IN THE MATTER OF:
THE TECHNICAL STANDARDS AND SAFETY ACT, 2000, S.O. 2000, c. 16 (the “Act”)
- and -
ONTARIO REGULATION 223/01
(Codes and Standards Adopted by Reference) made under the Act
- and -
ONTARIO REGULATION 209/01(Elevating Devices) made under the Act

Subject: Elevating Device Code Adoption Document Amendment:
Consolidation of Amendments and Adoption of Z98

Applicable to: All Elevating Device Contractors, Consultants and Elevating Device Mechanics

The Director of Ontario Regulation 209/01 (Elevating Devices), pursuant to section 4 of Ontario Regulation 223/01 (Codes and Standards Adopted by Reference), hereby provides notice that the Elevating Devices Code Adoption Document dated June 1, 2001 (CAD), as amended, published by the Technical Standards & Safety Authority is further amended as follows:


1. Effective immediately, Part I, II, III, IV, VI and VII is revoked and replaced by Parts 1, 2, 3, 4, 6, and 7 of this document.

B. Changes to Part V Passenger Ropeways

1. Effective October 1, 2011, Part V Passenger Ropeways is revoked and replaced by Part 5 of this document.

Part 1

1 GENERAL

1.1 Definitions

1.1.1 The terms in this Code Adoption Document (Document) have the same meaning as in the Act or the Regulation unless otherwise specified herein.

1.1.2 Where a provision of a code or standard adopted in this Code Adoption Document (Document) is inconsistent with the requirements of this Document, the provision of this Document shall prevail.

1.1.3 In this Document,
(a) “Regulation” means Ontario Regulation 209/01 (Elevating Devices) - made under the *Technical Standards and Safety Act*.

(b) “CSA” means the Canadian Standards Association.

(c) “CAN” means a standard recognised as a National Standard of Canada and approved by the Standards Council of Canada.

(d) “ANSI” means the American National Standards Institute.

(e) “freight elevator-P” means a freight elevator upon which passengers are permitted to ride;

(f) “common-mode failure” means the result of an event(s) which because of dependencies, causes a coincidence of failure states of components in two or more separate channels of a redundancy system, leading to the defined system failing to perform its intended function. [CAD Amendment 216-07]

(g) “software system failure” means a behaviour of the software, including its support (host) hardware, that is not in accordance with the intended function. [CAD Amendment 216-07]

(h) “solid-state device” means an element that can control current flow without moving parts. [CAD Amendment 216-07]

### 1.2 Exceptions

1.2.1 Except where otherwise indicated, this Document applies to all elevating devices and parts thereof.

1.2.2 Despite subsection 1.2.1 and unless otherwise specified in the Regulation, in this Document or by the director, the codes and standards referred to in this Document do not apply to existing elevating devices except for those sections respecting alterations, the inspection, testing, maintenance, operation and use of the elevating device, including signage and instructions relating to the use of the elevating device.

### Part 2

#### 2 GENERAL TECHNICAL REQUIREMENTS

##### 2.1 Welding

2.1.1 The welding of a steel structure on an elevating device shall conform to the requirements of CSA Standard W59-03, Welded Steel Construction (Metal Arc Welding). [CAD Amendment 246-11]

2.1.2 The welding of a steel structure on an elevating device shall be undertaken by a fabricator or contractor qualified to the requirements of CSA Standard W47.1-03, Certification of Companies for Fusion Welding of Steel Structures. [CAD Amendment 246-11]

2.1.3 The field welding of piping and fittings on an elevating device shall conform to the requirements of CSA Standard B51-03, Code for the Construction and Inspection of Boilers. [CAD Amendment 246-11]

2.1.4 Despite subsections 2.1.1, 2.1.2 and 2.1.3, an equivalent welding standard may be used if it is acceptable to the director.
2.2 **Electrical**

2.2.1 Electrical equipment shall conform to the requirements of,

(a) Ontario Electrical Safety Code as amended from time to time; and [CAD Amendment 246-11]

(b) CAN/CSA B44.1/ASME A17.5-04, Elevator and Escalator Electrical Equipment, or [CAD Amendment 246-11]

(c) CAN/CSA C22.2 No. 14, Industrial Control Equipment (applicable to elevating devices other than elevators, escalators, moving walks, dumbwaiters, material lifts, and lifts for persons with physical disabilities). [CAD Amendment 246-11]

