CHAPTER 1320
DEPARTMENT OF ADMINISTRATION
STATE BUILDING CODE
ELEVATORS AND RELATED MACHINES

1320.0100 DEFINITIONS.

Subpart 1. **Scope.** For the purpose of this chapter, the terms or words listed below shall have the meaning indicated.

Subp. 2. **Existing installation.** "Existing installation" means an installation on which the construction or installation was begun prior to the effective date of this code.

Subp. 3. **New installation.** "New installation" means an installation on which the construction or installation was begun subsequent to the effective date of this code.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.0200 GENERAL.

Elevators, dumbwaiters, escalators, manlifts, moving walks, hoists, and lifts shall be designed, constructed, installed, and maintained so as to be reasonably safe to life, limb, and adjoining property.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.0300 EXISTING INSTALLATIONS.

Subpart 1. **Amendment to 1978 code.** "Existing installations" is amended to read as follows.

Subp. 2. **Conditions for continued operation.** All existing installations may be continued in service as long as they are properly maintained and are, in the opinion of the administrative authority, installed and maintained in a safe condition. The administrative authority may order the installation of car gates, car tops, and the car walls extended to the car top on all existing installations. The administrative authority shall have the authority to shut down any piece of equipment covered by this chapter, which in his opinion is dangerous to life, limb, and adjoining property, and such equipment shall not be put back into operation until such unsafe condition has been corrected and approved by the administrative authority.

Subp. 3. **Material change or damage.** Any installation which is materially changed subsequent to the date of enactment of this code shall comply with all of the requirements covering a new installation.

A material change shall be defined as any change which moves the location, increases or decreases the length of travel, changes the type of operation, increases the speed or carrying capacity, or changes the types of power supply of an existing installation.

Any installation, whether new or existing, which shall become damaged, defective, or worn by fire or other causes including ordinary wear to such an extent that in the opinion of the administrative authority it becomes dangerous to life, limb, and adjoining property, such installations shall be repaired or rebuilt in conformity with the provisions of this chapter for new installations. Such equipment shall, if in the opinion of the administrative authority, it is found necessary to protect life, limb, and property, be taken out of service until such unsafe condition has been removed.

Subp. 4. **Unsafe conditions.** When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner and the administrative authority a full and true report of such inspection and such unsafe condition. If the administrative authority finds that the unsafe condition endangers human life, he shall cause to be placed on such elevator, escalator, or moving walk in a conspicuous place a notice stating that such conveyance is unsafe. The owner shall see to it that such notice of unsafe condition is legibly maintained where placed by the administrative authority. The administrative authority shall also issue an order in writing to the owner requiring the repairs or alterations to be made to such conveyance which are necessary to render it safe, and may order the operation thereof discontinued until the repairs or alterations are made or the unsafe conditions are removed. A posted notice of unsafe conditions shall be removed only by the administrative authority when he is satisfied that the unsafe conditions have been corrected.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.0400 INSPECTION, TESTS AND APPROVAL.

Subpart 1. [Repealed by amendment, 9 SR 1557]

Subp. 2. **Approval of plans.** Any person, firm, or corporation desiring to install, relocate, alter materially, or extend any installation covered by this chapter shall be required to obtain approval for so doing from the administrative authority. Two sets of drawings and specifications showing such installations, relocation, alteration, or extension shall be submitted for approval.

Subp. 3. **Inspections and tests.** It is unlawful for any person, firm, or corporation to put into service any installation covered by this chapter whether the installation is newly installed, relocated, or altered materially without the installation being inspected and approved by the administrative authority. The installer of any equipment included in this chapter must notify the administrative authority seven days prior to completion of the installation for inspection. The administrative authority may require tests provided in ANSI A17.1-1981 Edition and Supplement ANSI A17.1a-1982 which he considers necessary to prove the safe operation of any installation.

Subp. 4. **Approval.** A certificate or letter of approval shall be issued by the administrative authority for such installation when the entire installation is completed in conformity with this chapter. The entire installation shall include all enclosures or shafts, gates, doors, machinery safety and control devices, and all other appurtenances necessary.

Subp. 5. **Limited use of an elevator.** When a building or structure is to be equipped with one or more elevators, at least one of such elevators may be approved for limited use prior to the completion of the building or structure.

