

CHAPTER 72
CONVEYANCES INSTALLED ON OR AFTER JANUARY 1, 1975

[Prior to 9/24/86, Labor, Bureau of [530]]

[Prior to 10/21/98, see 347—Ch 72]

875—72.1(89A) Purpose and scope. This chapter contains safety standards covering the design, construction, installation, operation, inspection, testing, maintenance, alteration and repair of conveyances installed on or after January 1, 1975. The rules of this chapter also apply to previously dormant conveyances that are being reactivated, and to reinstalled or moved conveyances. As used in this rule, the word “installation” refers to the date on which a conveyance contractor enters into a contractual agreement pertaining to a conveyance.

72.1(1) For installations between January 1, 1975, and December 31, 1982, ANSI A17.1 shall mean ANSI A17.1 (1971).

72.1(2) For installations between January 1, 1983, and December 31, 1992:

a. ANSI A17.1 shall mean ANSI A17.1 (1981); and

b. ANSI A117.1 shall mean ANSI A117.1 (1980).

72.1(3) For installations between January 1, 1993, and December 31, 2000:

a. ASME A17.1 shall mean ASME A17.1 (1990) and in addition shall mean the following:

(1) ASME A17.1b (1992), Rule 110.11h, for electric elevators installed between July 1, 1993, and December 31, 2000, and

(2) ASME A17.1b (1992), Rule 110.11h that is referenced by Rule 300.11, for hydraulic elevators installed between July 1, 1993, and December 31, 2000.

b. ANSI/NFPA 70 shall mean ANSI/NFPA 70 (1990); and

c. ANSI A117.1 shall mean ANSI A117.1 (1980).

72.1(4) For installations between January 1, 2001, and December 31, 2003:

a. ASME A17.1 shall mean ASME A17.1 (1996 through the 1999 addenda);

b. ASME A18.1 shall mean ASME A18.1 (1999), except Chapters 4, 5, 6, and 7;

c. ANSI A117.1 shall mean ANSI A117.1 (1998); and

d. ANSI/NFPA 70 shall mean ANSI/NFPA 70 (1999).

72.1(5) For installations between January 1, 2004, and April 4, 2006:

a. ASME A17.1 shall mean ASME A17.1 (2000 through the 2003 addenda);

b. ASME A18.1 shall mean ASME A18.1 (1999 through the 2001 addenda), except Chapters 4, 5, 6, and 7;

c. ANSI A117.1 shall mean ANSI A117.1 (1998); and

d. ANSI/NFPA 70 shall mean ANSI/NFPA 70 (2002).

72.1(6) For installations between April 5, 2006, and July 22, 2008:

a. ASME A17.1 shall mean ASME A17.1-2004, A17.1a-2005 and A17.1S-2005;

b. ASME A18.1 shall mean ASME A18.1 (2003), except Chapters 4, 5, 6, and 7;

c. ANSI A117.1 shall mean ANSI A117.1 (2003), except for Rule 407.4.6.2.2; and

d. ANSI/NFPA 70 shall mean ANSI/NFPA 70 (2005).

72.1(7) For installations between July 23, 2008, and July 18, 2012:

a. ASME A17.1 shall mean ASME A17.1-2007/CSA B44-07;

b. ASME A17.7 shall mean ASME A17.7-2007/CSA B44-07;

c. ASME A18.1 shall mean ASME A18.1 (2003), except Chapters 4, 5, 6, and 7;

d. ANSI A117.1 shall mean ANSI A117.1 (2003), except for Rule 407.4.6.2.2; and

e. ANSI/NFPA 70 shall mean ANSI/NFPA 70 (2005).

72.1(8) For installations between July 19, 2012, and January 30, 2014:

a. ASME A17.1 shall mean ASME A17.1-2010/CSA B44-10, except for Rule 2.27.1.1.6;

b. ASME A17.7 shall mean ASME A17.7-2007/CSA B44-07;

c. ASME A18.1 shall mean ASME A18.1 (2003), except Chapters 4, 5, 6, and 7;

d. ANSI A117.1 shall mean ANSI A117.1 (2003), except for Rule 407.4.6.2.2; and

e. ANSI/NFPA 70 shall mean ANSI/NFPA 70 (2008).

