

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

ELEVATORS

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These rules take effect 90 days after filing with the secretary of state.

These rules take effect immediately upon filing with the secretary of state unless adopted under section 33, 44, or 45(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the director of the department of licensing and regulatory affairs by section 8 of 1967 PA 227, MCL 408.808, section 3 of 1976 PA 333, MCL 338.2153, and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4 and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030)

R 408.7002, R 408.7003, R 408.7004, R 408.7005, R 408.7006, R 408.7007, R 408.7012, R 408.7014, R 408.7015, R 408.7019, R 408.7020, R 408.7023, R 408.7023a, R 408.7023b, R 408.7024, R 408.7025, R 408.7029, R 408.7030, R 408.7031a, R 408.7034, R 408.7034a, R 408.7037a, R 408.7041, R 408.7045, R 408.7046, R 408.7054, R 408.7057, R 408.7057a, R 408.7058a, R 408.7058b, R 408.7059a, R 408.7060, R 408.7062, R 408.7071, R 408.7079, and R 408.7081a of the Michigan Administrative Code are amended, R 408.7054a is rescinded, and R 408.7031b, R 408.7033a, R 408.7040a, R 408.7041a, R 408.7048a, R 408.7058c, and R 408.7058d are added, as follows:

CHAPTER 1. GENERAL PROVISIONS

R 408.7002 Definitions.

Rule 2. (1) As used in these rules:

(a) "Act" means 1967 PA 227, MCL 408.801 to 408.824.

(b) "Belt manlift" means a power-driven endless belt that has steps and handholds and is used to transport persons in a vertical direction through successive floors or levels of a building or structure.

(c) "Department" means the department of licensing and regulatory affairs.

(d) "Electrical-powered, 1-man elevator" means an elevator that has a car platform area of not more than 5 square feet, a rated load of not more than 300 pounds, and a rated speed of not more than 100 feet per minute. It is for the exclusive use of certain designated operating and maintenance employees and is installed in any of the following structures:

- (i) A grain or feed mill.
- (ii) A chemical or alcohol distillery.
- (iii) A cement storage tower.
- (iv) A radio tower.
- (v) A similar structure that is not accessible to the general public.
- (e) "Examination" means a survey of the design and construction of elevators or elevator equipment by a dealer in elevators or elevator equipment or an approved insurance company.
- (f) "Hand-powered, 1-man elevator" means an elevator that has a car platform area of not more than 5 square feet, has a rated load of not more than 300 pounds, and is operated from the car only by pulling on a stationary rope that is located in the hoistway and passing through or adjacent to the car platform. The elevator is for the exclusive use of certain designated operating and maintenance employees and is installed in a grain or feed mill or a similar structure that is not accessible to the general public.
- (g) "Inspection" means the official determination by a general inspector of the condition of all parts of equipment on which the safe operation of an elevator depends.
- (h) "Private residence elevator" means any elevating device installed in or at a private residence or installed in a building as a means of access to a private residence within such building, provided the elevator is installed so that it is not accessible to the general public or to other occupants in the building. The use is restricted to the owner and the owner's immediate family and nonpaying guests. All other elevating device installations must be classified as commercial.
- (i) "Special elevating device" includes another lifting or lowering apparatus that is guided as provided in section 3 of the act, MCL 408.803.
- (j) "Temporary inspection" means the inspection of a permanent elevator that is to be used on a temporary basis.
- (k) "Maintenance" means the process of routine examination, lubrication, cleaning, and adjustment of parts components or subsystems, or both, to ensure performance pursuant to these rules and the American Society of Mechanical Engineers (ASME) A17.1.
- (2) Terms defined in the act have the same meanings when used in these rules.

R 408.7003 Applicability of national standards.

Rule 3. The following standards are adopted by reference.

(a) The following standards are available from the American Society of Mechanical Engineers (ASME), 22 Law Drive, Box 2900, Fairfield, New Jersey 07007-2900, <https://www.asme.org>, at a cost as of the time of adoption of these rules, as stated in this subdivision:

(i) ASME A17.1- 2016 safety code for elevators and escalators, except for sections, 1.2.1(b), 1.2.1(c), 2.5.1.5.3, 2.8.3.3.2, 2.8.6, 2.11.1.3, 2.11.1.4, 2.11.7.2, 2.11.7.2.1, 2.11.7.2.2, 2.11.7.2.3, 2.11.7.2.4, 2.11.7.2.5, 2.12.7.2.1(c), 2.12.7.2.2, 2.14.2.2(f), 2.14.2.6, 2.14.5.9.2, 2.22.2, 2.27.3.1.6(c), 3.18.3.8.3, 3.19.5.2, 3.22.1.6, 5.3.1.1.1, 5.3.1.1.2, 5.3.1.2.1, 5.3.1.14.3, 5.4.10.1, 5.4.10.2, 5.11, 5.12, 5.12.1, 5.12.1.1, 5.12.1.2, 5.12.1.3, 5.12.1.4, 5.12.2, 5.12.3, 8.6.1.7.1, 8.6.4.19.12 (b), 8.6.4.20.1(b),

8.6.4.20.1(b)(1), 8.6.4.20.1(b)(2), 8.6.4.20.3(a)(2), 8.6.4.20.3 (2)(b), 8.6.4.20.3 (g), 8.6.4.20.4 (b), 8.6.4.20.4 (b)(1), 8.6.4.20.4 (b)(2), 8.6.4.20.10(b), 8.6.4.20.10(b)(1), 8.6.4.20.10(b)(2), 8.6.5.8, 8.6.7.11 to 8.6.7.11.3, 8.6.7.12, 8.6.7.12.1, 8.6.7.12.2, 8.6.11.5 to 8.6.11.5.6, 8.6.11.10 to 8.6.11.10.4, 8.7.2.14.5.2, 8.10.1.1.3, 8.10.1.2, 8.11.1.1, 8.11.1.1.1, 8.11.1.1.2, 8.11.5.14 to 8.11.5.16. Cost \$252.00.