The use of such elevators may be permitted by the administrative authority under the authority of a limited permit issued by him for each class of service. Such limited permit shall specify the class of service permitted and it shall not be issued until the elevator has been tested with rated load and the car safety and

terminal stopping equipment have been tested to determine the safety of the equipment and until permanent or temporary guards or enclosures are placed on the car and around the hoistway and at the landing entrance on each floor. Landing entrance guards shall be provided with locks that can be released from the hoistway side only. Automatic and continuous pressure elevators shall not be placed in temporary operation from the landing push buttons unless door locking devices and/or interlocks are installed and operative.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.0500 ACCIDENTS.

Subpart 1. **To be reported.** The owner or person in control of an elevator or other installation covered by this chapter shall promptly notify the administrative authority of any accident to a person or apparatus on, about, or in connection with such elevator or other installation, and shall afford the administrative authority every facility for investigating such accident and the damage resulting therefrom. Notification may be given to the administrative authority by telephone or verbally, but such notification shall be confirmed in writing.

Subp. 2. **Investigation.** The administrative authority shall make or cause to be made an investigation of the accident, and the report of such investigation shall be placed on file in his office. Such report shall give in detail the cause or causes, so far as they can determine, and such report shall be open to public inspection.

Subp. 3. **Operation discontinued.** When an accident involves the failure or destruction of a part of the installation or the operating mechanism, the elevator or other installation shall be taken out of service and shall not be used again until it has been made safe and such reuse approved by the administrative authority.

The administrative authority may, if deemed necessary, order the discontinuance of operation of any such elevator or installation until a new certificate of approval has been issued.

Subp. 4. **Removal of parts restricted.** No part of the damaged installation, construction, or operating mechanism shall be removed from the premises until permission is granted by the administrative authority.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.0600 ELEVATORS, DUMBWAITERS, ESCALATORS, AND MOVING WALKS.

Subpart 1. [Repealed by amendment, 9 SR 1557]

Subp. 2. **Incorporations by reference.** The American National Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks, ANSI A17.1-1981 including supplement ANSI A17.1a-1982, is incorporated by reference and made a part of this code. All references in ANSI A17.1-1981 and supplements, to the National Electrical Code are changed to read: "National Electrical Code" ANSI/NFPA 70-1984.

Subp. 3. **Exceptions to ANSI.** Winding drum machines shall not be permitted on new elevator installations nor replacements on existing installations.

Subp. 4. **Exceptions; swing doors.** Horizontal swing doors, either single-section or center-opening two-section, shall not be permitted on new elevator installations nor as replacements on existing installations, except the administrative authority may approve such installation if the conditions are such as to make it impossible to install other than swing doors.

Subp. 5. **Exceptions; side exits.** Side emergency exits on elevator cars shall not be permitted.

Subp. 6. [Repealed by amendment, 9 SR 1557]

Subp. 7. **Exceptions; call buttons.** Exterior elevator call buttons may not be placed higher than 60 inches above the floor. No door opening and door closing buttons or elevator floor buttons may be placed higher than 60 inches above the floor.

Subp. 8. [Repealed by amendment, 9 SR 1557]

Subp. 9. **Operating devices.** Operating devices must be of the enclosed electric type. Rope or rod operated devices activated by hand, or rope operating devices activated by wheels, levers or cranks, must be removed. Exception: This is not considered a material change.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

AMENDMENTS TO ANSI A 17.1

1320.0700 ANSI A17.1, RULE 100.4

ANSI A17.1, Rule 100.4 is amended to read as follows:

100.4 Hoistway protection in case of fire.

Hoistways of elevators must be provided with means to prevent the accumulation of smoke and hot gases in case of fire as required by Section 1706(d) of the UBC. Vents must be manually openable or remote control automatic vents. Location of operating devices is subject to approval of the fire chief.

Exceptions: Hoistways not extending into the top floor of the building, in buildings other than hotels, apartment houses, hospitals, and similar buildings with overnight sleeping quarters, where the hoistways are equipped with approved automatic sprinklers connected to the building water-supply system or to an approved automatic sprinkler system (see NFPA No. 13-1976, Sprinkler Systems). Such systems shall be responsive to an accumulation of smoke as well as heat at the top of the hoistway.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.0710 ANSI A171, RULE 100.1B.

ANSI A17.1, Rule 100.1b is amended to read as follows:

100.1b Fire resistance ratings. The fire resistance rating of the hoistway enclosure, exclusive of entrances and protective assemblies in other openings, must be not less than required by Part IV of the Uniform Building Code.

The fire resistance ratings of the entrances must be not less than 1-1/2 hours as determined by the tests specified in Section 1102.