72.1(9) For installations between January 31, 2014, and January 14, 2015:

- a. ASME A17.1 shall mean ASME A17.1-2010/CSA B44-10, except for Rule 2.27.1.1.6;
- b. ASME A17.7 shall mean ASME A17.7-2007/CSA B44-07;
- c. ASME A18.1 shall mean ASME A18.1 (2011), except Chapters 4, 5, 6, and 7;
- d. ANSI A117.1 shall mean ANSI A117.1 (2003), except for Rule 407.4.6.2.2; and
- e. ANSI/NFPA 70 shall mean ANSI/NFPA 70 (2008).

72.1(10) For installations on or after January 14, 2015:

- a. ASME A17.1 shall mean ASME A17.1-2013/CSA B44-13;
- b. ASME A17.7 shall mean ASME A17.7-2007/CSA B44-07;
- c. ASME A18.1 shall mean ASME A18.1 (2011), except Chapters 4, 5, 6, and 7;
- d. ANSI A117.1 shall mean ANSI A117.1 (2003), except for Rule 407.4.6.2.2; and
- e. ANSI/NFPA 70 shall mean ANSI/NFPA 70 (2011).

[ARC 7840B, IAB 6/17/09, effective 7/22/09; ARC 8759B, IAB 5/19/10, effective 6/23/10; ARC 0168C, IAB 6/13/12, effective 7/18/12; ARC 1232C, IAB 12/11/13, effective 1/31/14; ARC 1766C, IAB 12/10/14, effective 1/14/15; ARC 1971C, IAB 4/29/15, effective 6/3/15]

875—72.2(89A) Definitions. The definitions contained in ASME A17.1, ASME A18.1, ANSI A117.1, and any other standard adopted herein by reference shall be applicable as used in this chapter to the extent that the definitions do not conflict with the definitions contained in Iowa Code chapter 89A and these rules. However, the definition of “building code” in ASME A17.1 is modified to exclude the Building Construction and Safety Code (NFPA 5000) and the National Building Code of Canada (NBCC) for any installation after March 1, 2008.

[ARC 7840B, IAB 6/17/09, effective 7/22/09]

875—72.3(89A) Accommodating the physically disabled. All passenger elevators installed between January 1, 1975, and December 31, 1982, which are available and intended for public use shall be usable by the physically disabled. All passenger elevators shall have control buttons with identifying features for the benefit of the blind and shall allow for wheelchair traffic. All passenger elevators and wheelchair lifts installed on or after January 1, 1983, which are accessible to the general public shall comply with Accessible and Usable Buildings and Facilities ANSI A117.1, sections 407 and 408.

875—72.4(89A) Electric elevators. The provisions contained in ASME A17.1, part 2, are adopted by reference.

875—72.5(89A) Hydraulic elevators. The provisions contained in ASME A17.1, part 3, are adopted by reference.

875—72.6(89A) Power sidewalk elevators. The provisions contained in ASME A17.1, section 5.5, are adopted by reference.

875—72.7(89A) Performance-based safety code. Conveyances may comply with ASME A17.7, in whole or in part, as an alternative to ASME A17.1.

875—72.8(89A) Hand and power dumbwaiters. The provisions contained in ASME A17.1, sections 7.1, 7.2, 7.3, and 7.8, are adopted by reference.

875—72.9(89A) Escalators and moving walks. The provisions contained in ASME A17.1, part 6, are adopted by reference, except for those portions that allow an operating or safety device to reset automatically.

[ARC 1766C, IAB 12/10/14, effective 1/14/15]

875—72.10(89A) General requirements.

72.10(1) The provisions contained in ASME A17.1, Part 8, are adopted by reference unless specifically excluded herein.

72.10(2) Except as noted in this rule, the American Society of Mechanical Engineers Safety Code for Existing Elevators and Escalators, A17.3 (2011), is adopted by reference with an enforcement date of May 1, 2020.

a. If a code provision that is more restrictive than A17.3 (2011) applied to a conveyance when the conveyance was installed, the more restrictive provision shall remain in effect.

b. A17.3 (2011) Part X applies to handicapped restricted use elevators without regard to the scope provisions set forth in A17.3 (2011) Part X.

c. Provisions of A17.3 (2011) that require installation of a new controller to implement Phase 1 and Phase 2 fire service or car top operation are not adopted by reference and shall not be enforced in Iowa.

d. A17.3 (2011), Rule 2.3.2, is intended to prevent the accumulation of sewer gas in an elevator pit and shall not be interpreted to require the addition of a drain pipe in an existing pit. An air gap in an existing drain pipe shall be considered adequate compliance.

e. An elevator that was legally installed with guide rails made of materials other than steel shall not be required to replace the guide rails due to the adoption of A17.3 (2011).