2.3 **Rope Clips**

2.3.1 Where clips are permitted to fasten metal rope in an elevating device,

(a) the minimum number of clips to be used on each rope ends shall be,

   (1) two clips for rope under nine millimetres in diameter,

   (2) three clips for rope nine millimetres in diameter and over but under sixteen millimetres in diameter,

   (3) four clips for rope sixteen millimetres in diameter and over but under nineteen millimetres in diameter;

(b) the rope end shall be bent over a heart-shaped thimble that has a groove of a radius equal to that of the rope or shall be provided with protection that a director considers equivalent;

(c) the clips shall be spaced at a distance apart equal to six times the rope diameter from the short end of the rope;

(d) U-type clips shall be placed so that the U bolts bear on the short or dead end of the rope and the bases bear on the load part of the rope; and

(e) the nuts on the clips shall not be fully tightened until after the rope has been under load and all nuts shall be fully tightened while the rope is still loaded.

2.4 **Rope Replacement (17/84) & (122/95)**

2.4.1 When changing or shortening ropes on counterweighted elevators, the installation shall be provided with a data plate permanently and securely attached in the pit, in the vicinity of the counterweight buffer, indicating the maximum designed counterweight runby. [CAD Amendment 246-11]

2.4.2 The minimum stranding for cables used to relate any car or landing door shall be not less than 7 x 19 construction. [CAD Amendment 246-11]

2.5 **Relocation of an Elevating Device**

2.5.1 Where an elevating device is relocated it shall meet the requirements of the applicable code or standard adopted in this Document, unless otherwise specified in this Document or by the director.
2.6 Alteration

2.6.1 Where an alteration is made to an elevating device the altered components and functions and those components and functions that are affected by the alterations shall conform to the requirements of codes or standards adopted in this Document.

2.6.2 Unless otherwise specified in this Document or by the director, and without limiting generality of the Regulation, the following alteration to an elevating device shall constitute a major alteration:

(a) An increase by more than 10 per cent in,
   (1) the rated speed of the load-carrying unit,
   (2) the maximum capacity, or
   (3) the dead-weight of the machine, load-carrying unit or counter-weight;

(b) except for construction hoists, an increase or decrease in the distance of the travel of the load-carrying unit;

(c) a change in,
   (1) the method or type of operation,
   (2) the method or type of motion control,
   (3) the type or size of guide rails or other guiding means for the load-carrying unit or counter-weight,
   (4) the type of safety device or other safety stopping device for the load-carrying unit or counter-weight,
   (5) the power supply to the machine,
   (6) the type of driving machine or brake,
   (7) the location of;
      a) the elevating device,
      b) elevating device controller, [CAD Amendment 246-11]
      c) the machine,
      d) the load-carrying unit,
      e) the counter-weight, or
   (8) the working pressure of a hydraulic system by more than 10 per cent;

(d) a replacement of the controller; [CAD Amendment 246-11]

(e) changes that would result in a reclassification of the elevating device; and

(f) the addition of an entrance to the elevating device.

2.6.3 Unless otherwise specified in this Document or by the director, and without limiting the generality of the Regulation, any action or work performed on an elevating device that is not specified in subsection 2.6.2
and that results in a change to the original design or the operational characteristics of the elevating device or affects the inherent safety level of the elevating device, shall constitute a minor alteration.

2.7 **Rack and Pinion Safeties** [CAD Amendment 213-07]

2.7.1 Any repair or rebuild of a type ‘D’ rack and pinion safety where the manufacturer has stated that such work shall only be performed by the manufacturer, may either be;

(a) repaired, rebuilt or replaced by the manufacturer; or

(b) repaired or rebuilt in accordance with a procedure certified by a professional engineer.

2.7.2 The procedure referred to in clause **2.7.1(b)** shall be filed with the director and shall be available to the inspector upon request. [CAD Amendment 213-07]

2.8 **Format of Submission Documents**

2.8.1 Where a design submission is in paper format it shall;

(a) be submitted as one copy unless the submission includes oversized drawings;

(b) drawings that are not legible when printed on 11” x 17” paper are considered oversized and shall be submitted as four paper copies as well as in an electronic media form that contains the oversized drawings in unprotected PDF, JPEG or TIFF format;

(c) pages larger than 11”x17” provided in hardcopy shall be folded and submitted without any binding. [CAD Amendment 246-11]

2.8.2 Electronically submitted design submissions shall be as follows;

(a) filled specification sheets shall be provided in excel format;

(b) other supporting documentation shall be provided in unprotected PDF, excel or word format;

(c) where electronic pages exceed 11”x17” paper size, the information shall be legible to the smallest detail when printed to 11”x17”, otherwise they shall also be provided as four hardcopies;

(d) pages larger than 11”x17” provided in hardcopy shall be folded and submitted without any binding;

(e) documents received electronically, will be returned electronically at the conclusion of the design review. [CAD Amendment 246-11]

2.9 **Hydraulic Elevating Device Oil Loss Monitoring Program** [CAD Amendment 212-07-r1]

2.9.1 Every contractor who maintains a hydraulic elevating device with buried cylinders or buried piping shall ensure there is a written oil loss monitoring program.