The fire resistance rating of hoistway opening protective assemblies other than elevator entrances must be not less than 1-1/2 hours as determined by tests conducted in accordance with ANSI/ASTM E 152 Methods of Fire Tests of Door Assemblies.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.0720 ANSI A171, RULE 100.1D.

ANSI A17.1, Rule 100.1d is amended to read as follows:

100.1d Multiple hoistways. The number of elevators permissible in a hoistway must be in accordance with the Uniform Building Code.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.0800 ANSI A17.1, RULE 100.4B.

ANSI A17.1, rule 100.4b is amended to read as follows:

100.4b Location of Vents.

Vents shall be located:

1. in the side of the hoistway enclosure directly below the floor or floors at the top of the hoistway, and shall open either directly to the outer air or through noncombustible ducts to the outer air; or

2. in the wall or roof of the penthouse or overhead machinery space above the roof, provided that openings have a total area not less than the minimum specified in rule 100.4c. Vents passing through machine rooms must be in noncombustible ducts. When a vent is installed in the roof of the hoistway, a protective grille shall be provided to prevent persons from falling into hoistway.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.0900 ANSI A17.1, RULE 101.5A.

ANSI A17.1, rule 101.5a is amended to read as follows:

101.5a Lighting.

Permanent electric lighting shall be provided in all machine rooms and machinery spaces.

The illumination shall be not less than ten footcandles at the floor level. The lighting control switch shall be located within easy reach of the access to such rooms or spaces. Where practicable, the light control switch shall be located on the lock-jamb side of the access door.

A 20-ampere, 110-to-120-volt AC ground-type convenience outlet shall be installed in the machine room. The circuit for this convenience outlet shall not be connected to the equipment circuits.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.1000 ANSI A17.1, RULE 106.1E.

ANSI A17.1, rule 106.1e is amended to read as follows:

106.1e Illumination of Pits.

A permanent lighting fixture shall be provided in all pits, which shall provide an illumination of not less than five footcandles at the pit floor. A light switch shall be provided and shall be so located as to be accessible from the pit access door.

A 20-ampere, 110-to-120-volt AC ground-type convenience outlet shall be installed in the pit. The circuit for this convenience outlet shall not be connected to the equipment circuits.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.1100 ANSI A17.1, RULE 110.2a.

ANSI A17.1, Rule 110.2a is amended to read as follows:

ANSI A17.1 -- Rule 110.2a -- Passenger elevators and freight elevators authorized to carry employees.

Entrances on passenger elevators and freight elevators authorized to carry employees must be one of the following types:

(1) horizontal side, single or multisection;

(2) swing, single section;

(3) combination horizontal slide and swing;

(4) power-operated, vertical slide biparting counterbalanced, or vertical slide counterweighted which slide down to open, where located at entrances used by passenger (See Rule 207.4); or

(5) hand- or power-operated vertical slide which slide up to open.

Elevator doors must provide a clear opening of at least 32 inches.

Exception: At landing openings used exclusively for freight, any type of entrance permitted by Rule 110.2b.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.1200 ANSI A17.1, RULE 111.9B.

ANSI A17.1, rule 111.9b is amended to read as follows:

111.9b -- Location and Design of Hoistway Access Switches.

Hoistway access switches shall conform to the following:

1. Hoistway access switches shall be provided at top and bottom landings. The operation of the switch at the top floor shall be zoned to stop the top of the elevator car substantially level with the top floor.

2. The switch shall be installed adjacent to hoistway entrance at the access landing with which it is identified.

3. The switch shall be of the continuous-pressure spring-return type, and shall be operated by a cylinder-type lock having not less than a five-pin or five-disc combination .with the key removable only when the switch is in the "OFF" position. The lock shall not be operable by any key which will operate locks or devices used for other purposes in the building. The key shall be available to and used only by inspectors, maintenance men, and repairmen.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.1300 ANSI A17.1, RULE 111.9E.

ANSI A17.1, rule 111.9e is amended to read as follows:

111.9e -- Location and Design of Hoistway Door Unlocking Devices.

Hoistway door unlocking devices shall conform to the following:

1. The device shall unlock and permit the opening of the hoistway door from the lowest landing irrespective of the position of the car.

2. The device shall be installed only at the lowest landings.

Exception: For emergency use, see rule 111.10.

3. The device shall be designed to prevent unlocking the door with common tools.

4. The operating means for unlocking the door shall be provided with a special key not easily duplicated, and said key shall be available only to elevator mechanics and inspectors. The interlocks shall be designed and adjusted as to prevent movement of the car until after the door is closed and in the locking position.