[ARC 1891C, IAB 3/4/15, effective 4/8/15]

875—72.11(89A) Acceptance and periodic tests and inspections of elevators, dumbwaiters, escalators and moving walks. Rescinded IAB 6/17/09, effective 7/22/09.

875—72.12(89A) Wind tower lifts. Wind tower lifts authorized by this rule shall not be installed in grain elevators, high-rise buildings, water towers, television towers or any facility other than a wind tower built for the production of electricity. This rule applies to all wind tower lifts, whether installed before or after May 28, 2008; however, this exception shall not apply to a wind tower lift if the contract for its installation is executed after an AECO is accredited.

72.12(1) Wind tower lifts that meet the requirements of subrules 72.12(2) through 72.12(10) are exempt from the requirements of ASME A17.1. This temporary exemption shall terminate for a wind tower lift upon the occurrence of at least one of the following events:

a. Three weeks have passed since the accreditation of at least one AECO, and the manufacturer of the wind tower lift has not filed with the labor commissioner an affidavit attesting that a request for Certificate of Conformance as described by ASME A17.7 (2007) was submitted to an AECO.

b. The AECO has reviewed a request pursuant to ASME A17.7 and refused to issue a Certificate of Conformance for the model or series of lifts.

c. The AECO has determined that modifications to the wind tower lift are necessary, and the modifications have not been made with reasonable diligence.

d. The AECO has determined that modifications to the wind tower lift are necessary, and the labor commissioner determines the wind tower lift is not safe to operate prior to completion of the modifications.

e. The AECO has reviewed an application pursuant to ASME A17.7 and issued a Certificate of Conformance for the model or series of lifts.

72.12(2) A wind tower lift placed in operation on or before May 28, 2008, shall be registered by the owner with the labor commissioner no later than July 1, 2008, and shall pass an installation inspection by inspectors employed by the labor commissioner according to the schedule set by the labor commissioner. The wind tower lift shall receive a periodic inspection by the labor commissioner's inspectors annually thereafter.

72.12(3) The owner of a wind tower lift installed after May 28, 2008, shall register the wind tower lift with the labor commissioner prior to its installation. A wind tower lift installed after May 28, 2008, shall pass an installation inspection by the labor commissioner's inspectors prior to its being placed into operation. The wind tower lift shall receive a periodic inspection by the labor commissioner's inspectors annually thereafter.

72.12(4) Registration pursuant to this rule requires submission of the following information to the labor commissioner:

- a. The unique identifier of the wind tower.
- b. The name of the wind tower owner and contact information for the owner's representative.
- c. The name of the wind tower lift manufacturer and contact information for the manufacturer's representative.
- d. The location of the wind farm.
- e. Three copies of the prints and design documents that are certified by a professional engineer duly licensed in the state of Iowa and that bear the professional engineer's P.E. stamp for the lifts.
- f. The manufacturer's complete test procedures, inspection checklists, operating manual, service manual, and related documents as determined necessary by the labor commissioner.

72.12(5) The owner shall notify the labor commissioner within 30 days of any change in the information provided pursuant to 72.12(4) "b" and "c."

72.12(6) This subrule establishes reporting requirements in addition to the requirements of rule 875—71.3(89A). The manufacturer of a lift must notify the labor commissioner in writing within one week if one of its wind tower lifts anywhere in the world is involved in a personal injury accident requiring the service of a physician, a personal injury accident causing disability exceeding one day or death, or an incident causing property damage exceeding \$2,000. The notification shall specifically identify the model number, serial number, and owner of the lift, and a description of the incident or accident. The labor commissioner shall determine and require necessary inspections, tests, changes or enhancements to prevent a similar incident or accident in this state.

72.12(7) Wind tower lifts must comply with 29 CFR 1910.

72.12(8) The manufacturer shall notify the labor commissioner within seven days of notification to the manufacturer that an AECO has:

- a. Issued a Certificate of Conformance for the model or series of wind tower lifts,
- b. Refused to issue a Certificate of Conformance for the model or series of wind tower lifts, or
- c. Determined that modifications to the wind tower lifts are necessary.