2.9.2 A “hydraulic elevating device” means a non-portable device for hoisting and lowering or moving persons or freight and includes an elevator, dumbwaiter, manlift, incline lift, construction hoist, stage lift, platform lift and special elevating device that incorporates one or more hydraulic cylinders.

2.9.3 The purpose of the oil loss monitoring program is to identify any loss of oil which cannot be accounted for in the hydraulic system.
2.9.4 If a contractor performs maintenance on a hydraulic elevating device with buried cylinders or buried piping, the contractor shall ensure that a written oil loss monitoring program is developed and maintained before the contractor performs work on the hydraulic elevating device.

2.9.5 The oil loss monitoring program shall include: [CAD Amendment 246-11]

(a) the requirement to provide an oil loss monitoring log ("OLM log") for each hydraulic elevating device with buried cylinders or buried piping;

(b) the requirement for the OLM log to reference the elevating device installation number;

(c) the requirement to establish a fixed reference level for the oil and the requirement to mark the reference level on the tank, dip stick or other suitable location via permanent means;

Note: "permanent" implies affixed in such a manner so as to not be easily removed or repositioned.

(d) the requirement to document in the OLM log the location of the mark for the fixed reference level;

(e) the requirement to check that the oil level is at the established reference point when the device is level with the lowest landing during each scheduled maintenance visit;

(f) if the fixed reference level needs to be intentionally adjusted, the requirement to document and record the changes to the established reference level and reason for establishing the new reference level;

(g) the requirement to record in the OLM log any quantity of oil added or removed from the hydraulic system;

(h) that during each maintenance visit, even if no oil is added, the requirement to record in the OLM log the oil level and the date of the scheduled maintenance visit;

(i) if oil is added or removed, the requirement to record in the OLM log the dates oil was added or removed from the hydraulic system;

(j) the requirement to record in the OLM log the reason oil was added to or removed from the hydraulic system;

(k) the requirement to record in the OLM log the mechanic’s printed and legible name, signature and certification number for every entry made;

(l) the requirement to keep the OLM log in the elevator machine room, in a readily identifiable location;

(m) the requirement that the OLM log be kept in the elevator machine room for a period of at least five years from the date of the last entry in the OLM log;

(n) the requirement to never allow oil levels to exceed the fixed reference level for the oil level;

(o) the requirement to record in the OLM log the frequency of oil monitoring activities;

(p) the requirement that, despite (o), hydraulic elevating devices with buried single bottom cylinders be monitored on a monthly basis;

(q) the requirement that installations registered by MCCR prior to September 4, 1978 with an installation number below 031909 shall be monitored monthly, unless a notification* (in the form provided by the TSSA) is sent to the Director, advising why the monthly requirements should not apply, and the registered notification is posted along with the OLM log;

* A notification form is available from www.tssa.org. The “Subject” entry should state, Non Single Bottom Cylinder and the “TSSA Reference No.” should state, 212/07-r1.
(r) if there is any oil loss which cannot be accounted for, the requirement to immediately remove a hydraulic elevating device from service until the cause for the oil loss is determined and the cause and associated remedy noted in the OLM log;

(s) the requirement to report in writing any oil loss attributed to leaks in buried cylinders or buried piping to the TSSA Elevating Devices Director within 7 days;

(t) the requirement to provide maintenance personnel adequate training related to the contractor’s oil loss monitoring program;

(u) the requirement to maintain up-to-date written records showing who provided and who received the training referred to in (t), the nature of the training and the date when it was provided. A record of training shall be available to the TSSA upon request.

(v) the requirement that the contractor’s oil loss monitoring program be posted or otherwise available in the machine room, and

(w) the requirement that the collection containers shall not exceed 19 L (5 gal) per cylinder.

2.9.6 Oil that is returned to the hydraulic system from recovery containers, either by manual means or automatically via scavenger pumps, need not be recorded.