5. The unlocking-device keyway shall be located at a height not greater than six feet 11 inches above the floor.

Note: For diagrammatic representation, see Appendix C.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.1400 ANSI A17.1, RULE 112.5.

ANSI A17.1, rule 112.5 is amended to read as follows:

ANSI A17.1 -- rule 112.5 -- Reopening Device for Power-Operated Car Doors or Gates.

Where required by rule 112.3d or rule 112.4, a power-operated car door or gate shall be provided with a reopening device which will function to stop and reopen a car door or gate and the adjacent hoistway door in the event that the

car door or gate is obstructed while closing. If the closing kinetic energy is reduced to 2-1/2 foot-pounds or less, the reopening device may be rendered inoperative (see rule 112.4-a).

For center-opening doors, the reopening device shall be so designed and installed that the obstruction of either door panel when closing will cause the reopening device to function.

Hoistway door protection in passenger elevators. Hoistway doors on all passenger elevators shall not be solely dependent upon the door edge reopening device for protection from the doors closing on an obstruction, but shall also be provided with an approved light beam or electronic door protection device.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.1500 ANSI A17.1, RULE 204.2A.

ANSI A17.1, rule 204.2a is amended to read as follows:

204.2a -- Material for Enclosures and Enclosure Linings.

Car enclosures and car-enclosure linings shall conform to the following:

1. Material for enclosures shall be:

a. Metal; or

b. Fire-retardant-treated wood; or

c. Other equally fire-retardant approved material.

Exception: Non-fire-retardant treated wood or materials of equivalent combustible characteristics may be used if all exterior surfaces of the enclosure are covered with sheet metal not less than No. 27 U.S. gauge or other equally fire-retardant material or are protected by painting with an approved fire-retardant paint having a flame spread rating of not over 50, applied in accordance with the instructions of the manufacturer. Such ratings shall be based on the test procedure specified in ANSI/ASTM E84.

2. Slow-burning combustible materials for insulating, sound deadening, or decorative purposes may be used for lining enclosures if firmly bonded flat to the enclosure. Such materials shall not be padded. Materials must have a Class 1 flame spread rating.

Exception: Padded protective linings used temporarily in passenger cars during the handling of freight, provided the pads are made of fire-retardant material or treated with an acceptable fire retardant. The fire-retardant treatment shall be renewed as needed. The protective linings shall clear the floor of the car by not less than four inches.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.1600 [Repealed by amendment, 9 SR 1557]

1320.1650 ANSI A17.1, RULE 210.2E.

ANSI A17.1, Rule 210.2e is amended to read as follows:

210.2e Emergency stop switches. Emergency stop switches are not permitted to be installed inside the car on new installations of automatic operation elevators.

Note: Emergency stop switches must not be removed from existing automatic operation elevators which do not conform to Rule 210.10.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.1700 ANSI A17.1, RULE 211.1.

ANSI A17.1, Rule 211.1 is amended to read as follows:

Rule 211.1

Emergency communications. Every elevator car must be provided with a two-way communication system connected to an approved emergency service which operates 24 hours every day.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.1800 ANSI A17.1, RULE 211.3A.

ANSI A17.1 -- Rule 211.3a(4) is amended by adding the following:

The switches required by 211.3a-4 must conform to the following:

Emergency elevators. All keyed switches installed to operate elevators on emergency service must be keyed alike to a pattern approved by the administrative authority. In lieu of the above, keys for emergency elevator service may be in a metal box placed in a location approved by the administrative authority, if the box is locked with a five-pin tumbler core lock or equivalent which is keyed to the same pattern.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.1850 ANSI A17.1, RULE 211.3.

ANSI A17.1, Rule 211.3 is amended to read as follows:

211.3 Operation of elevators under fire or other emergency conditions. All elevators having a travel of 25 feet (7.62 meters) or more, above or below the designated level must conform to the requirements of Rule 211.3.

Note: (Rule 211.3): See Section 3 for definition of "designated level."

In buildings with elevators requiring phase I and II operation all floors must be served by cars sized to accommodate an ambulance stretcher in the horizontal position. The opening to the elevator car must be capable of passageway for such an ambulance stretcher.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.1900 ANSI A17.1, RULE 602.1.

ANSI A17.1, rule 602.1 is amended to read as follows:

Rule 602.1 -- Car Safeties.