(ii) ASME A17.2- 2017 guide for inspection of elevators, escalators, and moving walks. Cost \$195.00.

(iii) ASME A17.3-2017 safety code for existing elevators and escalators. Cost \$168.00.

(iv) ASME A17.6- 2017 standard for elevator suspension, compensation, and governor systems. Cost \$92.00.

(v) ASME A18.1- 2017 safety code standard for platform lifts and stairway chairlifts, except for sections 2.1.2 to 2.1.2.8, 2.1.3 to 2.1.3.10, 3.10.2 to 3.10.2.4, 10.1.1, 10.1.2 to 10.1.2.3, 10.1.3.3, 10.1.4, and 10.2.1. Cost \$98.00.

(vi) ASME A90.1-2009 safety standard for belt manlifts. Cost \$59.00.

(b) ANSI A10.4-2016, the American National Standards Institute (ANSI), safety requirements for personnel hoist and employee elevators for construction and demolition and operations, except for sections 24.1.2.1 and 26.4.8.1, is available from ANSI at 1430 Broadway, New York, New York, 10018, <https://www.ansi.org>. Cost \$110.00.

(c) The following standards are available from American Society for Testing and Materials, (ASTM), 100 Bar Harbor Drive, 2 Conshohocken, Pennsylvania 19428-2959, at a cost as of the time of adoption of these rules, as stated in this subdivision:

(i) ASTM D 2667-2008, standard test method for biodegradability of alkylbenzene sulfonates. Cost \$69.00.

(ii) ASTM E 648-2010, “standard test method for critical radiant flux of floor-covering systems using a radiant heat energy source”. Cost \$69.00.

(iii) ASTM F 714-2012, “standard specification for polyethylene (PE) plastic pipe (SDR-PR) based on outside diameter”. Cost \$69.00.

(d) The standards adopted in this subrule are also available for inspection at the Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 611 W. Ottawa St., 1st Floor Ottawa Building, Lansing, Michigan 48933. Direction to the organizations’ website to order the book may be obtained from the bureau of construction codes. The cost of the individual codes is noted in this subrule.

(e) All references to NFPA 70 mean the current Michigan electrical code. The Michigan electrical code is available for inspection at the Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes 611 W. Ottawa St., 1st Floor Ottawa Building, Lansing, Michigan 48933, at a cost as of the time of adoption of these amendatory rules of \$89.50.

R 408.7004 Registration of elevators.

Rule 4. An elevator shall be registered by the owner or user stating the location, type, capacity, name of manufacturer, and purpose for which it is used. Regardless of changes in ownership, the current certificate holder is responsible for submitting this information and updating this information. The certificate holder shall submit this information to the department in writing.

R 408.7005 Identification plates and tags.

Rule 5. (1) The holder of a certificate of operation shall permanently attach to the elevator in an approved area an identification plate or an engraving in the car operating panel, showing the type, the rated load, and the state-assigned serial number of each elevator. The assignment of a serial number does not automatically make the unit safe for public operation. All units shall be inspected before use pursuant to R 408.7010.

(2) One serial number tag must be furnished and permanently attached to the elevator machine controller.

(3) Identification plates and tags are furnished by the department and remain the property of the department.

R 408.7006 Accident reports.

Rule 6. The holder of a certificate of operation shall notify the department within 48 hours of every accident involving personal injury or damage to the elevator in a manner and on a form prescribed by the department. The department may investigate any accidents involving personal injury or damage to the elevator.

R 408.7007 Responsibility for elevator operation and maintenance.

Rule 7. (1) Responsibility for the operation and maintenance of elevators is as follows:

(a) The person, firm, or corporation installing, repairing, relocating, or altering an elevator is responsible for its operation and maintenance until the certificate of operation is issued, except as provided for in R 408.7012, and is responsible for all tests of new, repaired, relocated, and altered equipment until the certificate of operation is issued.

(b) The holder of a certificate of operation or duly appointed agent is responsible for the safe operation and proper maintenance of the elevator.

(c) The holder of the certificate of operation is responsible for all periodic inspections and tests, securing the renewal of the certificate of operation, and the compliance with violation notices.

(d) The licensed contractor holding a temporary certificate of operation is responsible for the safe operation, maintenance, repair, replacement, testing, and fees of the elevator during the period that the temporary certificate is in force.

(2) Safety tests must be performed by elevator journeypersons who are licensed in this state.

R 408.7012 Temporary use of permanent elevators during construction.

Rule 12. (1) A licensed elevator contractor may request a temporary certificate of operation to permit the use of a passenger or freight elevator before its completion. The passenger or freight elevator must not be used until it has been approved by a general inspector, the required fee has been paid, and a temporary certificate of operation has been obtained. This certificate must be issued for a period not to exceed 90 calendar days. Renewals under this subrule may be granted at the discretion of the department as follows:

(a) Permanent elevators used temporarily during construction to move workers, authorized personnel, and materials must have maintenance performed every 30 calendar days by a licensed elevator journey person. These elevators must be inspected by a general elevator inspector employed by the department every 90 calendar days.