Note: if oil from recovery containers is not suitable for return to the tank, it must be measured and an equivalent amount must be added to the system when recovery containers are emptied. If additional oil is needed to reach the fixed reference level it must be recorded as new oil. [CAD Amendment 212-07-r1]

2.10 Proper Use of Jumpers (Handbook and 01/82)

2.10.1 Each contractor shall have written procedures for the use of jumpers when working on elevating device circuits. Each contractor is responsible for ensuring that their mechanics understand the procedure and are equipped to follow it. Each mechanic is responsible for ensuring that they adhere to the procedure. [CAD Amendment 246-11]

Part 3

3 ELEVATORS, DUMBWAITERS, ESCALATORS, MOVING WALKS, MATERIAL LIFTS AND FREIGHT PLATFORM LIFTS

3.1 Applied Code [CAD Amendment 225-07-r3]

Every elevator, dumbwaiter, escalator, moving walk, material lift, and freight platform lift shall conform to the requirements of:

(a) ASME A17.1-2007/CSA B44-07 Safety Code for Elevators and Escalators, and

(b) CSA Standard B44.2-07 Maintenance requirements and intervals for elevators, dumbwaiters, escalators, and moving walks, except

(c) The requirements of (a) are adopted with the following modifications and clarifications:

   (1) Requirements which are identified as applicable to “jurisdictions not enforcing NBCC” are not adopted, unless otherwise stated. Note: NBCC means the National Building Code of Canada;

   (2) Requirements identified as applicable “in jurisdictions enforcing NBCC” are adopted;
(3) Any reference to the “building code” or to the National Building Code of Canada or “NBCC” in this definition and throughout the Code shall be deemed to refer to the Ontario Regulation 350/06 made under the Building Code Act 1992, as amended, commonly known as Ontario Building Code or OBC;

(4) Where there is inconsistency between the Regulations and this Code (e.g. Requirement 2.15.9.2 related to the car-platform guards or aprons) the Regulation prevails, unless otherwise specified in this Amendment;

(5) Requirement 2.2.2.7 (restriction on sump pumps in pits) is not adopted;

(6) Requirement 2.14.1.8.3 (3C film-reinforced mirror) is not adopted;

Note: Glass and mirror shall conform to the requirements of 2.14.1.8.1, 2.14.1.8.2, 2.14.1.8.4. Type 3C film reinforced silver mirror is not permitted for use in elevators. The standard CAN/CGSB-12.5 was revoked by Canadian General Standards Board in May 2004.

(7) Requirement 2.14.2.1 is revoked and the following substituted;

**CAD 2.14.2.1 Material for Car Enclosures, Enclosure Linings, and Floor Coverings.** All materials exposed to the car interior and the hoistway shall be metal, glass, or shall conform to 2.14.2.1.1 through 2.14.2.1.4.

2.14.2.1.1 not adopted.

**CAD 2.14.2.1.2** In jurisdictions enforcing the NBCC:

(a) materials in their end-use configuration, other than those covered by 2.14.2.1.2(b), 2.14.2.1.3 and 2.14.2.1.4 shall conform to the following requirements, based on the tests conducted in accordance with the requirements of ASTM E 84, ANSI/UL 723 or CAN/ULC-S102:

1. flame spread rating of 0 to 75
2. smoke development of 0 to 450

(b) floor surfaces shall have a flame spread rating of 0 to 300, based on the test conducted in accordance with the requirements of CAN/ULC-S102.2

(c) where the building is designated by the building code as a high building:

1. materials in their end-use configuration shall have a flame spread rating for walls and ceiling of 0 to 25 with smoke development of 0 to 100 based on the test conducted in accordance with the requirements of CAN/ULC-S102.
2. floor surfaces shall have a flame spread rating of 0 to 300 with smoke development of 0 to 300 based on the test conducted in accordance with the requirements of CAN/ULC-S102.2

**CAD 2.14.2.1.3**
Padded protective linings, for temporary use in passenger cars during the handling of freight, shall be of materials conforming to either 2.14.2.1.1(a). The protective lining shall clear the floor by not less than 100 mm (4 in.).

**CAD 2.14.2.1.4** Handrails, operating devices, ventilating devices, signal fixtures, audio and visual communication devices, and their housings are not required to conform to 2.14.2.1.

(8) Introduction to requirement 2.27.3 is revoked and the following substituted:

**CAD 2.27.3 Firefighters’ Emergency Operation: Automatic Elevators**
Firefighters’ Emergency Operation shall apply to all automatic elevators except where the hoistway or a portion thereof is not required to be fire-resistive construction (see 2.1.1.1), the rise does not exceed 2000 mm (80 in.), and the hoistway does not penetrate a floor.

