Duties and Powers of Elevator Inspectors and the Office of Public Safety and Inspections* shall also be included.

SECTION 7 PRIVATE RESIDENCE INCLINED STAIRWAY CHAIRLIFTS

Delete SECTION 7 and replace with:

Inclined stair lifts located and installed in residential homes are exempt from the definition of "elevator" and thus exempt from regulation by the Board pursuant to M.G.L. c. 143, § 71E.

SECTION 10 ROUTINE, PERIODIC, AND ACCEPTANCE INSPECTIONS AND TESTS

10.2.1 Inspections and Test Periods. Delete and replace with:

Refer to 524 CMR 8.00: *Practical Tests and Inspections* for test and inspection requirements.

REGULATORY AUTHORITY

524 CMR 38.00: M.G.L. c. 143, §§ 62 through 71G.