(b) Periodic inspections may be conducted by a general inspector every 30 calendar days. The fees are cited in R 408.7019 and may be assessed at the discretion of the department based upon the frequencies in this rule.

(2) A licensed elevator contractor may also request an inspection and temporary certificate of operation to allow the use of a passenger or freight elevator by the public before its completion. This elevator must not be used until it is inspected by a general inspector; the required fee, listed in R 408.7019, is paid; and a temporary certificate of operation is issued by the department to the licensed elevator contractor. The certificate must be issued for a period not to exceed 90 calendar days. Renewals under this subrule may be granted at the discretion of the department as follows:

(a) Permanent elevators used temporarily by the public must have maintenance performed by a licensed elevator journey person every 30 calendar days.

(b) Periodic inspections may be conducted by a general inspector every 30 calendar days and the appropriate fees assessed at the discretion of the department.

R 408.7014 Inspection reports and certificates of operation.

Rule 14. (1) A general inspector shall provide a report to the department of each inspection stating the condition of the elevator within 2 business days of the inspection.

(2) A report indicating an elevator has been sealed out of service must be forwarded to the department within 48 hours of being sealed.

(3) The director shall issue a certificate of operation for a capacity not to exceed the capacity named in the inspection report.

R 408.7015 Violation notices.

Rule 15. (1) If upon inspection an elevator is determined to be in an unsafe condition, or if the owner or user has not complied with these rules, then the general inspector shall issue to the holder of the certificate of operation a violation notice stating corrections required and a time limit within which the owner or user must comply with the violation notice. The owner or user shall notify the department in writing as soon as he or she has complied with the corrections stated in the violation notice and full compliance is affected. Notification must be on forms furnished by the department.

(2) If in the judgment of the general inspector failure to make these corrections would endanger human life, then compliance with the violation notice may be required immediately.

(3) Noncompliance with the violation notice may subject the holder of the certificate of operation to the penalty provisions of the act.

R 408.7019 Fees.

Rule 19. (1) All fees are subject to a 2% to 3% increase per annum at the discretion of the department. All fee amounts are in effect as of the effective date of these rules and are

approved for 1 calendar year. After this first calendar year, the department must issue and enforce an updated fee schedule each calendar year. Fees must be paid in accordance with the following schedule:

Commissions to inspect elevators

Commission	\$50.00.
Commission renewal.....	\$50.00.

Examination for certificates of competency

Certificate of competency examination (nonrefundable)	\$50.00.
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Elevator contractors and journeyperson examination and licenses

Elevator contractor's license and renewal (nonrefundable).....	\$100.00.
Elevator contractor's examination (nonrefundable)	\$100.00.
Elevator journeyperson license and renewal (nonrefundable).....	\$40.00.
Elevator journeyperson examination (nonrefundable).....	\$100.00.

Installation permits fees

Application fee all devices (nontransferable and nonrefundable)	\$100.00.
Base permit fee for the following devices:	\$300.00.

Passenger elevator

Freight elevator

Inclined elevator

Limited-use/limited application elevator

Private residence elevator

Private residence inclined elevator

Special purpose personnel elevator

Dumbwaiter

Material lift

Power sidewalk elevator

Rooftop elevator

Belt manlift

Special elevating device

Personnel hoist

For these installations, an additional amount of \$50.00 is charged for each hoistway opening or for each floor traveled without a hoistway opening, or both.

Base permit fee: escalators and moving walks	\$360.00.
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Base permit fee: private residence platform lift and private residency stairway chairlift.....	\$250.00.
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Base permit fee: platform lift and stairway chairlift	\$100.00.
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Alteration, replacement, and dormant elevator permit fees

Application fee: all devices, excluding emergency permits, nontransferable and nonrefundable.	\$100.00.
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Alteration personnel hoist	\$150.00.
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For the specified alteration fees, an additional amount is charged for each additional alteration and or personnel hoist tower rise at \$75.00.

Dormant elevator \$100.00.

For alterations, excluding personnel hoist, and dormant elevators, an additional amount of \$25.00 is charged for each hoistway opening or for each floor traveled without a hoistway opening, or both.

Emergency permit fee, maximum 2 items and not applicable for installations. \$500.00.

Certificate of operation

Biennial and annual certificate of operation.....\$60.00.

Temporary certificate of operation\$250.00.

Inspection by general inspector

Biennial inspection for devices complying with R 408.7011(b).....\$125.00.

Annual and biennial inspection for all other devices.....\$175.00.

The items listed under “Inspection by general inspector” also have an additional amount of \$25.00 that will be charged for each hoistway opening or for each floor traveled without a hoistway opening, or both.

Temporary certificate of operation inspection.....\$200.00.

The temporary certificate of operation inspection has an additional amount of \$35.00 that will be charged for each hoistway opening or for each floor traveled without a hoistway opening, or both.

Reinspection or violation notice follow-up for devices complying with R

408.7011(b).....\$125.00.

Reinspection or violation notice follow-up for all other devices.....\$175.00.

(2) A final inspection fee is included in the installation and alteration permit fee. If a scheduled final inspection is canceled without 24 hours notice to the department, or if the elevator is not complete in the judgment of the general elevator inspector, then an additional fee must be charged to the elevator contractor as follows:

(a) \$450.00 for private residence elevator, dumbwaiter, platform lift, or stairway chairlift.

(b) \$750.00 for all other devices.