NOTE (2.27.3): When the structure (building, etc.) is located in a flood hazard area, the alternate and designated levels (see 8.12.1) should be above the base flood elevation.

Note: Independent of the requirements in NBCC, Phase I recall shall include the requirements of both 2.27.3.1 and 2.27.3.2.

Note: Requirements 2.27.3.1 through 2.27.3.5 are adopted or adopted as amended below.

(9) Requirement 2.27.3.2.2 is revoked and the following substituted;

**CAD 2.27.3.2.2**

(a) Smoke detectors or fire detectors (fire alarm initiating devices)\(^1\) shall be installed to provide a signal, either directly or through the fire alarm system, to the elevator controller(s) to automatically initiate Phase I Emergency Recall Operation, and shall be located

(1) at each floor served by the elevator

(2) in the associated elevator machine room, control space, or control room.

(b) The installation of these detectors shall be in conformance with the requirements of the NBCC. Despite (a), fire detectors located outside the machine room, control space, or control room need not be provided within a floor area if the floor area is sprinklered and the sprinkler system is electrically supervised in conformance with NBCC.

(c) Where the building fire alarm system is identified to activate Phase 1, pull stations shall not be used to initiate either the designated or alternate level recall\(^2\).

NOTE:

\(^1\) Fire alarm initiating devices are referred to as fire detectors (smoke or heat) in the NBCC

\(^2\) To ensure initiation of recall by automatic means only.

(10) Requirement 2.27.3.2.4(a) is revoked and the following substituted:

**CAD 2.27.3.2.4(a)** the activation of a fire alarm initiating device specified in 2.27.3.2.1(a) or 2.27.3.2.2(a) that is located at the designated level, shall cause all elevators serving that level to be recalled to an alternate level, unless Phase I Emergency Recall is in effect.

Note 2.27.3.2.2(a) was 2.27.3.2.2(b) in the code;

(11) Requirement 5.2.1.16.5 - Maximum Rise limitation for LULA elevators is not adopted;

(12) Sections 5.3 and 8.7.5.3 – Private Residence Elevators, are not adopted;

(13) Sections 5.4 and 8.7.5.4 – Private Residence Inclined Elevators, are not adopted;

(14) Sections 5.7 and 8.7.5.7 – Special Purpose Personnel Elevators, are not adopted;

(15) Sections 5.8 and 8.7.5.8 – Shipboard Elevators, are not adopted;

(16) Sections 5.9 and 8.7.5.9 – Mine Elevators, are not adopted;

(17) “Elevators used for construction” shall have the same meaning as “temporary elevator” used in Ontario Regulation 209/01;

(18) Requirement 5.10.1.9.5(a) is revoked and the following substituted:

**CAD 5.10.1.9.5(a)** For elevators with car speeds of up to 1.75 m/s (350 ft/min), hoistway doors or gates shall be provided with devices that comply with the requirements of 5.10.1.9.5(b);

(19) “Material lift – type B” shall mean the same as the term “freight platform lift – type B” used in Ontario Regulation 209/01;
(20) Sections 7.8 to 7.11 – Dumbwaiters and Material Lifts with Automatic Transfer Devices, that meet the requirements as specified in item 2(3)(j) of the Elevating Device Regulation 209/01, are not adopted;

(21) The requirements of 8.6.1 through 8.6.11 are not adopted, except:
   a) 8.6.1.6.3(d) “use of jumpers”
   b) 8.6.3.2 Replacement of a Single Suspension Rope
   c) 8.6.8.2 Step-to-Skirt Clearance
   d) 8.6.8.4.1 & 8.6.9.2.1 Comb replacement requirements
   e) 8.6.8.4.2 & 8.6.9.2.2 Comb teeth meshing requirements
   f) 8.6.11.5 Escalator or Moving Walk Startup are adopted
   g) 8.6.11.6 Operating Instructions for Means Specified in 2.7.5.1.1 or 2.7.5.2.1
   h) 8.6.11.7 Egress and Reentry Procedure From Working Areas on 2.7.5.1.3 or 2.7.5.2.3
   i) 8.6.11.8 Operating Instructions for Retractable Platforms;

(22) Requirements of elevator maintenance are adopted in accordance with 8.6.12 of the B44-07 Code, and are supplemented with:
   a) the additional maintenance requirements identified in CSA Standard B44.2-07, which are adopted and,
   b) The ‘Replacement of specific elevator components’ from CAN/CSA B44-04 Safety Code for Elevators, sections c8.6.12.5.4 to c8.6.12.5.7 are adopted;