Elevators having a travel of more than 15 feet shall be provided with a car safety, attached to the underside of the car frame, capable of stopping and sustaining the car, and rated load.

The car safety device is not required to be operated by a speed governor, and may be of the instantaneous type operated as a result of the breaking or slackening of the suspension members.

Where the travel exceeds 40 feet, driving machines having hand-operated brakes shall also be equipped with an automatic speed retarder.

All handpowered elevators shall be equipped with a broken rope safety device.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.2000 ANSI A17.1, RULE 703.1.

ANSI A17.1, rule 703.1 is amended to read as follows:

Rule 703.1 -- Where Required.

Car and counterweight safeties shall not be required except for protection of spaces below hoistways for all dumbwaiter cars and counterweights having a rated load over 25 pounds. Where required, the car and counterweight safeties may be operated as a result of breaking the suspension means and may be of the inertia type without governors. Car safeties may be located in the car crosshead.

All dumbwaiters shall be equipped with a broken rope safety device.

Statutory Authority: *MS s 16B.59 to 16B.73*

LIFTS AND HOISTS

1320.2100 STAGE AND ORCHESTRA LIFTS.

Stage and orchestra lifts shall be designed, installed, constructed, and maintained so as to be reasonably safe to life, limb, and adjoining property and shall be approved by the administrative authority prior to installation or construction.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.2200 MANLIFTS.

Manlifts must be designed, installed, constructed, and maintained so as to be reasonably safe to life, limb, and adjoining property and must conform to the rules of the Department of Labor and Industry, parts 5205.0010 and 5205.0550 to 5205.0590.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.2300 TEMPORARY INTERIOR AND EXTERIOR HOISTS.

Temporary interior and exterior hoists shall be designed, constructed, installed, and maintained so as to be reasonably safe to life, limb, and adjoining property and shall conform to Safety Requirements for Workman's Hoists, ANSI 10.4-1963, Safety Requirements for Material Hoists, ANSI 10.5-1969 and rules of the Department of Labor and Industry.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.2400 MECHANICAL PARKING GARAGE EQUIPMENT.

Mechanized parking garage equipment shall be designed, constructed, installed, and maintained so as to be reasonably safe to life, limb, and adjoining property and shall conform to the standards specified in the American Standard Safety Code for Mechanized Parking Garage Equipment, ANSI A113.1 (R-1971).

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.2500 STANDARDS FOR WHEELCHAIR ELEVATING DEVICES.

Subpart 1. **Applicability.** Parts 1320.2500 to 1320.2700 apply to electric powered vertically traveling elevating devices used to raise or lower physically handicapped persons from one level to another in existing buildings, referred to in parts 1320.2500 to 1320.2700 as a "device."

Subp. 2. **Requirements.** A device must conform to all applicable sections of ANSI A17.1-1981 and Supplement ANSI A17.1a-1982 National Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks, which are directly referred to in chapter 1320.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1320.2600 HOISTWAYS, HOISTWAY ENCLOSURES.

Subpart 1. **Walls.** Hoistway walls shall be provided on all sides of the device not used for entrance or exits. Walls shall be fully enclosed and of noncombustible material. Walls shall extend to a height of at least the top terminal landing level. When terminated at top landing level or any level below 42 inches above top terminal landing a guard rail conforming to UBC section 1711 shall be provided.

Subp. 2. **Strength of enclosure.** Strength of enclosure: see Rule 100.1e.

Subp. 3. **Construction at top of hoistway.** A ceiling at the top of the hoistway is not required unless a hazard exists from falling objects from overhead. When a ceiling is provided it must be noncombustible material and must reject a ball one inch in diameter. Minimum clear headroom seven feet zero inches.

Subp. 4. **Construction at bottom of hoistway.** A pit is not required, but when provided it shall be designed as to prevent entry of ground water. The floor at the bottom level shall be designed to accept the loads imposed upon it. (UBC chapter 23.)

Subp. 5. **Ramps.** All ramp surfaces leading to or from the device shall be of the nonskid type. Ramp's slope shall not exceed a ratio of one vertical to 12 horizontal.

Subp. 6. **Protection from weather.** Devices shall not be exposed to the outside elements.

Subp. 7. **Projections, recesses, setbacks.** Projections, recesses, and setbacks in hoistway enclosures, see rule 100.6 and rule 110.10A (Omit item 1 only).

Subp. 8. **Preventing movement of platform.** Means shall be provided to prevent movements of platform when loading or unloading.