(3) A written request for a refund on a permit must be made within 1 year from the application date. An issued permit becomes invalid unless the work on the site authorized by the permit is commenced within 180 days after issuance, or if the work authorized on the site by the permit is suspended or abandoned for a period of 180 days after work is commenced. A 1-time 180-day permit extension must automatically be granted when a building permit for the same project remains valid.

(4) The department may provide, upon written request, special services that are not otherwise covered in the fee structure. The charge for this service \$150.00 per hour including travel time, any overnight accommodations, or special traveling needs, such as flights, if

required. Fees that are required pursuant to the provisions of the act must be paid to the department. Checks or money orders must be made payable to the "State of Michigan."

R 408.7020 Licensed elevator contractor and elevator contracting company.

Rule 20. (1) If an elevator contracting company's ability to apply for permits is based on the qualification of employing an individual who works full-time and is licensed in this state as an elevator contractor, the termination or separation of employment of the licensed elevator contractor must result in the immediate suspension of the elevator contracting company's ability to obtain new permits. An elevator contracting company's ability to request permits remains suspended until another licensed elevator contractor is working full time for the elevator contracting company. Upon separation from the elevator contracting company, the licensed elevator contractor and the elevator contracting company shall each immediately notify the department in writing when the termination or separation of the employment occurs. The notification to the department of a new licensed elevator contractor working for an elevator contracting company must be submitted in writing by the licensed elevator contractor and the elevator contracting company within 5 business days of hiring. Failure to notify the department of separation or hiring may result in a \$50.00 fine to be paid by either or both parties found not to have notified the department.

(2) A person serving as the licensed elevator contractor of an elevator contracting company may not concurrently serve as a licensed elevator contractor for another elevator contracting company. A licensed elevator contractor must be employed on a full-time basis by the elevator contracting company for whom the elevator contractor requests permits.

(3) The elevator contracting company and the licensed elevator contractor are jointly and separately responsible for exercising the supervision and control of the elevator operations necessary to secure full compliance with the act, the rules promulgated under the act, and all other laws and rules related to elevating devices.

R 408.7023 Appeals to the board.

Rule 23. (1) Any person, firm, or corporation aggrieved by any decision, ruling, or order of the director or of the department may appeal 1 time. The appeal must be made in writing within 15 calendar days from date of mailing of the decision, ruling, or order to the board, for a hearing before the board pursuant to section 8(1)(d) of the act, MCL 408.808. An appeal must specify the reasons and the relief sought and be submitted to the director for presentation to the board. All submissions must include but not limited to make, model, and drawings detailing top, side, front and orthographic views of equipment including detailed documentation specific to affected systems, parts, assemblies and devices as well as any connected equipment subject to the discretion of the department and board.

(2) A \$250.00 nonrefundable fee must be made to the department at the time the appeal is filed. Checks, money orders, e-checks, cashier's checks, or credit card charges must be made payable to the "State of Michigan."

(3) The board shall set a time for hearing of the appeal and provide written notice to the appellant at least 10 days before the date set for hearing.

(4) A request for an adjournment must be filed in writing at least 5 days before the date set for hearing. The board or the director may, for good cause, grant an adjournment.

(5) If the appellant fails to appear at the time set for hearing, the board may proceed with the hearing and decide the case in the absence of the appellant. The board may affirm, modify, or set aside the ruling of the department and shall notify the director and the appellant in writing of its decision.

R 408.7023a Variance requests.

Rule 23a. (1) A person, firm, or corporation upon application in specific cases, may request a variation of the requirements of the rules when it is clearly evident that exceptions or variations are necessary to prevent undue hardship or when existing conditions prevent compliance with the requirements of the act and these rules. The request must be on a form prescribed by the department. A person, firm, or corporation shall specify on the form the reasons for the variance and the relief sought. The form must be submitted to the department for review.

(2) A \$100.00 nonrefundable fee must be paid to the department at the time the variance request is filed. Checks, money orders, e-checks, cashier's checks, or credit card charges must be made payable to the "State of Michigan".

(3) The department may submit the variance request to the board for its action. The department shall set a time for reviewing a request submitted to the board and provide written notice to the appellant at least 10 days before the date set for the review.

(4) A request for an adjournment must be filed in writing by the appellant at least 5 days before the date set for the review. The department or the board may, for good cause, grant an adjournment.

(5) If the appellant fails to appear at the time set for the variance request, the action may continue and the board may decide the request in the absence of the appellant. The request may be approved, denied, modified, or set aside. The department shall notify the appellant in writing of the decision.

R 408.7023b Product acknowledgement.

Rule 23b. (1) All elevating devices, equipment, systems, subsystems, components, and functions must be reviewed for compliance with the current elevator requirements and approved by the department before use in this state. An initial \$100.00 nonrefundable application fee must be made to the department at the time of application.

(2) All product acknowledgement requests must be on a form prescribed by the department and accompanied by a compliance document that reflects compliance with the corresponding requirements and supporting documents, including, but not limited to, make, model, and wiring diagram; factor of safety calculations; certifications; drawings detailing top, side, front, and orthographic views of equipment, including detailed documentation specific to affected systems, parts, assemblies and devices; and any other information the department finds necessary for the specific review.

(3) A letter on the manufacturer's letterhead, signed by an engineer who is employed by the manufacturer, must accompany the documentation. The letter must state that when installed per manufacturer specifications, the unit will comply with the applicable standards or codes, or both, that are adopted by reference in R 408.7003. Equipment not covered by codes and standards in accordance with R 408.7003 must not be installed until approved in accordance with this rule.

(4) A rate of \$100.00 per hour may be charged for special services of a product review. The total charges are determined on an hourly basis for the review upon completion. An acknowledgement may not be granted until full payment of these services has been received.