(23) Maintenance records shall be kept in the log book, in accordance with 8.6.12.2.5 of the Code and Section 34 of Ontario Elevating Device Regulation 209/01;

(24) Section 8.7 – Alterations, is adopted, with modifications and enforcement procedures as specified below and in Director’s Order #226/07 including it’s latest revision;

(25) Requirement 8.7.2.27.4(a) is revoked and the following substituted:

   **CAD 8.7.2.27.4 Controllers**
   (a) Where a controller is installed as part of an alteration, it shall conform to 2.25, 2.26.1.4, 2.26.1.5, 2.26.4 through 2.26.9, and where
      (1) required by NBCC at the time of the original installation to 2.27.2 through 2.27.8, **CAD** 2.27.3 and the provisions of Director’s Order 226/07 as specified in subsection (24) above;
      (2) provided voluntarily shall conform to 2.27, **CAD** 2.27.3 and the provisions of Director’s Order 226/07 as specified in subsection (24) above.

(26) Requirement 8.7.2.27.5 is revoked and the following substituted:

   **CAD 8.7.2.27.5 Change in Type of Motion Control**
   Where there is a change in the type of motion control, the installation shall conform to the following:
   (a) The protection of the hoistway landing openings shall conform to
      (1) 2.11.1 except;
         (a) Existing entrance openings less than 2030mm in height or 800mm in width are permitted to be retained
         (b) requirement 2.11.1.4
      (2) 2.11.2 through 2.11.6, except 2.11.6.3
      (3) 2.11.8, 2.11.9
      (4) 2.11.11.8 for horizontally sliding center opening and single speed entrances
      (5) 2.11.12.8,
      (6) 2.12, except;
(a) requirement 2.12.2.4.3 to allow a minimum engagement of 6mm
(b) 2.12.4, 2.12.5 and
(7) 2.13.

(b) Car enclosures and car doors or gates shall conform to 2.14, except that where existing car
enclosures and/or car doors or gates are retained, conformance with the following
requirements are not required:
(1) requirements 2.14.1.3, 2.14.1.5.1,
(2) car top enclosures are not required to meet the design requirements of 2.14.1.6, but
shall meet the loading requirements specified
(3) requirement 2.14.1.7.1 applies only to the extent the existing vertical clearances
allow
(4) requirement 2.14.1.8, 2.14.1.9 and 2.14.1.10
(5) requirements 2.14.2.1, 2.14.2.3, through 2.14.2.6
(6) requirement 2.14.3
(7) requirements 2.14.4.2.5, 2.14.4.3, 2.14.4.5.1(c) and 2.14.4.6
(8) requirements 2.14.5.1, 2.14.5.6 through 2.14.5.8
(9) requirement 2.14.6.2.2 except 2.14.5 shall be as amended above
(10) requirements 2.14.7.1.3, 2.14.7.1.4 and 2.14.7.2 through 2.14.7.4

(c) The car safety, the counterweight safety (where provided), and the governor shall conform
to 2.17 and 2.18, except that
(1) where the safety factors required by 2.17.12.1 cannot be ascertained, performance
testing shall be accepted, and
(2) the pitch diameter of speed governor sheaves and tension sheaves are not required
to conform to 2.18.7.

(d) The capacity and loading shall conform to 2.16.8(e), (f), (g) and (h).

(e) The terminal stopping devices shall conform to 2.25.

(f) The operating devices and control equipment shall conform to 2.26. The requirements of
2.26.4.2, 2.26.4.3, and 2.26.4.4 shall not apply to electrical equipment unchanged by the
alteration.

(g) Emergency operation and signaling devices where
(1) required by NBCC at the time of the original installation shall be provided and shall
conform to 2.27, CAD 2.27.3 and the provisions of Director’s Order 226/07 as
specified in subsection (24) above;
(2) provided voluntarily shall conform to 2.27, CAD 2.27.3 and the provisions of
Director’s Order 226/07 as specified in subsection (24) above.

(h) Car overspeed protection and unintended movement protection shall conform to 2.19.

(27) Requirement 8.7.2.27.6(g) is revoked and the following substituted:

**CAD 8.7.2.27.6 Change in Type of Operation Control**

(g) Emergency operation and signaling devices where
(1) required by NBCC at the time of the original installation shall be provided and shall
conform to 2.27, CAD 2.27.3 and the provisions of Director’s Order 226/07 as
specified in subsection (24) above;
(2) provided voluntarily shall conform to 2.27, CAD 2.27.3 and the provisions of
Director’s Order 226/07 as specified in subsection (24) above.