72.12(9) Wind tower lifts shall pass an inspection covering the following criteria:

- a. Ascending speed, descending speed, and emergency descending speed shall not exceed the manufacturer's recommendations.
- b. Stop switch, interior lighting, cage entry door, door contact, operating controls and remote operating controls shall operate according to manufacturer's recommendations.
- c. Interior floor and cage framework shall appear to be structurally sound.
- d. Enclosure signage recommended by the manufacturer shall be in place.
- e. Manufacturer's data plate shall be visible.
- f. Hoisting mechanism shall appear to be structurally sound and intact from inside and outside the car.
- g. Guide shoes shall appear to be structurally sound and undamaged.
- h. Suspended power cords and strain relief devices shall reveal no visible damage.
- i. Upper and lower normal and final limits shall operate according to the manufacturer's recommendations.
- j. Overspeed device shall successfully pass a full-load test.
- k. Overload device shall successfully pass an overload test according to the manufacturer's recommendations.
- l. Wire rope, safety rope, and guide rope shall show no evidence of wear.
- m. Guide rope attachments, suspension attachment beam, beam tower attachments, suspension rope attachment, suspension rope secondary attachment (if present), and guide wire rope attachments shall show no evidence of wear or fatigue.
- n. The wind tower lift shall not drift when subjected to a static full load.
- o. Maintenance logs, tags, and other necessary documentation shall be available in sufficient detail to establish that maintenance is occurring pursuant to the manufacturer's schedule.
- p. Guide rope tension device, safety rope tension device, and suspension rope tension device shall pass a visual test for proper tension.
- q. Power cord catch basket shall pass a visual inspection.

r. Safety set distance, overspeed trip speed, overload limit setting, and maximum overload allowed shall not exceed manufacturer's recommendations.

s. A communication device, if installed in the car, shall be operable.

t. Any other items on the manufacturer's recommended inspection checklist shall pass inspection.

72.12(10) The owner or owner's representative shall provide weights as needed to perform necessary tests during inspections.

875—72.13(89A) Alterations, repairs, replacements and maintenance.

72.13(1) General. Except as set forth in this rule, all maintenance, repairs, replacements, and alterations shall comply with the edition of ASME A17.1 currently adopted for new conveyances at rule 875—72.1(89A) or ASME A17.7-2007/CSA B44-07, as applicable. Rule 875—71.10(89A) describes alterations which require that the entire conveyance be brought into compliance with the most current codes.

72.13(2) Exemption for button renumbering. All maintenance, repairs and alterations to devices covered by ANSI A117.1 shall comply with ANSI A117.1 (2003), except for Rule 407.4.6.2.2.

72.13(3) Sump pump exemption. The provisions of ASME A17.1 that require a pit sump or drain shall not apply to an elevator alteration when all of the following criteria are met:

a. No other code or rule requires that the pit be excavated or lowered.

b. The alteration plans do not include the excavation or lowering of the pit floor for any other reason.

c. There is evidence that groundwater has not entered the pit previously.

d. The location and geology of the building indicate a likelihood that groundwater would enter the pit if the foundation or pit floor were breached to install the pit sump or drain.

e. A description of alternative means to maintain the pit in a dry condition is provided to the labor commissioner with the alteration permit application.

f. The labor commissioner approves the alternative means to maintain the pit in a dry condition.

g. The alternative means to maintain the pit in a dry condition are installed or implemented as described in the alteration permit application.

72.13(4) Pit excavation exemption. The full length of the platform guard set forth in ASME A17.1, Rule 2.15.9.2(a), shall not be required if all of the following criteria are met:

a. No other code or rule requires that the pit be excavated or lowered.

b. The alteration plans do not include the excavation or lowering of the pit floor for any other reason.

c. A full-length platform guard would strike the pit floor when the elevator is on its fully compressed buffer.

d. The clearance between the bottom of the platform guard and the pit floor is 2.5 centimeters (1 inch) when the elevator is on its fully compressed buffer.

72.13(5) Sprinkler retrofits and shunt trip breakers. When a sprinkler is added to a hoistway or machine room, the conveyance shall comply with the following:

a. The installation shall comply with the applicable version of ASME A17.1, Rule 2.8.3.3.

b. The elevator controls shall be arranged to comply with the phase I fire recall provisions of the applicable version of ASME A17.1, Rule 2.27.3.

c. The applicable version of ASME A17.1 shall be determined by reference to rule 875—72.1(89A). For purposes of rule 875—72.13(89A), the relevant subrule of 875—72.1(89A) shall apply based on the date the sprinkler is installed instead of the date the conveyance was installed.

72.13(6) Alterations of handicapped restricted use elevators. A component of a handicapped restricted use elevator being altered shall comply with the portions of ASME A17.1, section 5.3, applicable to the component. The edition of ASME A17.1 adopted by reference in rule 875—72.1(89A) shall be applied.