R 408.7024 Applicability of rules and manual.

Rule 24. Elevators that were installed before the effective date of this code edition must comply with this state's elevator laws and rules in effect at the time of installation. The alteration of elevators installed before the effective date of this code must comply with the state's elevator laws and rules in effect at the time of alteration. All other approved existing features or components of the elevator must comply with these rules and be maintained as described in the ASME safety code for existing elevators and escalators ASME A-17.3, which is adopted by reference in R 408.7003.

R 408.7025 Maintenance of power elevators; frequency; exceptions.

Rule 25. (1) A power elevator, except a private residence elevator, private residence inclined elevator, private residence platform lift, or private residence stairway chairlift, must be maintained at least once every 90 days by an elevator journey person who is licensed in this state, except for the following devices, which must be maintained at least once every 180 days:

- (a) Dumbwaiters.
- (b) One-person elevators, electric and hand-powered.
- (c) Platform lifts and stairway chairlifts in buildings other than private residences.
- (d) Private residences inclined elevators installed under the requirements of the act for use by multiple residences.

(2) An ongoing written record of all maintenance, repairs, replacements, inspection, callbacks, and testing must be kept in the machine room or on-site if a machine room does not exist.

CHAPTER 2. ALL ELEVATORS

R 408.7029 Dormant elevators.

Rule 29. (1) An elevator, escalator, or moving walk that is inactive for 1 year must be classified as dormant and placed out of service in compliance with section 8.11.1.4(b) of the ASME A17.1 code.

(2) A permit must be obtained and the elevator must not be placed into service until it has been inspected and tested by a general inspector, except as provided in section 15 of the act, MCL 408.815.

(3) A platform lift or stairway chairlift that is inactive for 1 year must be classified as dormant and placed out of service as follows:

(a) The device must be lowered and any suspension means removed.

(b) The power feed lines must be disconnected from the machine disconnect switch ensuring all circuit parts or conductors are deenergized. The platform lift or stairway chairlift must comply with section 10.1.6 of the ASME A18.1 code, as adopted by reference in R 408.7003.

(c) All landing entrances must be secured in a closed position from inside the runway or hoistway.

(d) Folding type devices must be secured against movement.

(4) Before a dormant elevating device may be placed in service, an alteration permit must be applied for and approved by the department. The dormant elevating device must be inspected by the department and conform to these rules and the applicable section of the standard.

R 408.7030 Elevator and escalator monitoring.

Rule 30. All elevators and escalators may be monitored from a remote location. Monitoring must consist of passing information from the elevator control to a remote location for the collection of information. A device may not have the capability to adjust, alter, change, or reset any switch, parameter, or system of the elevator control from any location except the corresponding car, hoistway, machine room, lobby panel, or fire command center. The device must not be capable of bypassing or resetting any safety or electrical protective device. The monitoring means may be used to initiate car and hall landing calls or to secure floors from access. Information collected must be made available to the department upon request. A system related to the operation of an elevator or escalator that interfaces and communicates with the device and any other device must also comply with this rule. Remote connections found to be in violation of the above requirements must be removed and prohibited from future use.

CHAPTER 3. ASME A17.1 MODIFICATIONS

R 408.7031a Automated equipment utilizing elevator.

Rule 31a. (1) Not more than 1 elevator in a bank may be occupied by an automated device at any 1 time. If a single elevator bank is selected due to normal power supply loss, automated devices may not utilize that car. General public passenger cars may not be used to transport automated devices.

(2) A maintenance program for devices must be instituted by the building owner and be available to the requestor upon request.

(3) Devices that utilize multiple carts must be tested annually with all possible variations of carts. Records must be kept onsite and be available to the requestor upon request.

(4) All circuitry and controllers must be kept out of elevator machine rooms and control spaces.

(5) Proper signage must be posted at each elevator connected to the automated devices. Signs must include both of the following language:

(a) Do not enter or use elevator if automated carts are entering, exiting, or on the car.

(b) Service elevator interfaced with automated carts, "Stand clear!"

(6) Any interfacing must comply with R 408.7030.

R 408.7031b Guards between adjacent pits.

Rule 31b. Section 2.2.3 of the ASME A17.1 code is amended to read as follows:

2.2.3.1 Guards must be provided between adjacent pits. The guard must be of noncombustible material. The guard, if of openwork material, must reject a ball 25 mm (1 inch) in diameter. The guard must be supported such that when subjected to a force of 450 N (100 lbf) applied over an area of 100 mm by 100 mm (4 inches by 4 inches) at any location, the deflection must not reduce the clearance between the guard and the adjacent pit below 25 mm (1 inch). Guards must extend not less than 2000 mm (79 inches) above the level of the higher pit floor. Where a ladder is installed adjacent to a guard, the guard must extend not less than 2000 mm (79 inches) above the top rung or rungs used as handgrips. A single horizontal structural element at the top of a pit ladder, used to stabilize the vertical side rails, is not considered a rung or handgrip.

2.2.3.2 Where access to pits of elevators in a multiple hoistway is by means of a separate pit access door (see 2.2.4.5) and not by a pit access ladder, adjacent pits must:

(a) Be guarded as required by 2.2.3.1.

(b) The guards may be omitted if the clearance between the bottom of the car or counterweight, including any equipment attached thereto, while resting on a fully compressed buffer and the bottom of the pit is not less than 2,130 mm (84 inches)

R 408.7033a Sumps and sump pumps.