(28) Requirement 8.7.2.28 is adopted with the following modifications and clarifications:

**CAD 8.7.2.28 Emergency Operation and Signaling Devices**
Where an alteration consists of the addition of an elevator to a group, all elevators in that group shall conform to 2.27.1, 2.27.2 and the FEO operation (or equivalent) of any car shall not be diminished and shall match or exceed the highest level of FEO features (or equivalent) that existed on any car in the group prior to the alteration.

(29) Section 8.7.7.3 Material Lifts and Dumbwaiters with Automatic Transfer Devices, is not adopted, except 8.7.7.3.2 is adopted;

(30) Section 8.8 – Welding, is not adopted. The requirements in Part 2 of the Elevating Devices Code Adoption Document apply;

(31) Section 8.9 – Code Data Plate, is adopted except that the requirements shall not apply to the existing devices installed or altered to versions of the B44 Code earlier than B44-00;

(32) Section 8.11 - Periodic Inspection and Test Requirements are not adopted, and; [CAD Amendment 239-10]

(33) Firefighters’ Emergency Operation  [CAD Amendment 239-10]

(a) Elevators that incorporate any form of Firefighters’ Emergency Operation are required to have this operating mode tested on an annual basis to verify that the firefighters’ feature is operational and ready for use by firefighters or emergency personnel if required during a fire or other emergency.

(b) The required inspection checks of this operating mode shall either be recorded on the “Maintenance Checklist for Firefighters’ Emergency Operation - Record of Inspection Checks” form provided by the designated administrative authority or on a form containing not less than the tests prescribed on this form.

(c) The owner or the owner’s authorized agent may perform the necessary annual testing provided they are trained and instructed in the use of Firefighters’ Emergency Operation.

(d) A record of findings shall be made and recorded and shall be available to elevator personnel and to the authority having jurisdiction. Any deficiencies identified during the testing shall be rectified. Note: It is the responsibility of the elevating devices owner to ensure firefighters’ emergency operation testing is performed annually. [CAD Amendment 239-10]

3.2 Performance Based Safety Code  [CAD Amendment 225-07-r3]

3.2.1 Where conformance with the prescriptive requirements in 3.1 are not strictly met, conformance may be demonstrated through compliance to the requirements in ASME A17.7-2007/CSA B44.7-07 Performance-based safety code for elevators and escalators.

3.3 Maintenance Frequency (89/92-r4) [CAD Amendment 225-07-r3]

3.3.1 The requirements of 3.1(b) are adopted with the following modifications and clarifications:

(a) The requirements of B44.2-07 are applicable to all elevating devices covered in B44-07 as amended in 3.1(c) above, and includes limited use/limited application elevators, material lifts and freight platform lifts.

(b) B44.2-07 requirement 4.7 Plunger Return Test applies, except that testing with full-load shall not be required.
(c) Where frequencies of maintenance, examinations or inspections identified in B44.2-07 are extended,

(1) the altered maintenance, examination and/or inspection frequencies must take into account the age and inherent quality of the equipment, the frequency and method of usage, and the recommendation(s) by either the original manufacturer, or manufacturer’s agent, or the maintaining contractor;

(2) the owner and maintenance contractor shall agree in writing to the altered maintenance, examination and/or inspection frequencies;

(3) the log book shall either capture this agreement or make reference to another document where such an agreement is made;

(4) a copy of the altered maintenance, examination and/or inspection frequency agreement shall be made available to TSSA upon request;

(5) the interval between maintenance visits shall not exceed three (3) months;

(6) the frequency of tests** identified in B44.2 shall not be altered; and

(7) despite the allowance to adjust maintenance, examination or inspection frequencies as stated above, the frequency of activities listed in B44.2-07 section 5.2.1 shall not be altered.