Subp. 9. **Wiring, pipes, ducts.** For electrical wiring, pipes, and ducts in hoistways and machine rooms, see rule 102.

Subp. 10. **Location of device.** The device may be installed in a stair enclosure or exit system provided it does not reduce or obstruct exit widths as required in UBC chapter 33.

Subp. 11. **Guarding exposed equipment.** All exposed equipment on a device shall be guarded to protect against accidental contact which could cause bodily injury.

Subp. 12. **Movable barrier.** A movable barrier or gate at the upper terminal landing shall be installed to prevent a wheelchair from rolling off end of landing while waiting for the device. All movable barriers are to be self-closing when the platform leaves the floor level. Means shall be provided so barrier can not be opened unless platform is in the top landing zone. When the movable barriers to the device are power operated they must meet all requirements of section 1, rule 112.

Subp. 13. **Landings.** The terminal landings shall be permanently fastened and constructed so as to safely carry the imposed loads. Upper terminal ramp or landing shall be provided with guard rails on open sides.

Subp. 14. **Lighting.** Lighting shall conform to rule 204.7(a).

Subp. 15. **Anchoring.** The device shall be permanently anchored and maintained in a level position.

Subp. 16. **Guardrails.** Guardrails shall be provided to protect against access to the area of the bottom terminal landing when skirt is utilized as a loading ramp.

Subp. 17. **Clearance.** The running clearance from front or rear to the permanent hoistway enclosure shall not be more than one inch nor less than one-half inch.

Statutory Authority: *MS s 16B.59 to 16B.73*

1320.2700 MACHINERY AND EQUIPMENT FOR THE DEVICES.

Subpart 1. **Material and strength.** The frame and platform shall be of steel or approved noncombustible material. The platform shall not be larger than 42 inches wide by 60 inches long and not less than 36 inches wide by 48 inches long, inside dimensions. The rated capacity shall be not less than 400 pounds nor less than 33-1/3 pounds per square foot. The device shall be designed to insure a safety factor of five. Welding on the device shall conform to rule 203.7.

Subp. 2. **Preventing access below platform.** Means shall be provided on vertical traveling devices to prevent access below the platform when it is in the raised position. When a skirt is provided, it must be solid, not perforated or grilled, and may be hinged or collapsible type. If of hinged or collapsible type it shall have a switch to cut off the power to the driving machine in case of accidental contact with any object while device is moving downward. The required pressure on the skirt to make the switch function shall not exceed four pounds.

Subp. 3. **Barriers, speed, and travel.** Means shall be provided to prevent wheelchair from rolling off platform when in operation. The speed of the device shall not exceed 15 feet per minute in either direction under full load conditions. The total travel of the device shall not exceed 54 inches.

Subp. 4. **Operation.** Operating means shall be provided by the use of a universal key or magnetic card available and restricted to key personnel and physically handicapped persons. Operation shall be by continuous pressure, key-operated switches. Switches shall be arranged so that they will not remain in the run position unless held in position and will automatically return to the "off" position if released. Key switches shall be so located as to permit an unobstructed view of the entire length of the travel of the device. A slack cable or chain switch shall be provided where applicable. An upper and lower terminal stopping switch shall be provided to stop the device at the terminal landings. The device shall conform to rule 501.11c for control and operating circuit requirements.

Subp. 5. **Mechanical stop.** A mechanical stop shall be provided at the top and bottom. Overtravel and undertravel shall not be more than one inch until the mechanical stop is reached. Stops shall be designed to stop the car at full load, full speed in both directions and have a safety factor of not less than five.

Subp. 6. **Data plate.** A data plate shall be installed under the platform which shall contain: car weight, capacity, total load, and speed plus total load, and speed plus total weight of device.

Subp. 7. **Testing.** A full load speed safety test shall be performed on an annual basis.

Subp. 8. **Removable covers.** Covers to mechanism shall be removable, for inspection purposes.

Subp. 9. **Sign.** A sign shall be placed inside the device indicating "for use by physically handicapped persons only." Letters shall not be less than two inches high.

Subp. 10. **Maintenance.** Maintenance shall be provided on the device and shall conform to applicable rules of part 10 of ANSI A17.1-1978.

Subp. 11. **Engineering.** If the device is of the hydraulic type, the engineering shall conform to rule 1302.

Subp. 12. **Alarm.** An alarm bell shall be installed in accordance with rule 211.1 and shall be connected to a push button on car operating panel marked "alarm."

Statutory Authority: *MS s 16B.59 to 16B.73*