Rule 33a. Section 2.2.2.6 of ASME A17.1 is amended to read as follows: Sumps and sump pumps in pits, where provided, must be covered. Covers must be secured and level with the pit floor and be either a recessed grate type or solid. If solid, it must have means to permit water flow to comply with section 2.2.2.5 of ASME 17.1.

R 408.7034 Enclosure of machine rooms and machinery spaces.

Rule 34. Section 2.7.1 of the ASME A17.1 code is amended to read as follows:

2.7.1. Machines, control equipment, sheaves, and other machinery may not be exposed to the weather. Machine room, control room, and machinery-space enclosures must conform to section 2.7.1.1 or 2.7.1.2, and also conform to 2.7.1.3 of the ASME A17.1 code, as applicable.

Machine rooms and control rooms must be located at a hoistway landing associated with the equipment within the room. Elevator machine and control rooms may be located overhead, adjacent to, underneath the hoistway, or at a remote location. The entrance to the machine room or control room may be not more than 25 feet, clear unobstructed walking pathway from the elevator hoistway door. The distance from the machine room door to the hoistway door may be over 25 feet when the machine room is located directly above the hoistway in a conventional layout. Pit and hoistway access doors may not be a direct access between a hoistway enclosure and machine room or control room.

Elevators installed without a machine room or control room must locate the required disconnecting means outside of the hoistway in a separate dedicated control space that is readily accessible and adjacent to the control space that contains the control.

The disconnecting means must be in a single dedicated space or dedicated room, intended with or without full body entry, at a distance not to exceed 25 feet from the landing that contains the elevator control, inspection, or test panel. The disconnecting means must be secured so that only elevator journeyman and qualified personnel may gain access. If the controller is within an entrance assembly, signage must be placed at or near the frame with the specific location of the disconnecting means.

Access to machine rooms, control rooms, machine spaces, or control spaces may not be through restrooms, lavatories, locker rooms, or associated vestibules. Where enclosed ceilings are required or provided, they must be of a solid type with no access panels. Drop type ceilings are not permitted. Machine rooms, control rooms, machinery spaces, and control spaces may not be used as a pass through or for access to other areas. Building access panels or doors are prohibited in these areas.

R 408.7034a Location of equipment.

Rule 34a. Section 2.7.6.3.2 of the ASME A 17.1 code is amended to read as follows:

2.7.6.3.2 The motor controller must be located in a machinery space within the hoistway, a machine room, or control room. A motor controller may not be located outside the specified rooms or spaces. Regardless of location, illumination of 19 fc, meaning foot candles, must be provided where controller work is to be performed.

R 408.7037a Illumination of cars and lighting fixtures.

Rule 37a. Section 2.14.7.1.4 of ASME A17.1 is amended to read as follows:

2.14.7.1.4 Each elevator must be provided with at least 2 electric light fixtures and a ground fault circuit interrupter duplex receptable on the car top. The 2 light fixtures combined must provide an illumination level of not less than 10 fc at any point on the car top. The light fixtures must be permanent and be of the fixed or portable type and be equipped with guards.

R 408.7040a Phase I emergency recall operation.

Rule 40a. Section 2.27.3.1.5 of the ASME A17.1 code is amended to read as follows:

All “FIRE RECALL” switches must be provided with an illuminated visual signal. The visual signal must be 1 of the symbols shown in Fig.2.27.3.1.6(h) to indicate when Phase I Emergency Recall Operation is in effect.

R 408.7041 Machinery spaces, machine rooms, control spaces, and control rooms.

Rule 41. Sections 3.7 and 3.7.1 of the ASME A17.1 code is amended to read as follows:

3.7. A machinery space outside the hoistway containing a hydraulic machine and an elevator controller must be a machine room. The hydraulic machine must be located in the hoistway or outside the hoistway in an elevator machine room. Hydraulic machines being installed in the line of movement of an elevator car or where an affected person is required to work in the line of movement of an elevator car must be prohibited. The elevator controller must be accessible only from a machine room, control room, or hoistway.

3.7.1. Hydraulic machines, control equipment, sheaves, and other machinery may not be exposed to the weather. Machine room, control room, and machinery-space enclosures must conform to the requirements of sections 2.7.1 to 2.7.7 and 2.7.9 of the ASME A17.1 code and the following:

Machine rooms and control rooms must be located at a hoistway landing associated with the equipment within the room. Elevator machine and control rooms may be located overhead, adjacent to, underneath the hoistway, or at a remote location. The entrance to the machine room or control room must be not more than 25 feet, clear unobstructed walking pathway from the elevator hoistway door. The distance from the machine room door to the hoistway door may be over 25 feet when the machine room is located directly above the hoistway in a conventional layout. Pit and hoistway access doors may not be for direct access between a hoistway enclosure and machine room or control room. Regardless of location, illumination of 19 fc, meaning foot candles, must be provided where controller and machinery work is to be performed.

Elevators installed without a machine room or control room must locate the required disconnecting means outside of the hoistway in a separate dedicated control space, readily accessible and adjacent to the control space that contains the control.

The disconnecting means must be in a single dedicated space or dedicated room, intended with or without full body entry, at a distance not to exceed 25 feet from the landing that contains the elevator control, inspection, or test panel. The disconnecting means must be secured so that only elevator journeyman and qualified personnel may gain access. If the controller is within an entrance assembly, signage must be placed in plain view, at or near the controller, and state the location of the disconnecting means.