[ARC 7840B, IAB 6/17/09, effective 7/22/09; ARC 1766C, IAB 12/10/14, effective 1/14/15; ARC 2396C, IAB 2/17/16, effective 3/23/16]

875—72.14(89A) Design data and formulas. Rescinded IAB 11/26/03, effective 1/1/04.

875—72.15(89A) Power-operated special purpose elevators. The provisions contained in ASME A17.1, section 5.7, are adopted by reference.

875—72.16(89A) Inclined and vertical wheelchair lifts. The provisions contained in ASME Safety Standard for Platform Lifts and Stairway Chairlifts A18.1, sections 1, 2, 3, 8, 9, and 10, are adopted by reference for all inclined and vertical wheelchair lifts.

875—72.17(89A) Hand-powered elevators. Hand-powered elevators shall not be installed after January 1, 1983.

875—72.18(89A) Accommodating the physically disabled. Renumbered as 875—72.3(89A), IAB 11/26/03, effective 1/1/04.

875—72.19(89A) Limited-use/limited-application elevators. The provisions contained in ASME A17.1, section 5.2, are adopted by reference.

875—72.20(89A) Rack and pinion, screw-column elevators. The provisions contained in ASME A17.1, sections 4.1 and 4.2, are adopted by reference.

875—72.21(89A) Inclined elevators. The provisions contained in ASME A17.1, section 5.1, are adopted by reference.

875—72.22(89A) Material lift elevators. The provisions contained in ASME A17.1, Sections 7.4 and 7.5, are adopted by reference for Type B material lift elevators installed on or after July 23, 2008. Material lift elevators used exclusively for the movement of materials are not subject to regulation under Iowa Code chapter 89A.

[Editorial change: IAC Supplement 2/18/15; see Note 1 at end of chapter]

875—72.23(89A) Elevators used for construction. The provisions contained in ASME A17.1, section 5.10, are adopted by reference only as they pertain to elevators utilizing permanent equipment in a permanent location.

875—72.24(89A) Construction personnel hoists. The provisions of American National Standards Institute (ANSI) A10.4-2007 are adopted by reference for construction personnel hoists as defined by ANSI A10.4-2007. Notwithstanding the ANSI definition, these conveyances may be used only temporarily during construction.

875—72.25(89A) Alarm bell. An automatic passenger elevator shall be provided with an alarm bell that is activated by a switch marked “ALARM” located in or adjacent to the car operating panel. The alarm bell shall be audible inside the car and outside the hoistway.

[ARC 0950C, IAB 8/21/13, effective 9/25/13]

875—72.26(89A) Child safety guards. Unless the car door on a passenger elevator consists of a solid panel, the following criteria shall be met:

72.26(1) A multipoint light curtain shall be installed between the car door and the edge of the car platform.

72.26(2) A second multipoint light curtain shall be installed at the hoistway opening of each floor where a gap of more than 5 inches exists between the car light curtain and the hoistway door.

72.26(3) Each light curtain required by this rule must deactivate the elevator if the light curtain does not function or if the light curtain is obstructed by an object larger than a 4-inch ball.

[ARC 1972C, IAB 4/29/15, effective 6/3/15]

875—72.27(89A) Handicapped restricted use elevators. All handicapped restricted use elevators must meet ANSI A17.1 (1981), Part V. Additionally, the elevators shall comply with the following limitations:

1. The elevator shall be used only by a maximum of one disabled person and one attendant at a time. Where a disabled person cannot operate the elevator in a manner which will ensure access to all operating controls and safety features, an attendant shall accompany the disabled person.

2. The elevator shall be key-operated and shall not be capable of being called by buttons or switches but may be called by a key operator.

3. Keys to operate the elevator shall be in the control of the disabled person, the attendant or persons in positions of responsibility at the location.

4. A list shall be maintained at the location indicating the persons holding keys for the operation of the elevator.

5. Each landing and the elevator car shall be posted to indicate that the elevator is only for the use of disabled persons.

6. The travel distance of the elevator shall not exceed 50 feet.

[ARC 1971C, IAB 4/29/15, effective 6/3/15]

These rules are intended to implement Iowa Code chapter 89A.

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[Editorial change: IAC Supplement 2/18/15]¹

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[Filed ARC 2396C (Notice ARC 2264C, IAB 11/25/15), IAB 2/17/16, effective 3/23/16]

¹ Adopted language of rule 875—72.22(89A) [ARC 6854B, 6/18/08] editorially restored IAC Supplement 2/18/15.