Access to machine rooms, control rooms, machine spaces, or control spaces may not be through restrooms, lavatories, locker rooms, or associated vestibules. Where enclosed ceilings are required or provided, they must be of a solid type with no access panels. Drop type ceilings are not permitted. Machine rooms, control rooms, machinery

spaces, and control spaces may not be used as a pass through or for access to other areas. Building access panels or doors are prohibited in these areas.

R 408.7041a. Fire extinguishers.

Rule 41a. Section 8.6.1.6.5 of ASME A17.1 is amended to read as follows: In jurisdictions not enforcing the National Building Code of Canada, Class “ABC” fire extinguishers must be provided in elevator machine rooms, control rooms, and control spaces outside the hoistway intended for full bodily entry, and walk-in machinery spaces and control rooms for escalators and moving walks; and they must be located convenient to the access door.

For machine-room-less (MRL) installations, Class “ABC” fire extinguishers must be conspicuously located where they are readily accessible outside of the elevator hoistway within 21 feet (6.4m) of the centerline of each elevator entrance associated with the controller. In the event of side or rear elevator entrance assemblies a Class “ABC” fire extinguisher must be conspicuously located in accordance with this rule.

R 408.7045 Shutoff valves; gauge snaps; underground piping; tags.

Rule 45. Section 3.19.4.1 of the ASME A17.1 code is amended to read as follows:

3.19.4.1 A shutoff valve must be provided on a new or altered hydraulic elevator and be installed in the pressure piping within the elevator machine room. If the hoistway is remotely located from the machine room, then a shutoff valve must also be provided in the elevator pit.

R 408.7046 Pressure gauge fittings.

Rule 46. Section 3.19.4.5 of the ASME A17.1 code is amended to read as follows:

3.19.4.5 A new hydraulic machine must be provided with the necessary permanent pressure gauge snap-on fittings or permanent gauges, with a shut off valve to allow pressure readings at each pump for checking operating pressures. The gauge or fitting must be located on the jack side of the check valve or immediately adjacent to the hydraulic control valve.

R 408.7048a. Rupture or overspeed valve.

Rule 48a. Section 5.3.2.2.2 of the ASME A17.1 code is amended to read as follows: A pressure switch must be provided to remove power from the pump motor and the control valve unless there is positive pressure at the control valve.

A rupture or overspeed valve must be provided on all roped hydraulic jacks, either cable or chain, to stop the flow of fluid and arrest the descent of the car in the event of line or pipe rupture.

R 408.7054 Skirt deflector devices.

Rule 54. Section 6.1.3.3.10 of the ASME A17.1 code is amended to read as follows:

6.1.3.3.10 Deflector devices are permitted. Where provided, deflector devices must extend from skirt panels parallel to the escalator path of travel. Means to secure these deflector devices may be on the exposed surface of the skirt. All fasteners must be of steel with machine screw threads. Any exposed fastener heads shall be of the tamper-resistant type and flush to within 1 mm, or 0.04 inch.

(1) Rigid elements must comply with the following conditions:

(a) Horizontal protrusions extending above the step must be 18 mm, or 0.75 inch maximum. Corners or changes in profile must be rounded or beveled.

The exposed surfaces of such elements must be smooth and permanently treated with a low-friction material.

(b) On the incline, the area of any protrusion must lie entirely offset outward from a line beginning on the vertical portion of the skirt panel measured 25 mm, or 1 inch vertically above the step nose line. The lower surface must be beveled not less than 10 degrees upward and the upper surface must be beveled not less than 15 degrees downward in compliance with Figure 6.1.3.3.10 of the ASME A17.1 code.

(c) At the upper and lower landing, any protrusion must lie entirely above a line beginning on the vertical portion of the skirt panel 50 mm, or 2 inches, above the step nose line. The lower surface must be beveled not less than 10 degrees upward and the upper surface must be beveled not less than 15 degrees downward. Any rigid elements at the landings must smoothly blend into the rigid elements along the incline in accordance with the radius of curvature of the transition zone.

(d) If attached to the skirt, rigid elements must withstand a force of 900 N (200 lbf) perpendicular to the line of attachment of the element without detachment or permanent deformation. The force shall be applied to an area of 645 mm² (1 inch²).

(2) Flexible elements must comply with the following conditions:

(a) The horizontal protrusion extending from the skirt surface above the step must be 50 mm, or 2 inches, maximum.

(b) Must be capable of deflecting to an angle of 10 degrees or greater above the horizontal protrusion.

(c) Noncontinuous flexible elements are allowed to deflect to allow a maximum of 9.5 mm, or 0.375 inch interference with any point on the step surface.

(d) Continuous flexible elements may not deflect such that they can contact the steps.

R 408.7054a Rescinded.

R 408.7057 Applicability of alteration requirements.

Rule 57. Section 8.7.1.1 of the ASME A17.1 code is amended to read as follows:

8.7.1.1 (1) If an alteration is performed to the elevator or any of its subsystems, regardless of any other requirements of section 8.7 of the ASME A17.1 code, then the alteration, at a minimum, must conform to both of the following requirements:

(a) This state's elevator laws and rules at the time of installation.

(b) This state's elevator laws and rules for the alteration at the time of any alteration.

(2) A permit must be obtained and the elevator may not be placed into service until it has been inspected and tested in the presence of a general inspector, except as provided in section 15 of the act, MCL 408.815.

R 408.7057a Bottom car clearances.

Rule 57a. Section 2.15.9.2(c) of ASME A17.1 is amended to read as follows:

2.15.9.2(c). Where the installation is the result of replacement or alteration utilizing an existing hoistway and pit, the toe guard may be reduced in length utilizing an existing hoistway and pit, provided the car speed does not exceed 150 feet per minute. The toe guard may be reduced in length proportionate to the maximum length the pit depth will allow complying with section 2.4.1.5. At no time may the toe guard be shorter than the leveling or truck zone plus 75mm, or 3 inches.

R 408.7058a Escalator electrical protective devices.

Rule 58a. Section 6.1.6.3 of the ASME A17.1 code is amended to read as follows:

6.1.6.3. Electrical protective devices must be provided pursuant to 6.1.6.3 through 6.1.6.3.16 and be the manually resetting type. Automatic resetting of a safety device within these codes is prohibited.

R 408.7058b Moving walk electrical protective devices.

Rule 58b. Section 6.2.6.3 of the ASME A17.1 code is amended to read as follows:

6.2.6.3. Electrical protective devices must be provided pursuant to 6.2.6.3.1 through 6.2.6.3.12 and be the manually resetting type. Automatic resetting of a safety device within these codes is prohibited.

R 408.7058c Escalator handrail speed-monitoring device.

Rule 58c. Requirement 6.1.6.4 of the ASME A17.1 code is amended to read as follows:

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

R 408.7058d Moving walk handrail speed-monitoring device.

Rule 58d. Requirement 6.2.6.4 of the ASME A17.1 code is amended to read as follows:

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

R 408.7059a Periodic test tags.

Rule 59a. Section 8.10.1.1.1 of the ASME A17.1 code is amended to read as follows:

8.10.1.1.1. The acceptance inspection must be made by an inspector employed by the authority having jurisdiction. All parts of the installation must be inspected for conformity with the requirements of this state's elevator laws, these rules, and section 8.10 of the ASME A17.1 and ASME 17.2. An approved paper tag must be installed in the machine room or machine space for all periodic tests.

R 408.7060 Three-year inspection and test requirements.

Rule 60. Section 8.6.5.15.3 is added to the ASME A17.1 code to read as follows:

8.6.5.15.3. (1) Cylinders must be tested at intervals of not more than 36 months.

(2) Three-year inspection and test requirements are as follow:

(a) The relief valve setting must comply with section 3.19.4.2 of the ASME A17.1 code. The relief valve must be resealed if the relief valve setting is altered or if the seal is broken.

(b) Test the relief valve setting by first inching the empty car upward to engage the plunger stop ring or to engage other suitable blocking provided and then apply pressure from the pump to check the setting. A copy of test forms must be maintained on site in the machine room or space available to elevator personnel pursuant to section 8.6.1.4.1 of ASME A17.1. Procedures for set test are as follows:

(i) Put rated load in the car and locate it at any convenient level.

(ii) Open the disconnect switch and locate the elevation of the platform with respect to a convenient reference.

(iii) For cylinders that are not completely exposed, after not less than 2 hours, note the position of the platform with respect to the chosen reference. For cylinders that are completely exposed, after not less than 30 minutes, note the position of the platform with respect to the chosen reference. A change in the car position during a cylinder test that cannot be accounted for by visible oil leakage or temperature change of the oil indicates a failure of some type requiring further inspections, tests, or repairs. An accessible written record of all oil levels and all oil added must be maintained in the machine room.

CHAPTER 4. ASME A18.1 MODIFICATIONS

R 408.7062 Runway entrance.

Rule 62. Section 2.1.1.2 of the ASME A18.1 code is amended to read as follows:

2.1.1.2 The runway entrance must be guarded at the upper landing by a door of unperforated construction not wider than the platform plus 1 inch, or 25.4 millimeters. The door must be self-closing or power operated and guard the entire opening to a height equal to or higher than the height of the platform enclosure. The openings created in the runway by these doors must provide a minimum vertical clearance of 6 feet 8 inches. The doors must guard the entire area of the openings except for space necessary for

operation. Space necessary for operation must reject a ball 12 mm, or 0.5 inches, in diameter. The lift side of the landing doors and sill must present a smooth surface located not closer than 10 mm, or 0.375 inches, or more than 20 mm, or 0.75 inches, from the platform floor.

CHAPTER 6. ANSI A10.4 MODIFICATIONS

R 408.7071 Location.

Rule 71. Section 5.4.8 of the ANSI A10.4 standard is amended to read as follows:

5.4.8. (1) A personnel hoist must be installed not less than 10 feet from any other lifting or lowering apparatus except other personnel hoists.

(2) A hoistway may not be located either partially or wholly over sidewalks or passageways.

(3) If tower cranes or any other lifting or lowering apparatus are installed such that the boom, load, or trolley may go over or into the 10-foot restricted area, then the personnel hoist must be unoccupied anytime the boom, or trolley passes over the restricted area. The evacuation of the personnel hoist must be the responsibility of the crane operator and the general contractor.

R 408.7079 Rated load safety test.

Rule 79. Section 26.4.8 of the ANSI A10.4 standard is amended to read as follows:

26.4.8 A rated load safety test, as required by section 26.2.1.1 of the ANSI A10.4 standard, must be performed by a licensed elevator contractor in the presence of a general elevator inspector every 90 days. Periodic inspections may be conducted every 30 days and the appropriate fees assessed at the discretion of the department.

R 408.7081a Operators.

Rule 81a. Section 30.3 of the ANSI A10.4 standard is amended to read as follows:

30.3 The user shall ensure that the operators are knowledgeable and capable of performing the duties outlined in the operating manual and are capable of recording such activity in their log. A list certifying the training of any operator must be kept in the on-site documentation. Only authorized personnel listed in that document may operate the lift.