**where the terms: ‘operate’ - (or equivalent thereof), such as “governors shall be operated by hand” or ‘check’ - (or equivalent thereof), such as “skirt switches shall be checked” are used, the frequency of these tests shall not be altered. [CAD Amendment 225-07-r3]

3.4 Maintenance Log Book (99/92) & (8.6.12)

3.4.1 The log book shall, as a minimum, contain the following information:

(a) Building name and/or address,

(b) TSSA or MCCR installation number,

(c) Contractor’s and Owner’s name,

(d) Year and month when a specific task is performed,

(e) The code section, reference or clause number associated with a maintenance task, a description of the task performed and the prescribed maintenance frequency of the task,

(f) The printed name and signature of the persons who completed the required maintenance task. [CAD Amendment 246-11]

3.4.2 Where a part directly affecting the safety of the operation is found to be defective, the record of the maintenance task shall not be signed off until the defect is adjusted repaired or replaced. [CAD Amendment 246-11]

3.5 Location of the Log Book (99/92-r4)
3.5.1 The log book will be retained in the machine room or at the device location. If it is kept in another location in the building, a notice will be posted in the machine room indicating the alternate location. [CAD Amendment 246-11]

3.6 **Rated Load**

3.6.1 For the purpose of this Document and subsection 31.(3) of the Regulation, “rated load” in the code adopted in subsection 3.1, means “maximum capacity”.

3.7 **Alterations** (226/07)

3.7.1 Notwithstanding section 2.6, alterations of an elevator, dumbwaiter, escalator, moving walk, and material lifts shall conform to the requirements of the code adopted in subsection 3.1 and as specified by the director. [CAD Amendment 246-11]

3.7.2 Alterations to freight platform lifts type –B shall conform to the requirements for Material Lifts Type –B as required by the code adopted in subsection 3.1 and as specified by the director. [CAD Amendment 246-11]

3.7.3 Alterations to freight platform lifts type –A shall conform to the requirements for Material Lifts Type –B as required by the code adopted in subsection 3.1 and as specified by the director, except that ‘in-car’ controls are prohibited and no persons shall be permitted to ride. [CAD Amendment 246-11]

3.8 **Rope Clips**

3.8.1 Rope clip fastenings shall not be used when suspension ropes are changed on an existing elevator.

3.9 **Access to Machine Rooms and Spaces**

3.9.1 Every elevator shall have a safe and convenient access to its machine room and machinery space. [CAD Amendment 246-11]

3.10 **Requirements for Existing Passenger and Freight Elevators**

3.10.1 Notwithstanding section 4 of the Regulation, every existing passenger and freight elevator that was installed before the 1st day of May, 1981 and that does not have car safeties, a speed governor, a braking system and hoistway-door interlocks or hoistway-door locks and contacts conforming to the requirements of CSA B44, Safety Code for Elevators – edition 1975 as amended in 1977 and 1980, or any subsequent edition, shall conform to the applicable requirements of CSA B44, Safety Code for Elevators – edition 1975 as amended in 1977 and 1980, or any subsequent edition. [CAD Amendment 246-11]

3.11 **Requirements for Existing Dumbwaiters or Freight Platform Lifts**

3.11.1 Every existing power dumbwaiter or freight platform lift that was installed before the 1st day of May, 1981 and that does not have hoistway-door interlocks or hoistway-door locks and contacts shall be provided with a locking device that shall prevent the device from moving until the door or gate is closed and that shall prevent the door or gate from being opened unless the device is at the corresponding landing. [CAD Amendment 246-11]

3.12 **Platform Apron Requirements** (166/01)
3.12.1 Every passenger elevator installed before the 1st day of May, 1981 and currently operated in an apartment building, condominium apartment building or educational institution and every passenger elevator installed after that date in any building, shall be provided at the entrance side with a smooth apron made of metal not less than 1.5 millimetres thick, or made of material of equivalent strength and stiffness, reinforced and braced to the car platform such that,

(a) it does not extend less than the full width of the widest hoistway door opening;

(b) it has a straight vertical face, extending below the floor surface of the car-platform, of not less than 1,200 millimetres, except that for an existing elevator this may be reduced where the hoistway pit is not deep enough to accommodate a larger vertical face;

(c) its lower portion is bent back at an angle not less than 60 degrees and not more than 75 degrees from the horizontal; and

(d) it is securely braced and fastened in place to withstand a constant force of 500 newtons applied at right angles to and,

(1) at 450 millimetres from the top without deflecting more than six millimetres, or

(2) at 1,150 millimetres from the top without deflecting more than 50 millimetres,

and without permanent deformation.

3.12.2 Every passenger elevator referred to in subsection 3.12.1 shall have a pit deep enough to accommodate the apron required in subsection 3.12.1, and to provide a minimum twenty-five millimetres clearance between the bottom edge of the apron and the pit floor when the car is on fully compressed buffers.

3.12.3 Traction drive Limited-Use/Limited-Application (LULA) elevators serving 3 or more floors shall conform to 3.12.1 and 3.12.2, otherwise 2 stop traction, hydraulic or roped hydraulic drive Lulas’ are exempt from these requirements provided that;

(a) a supplementary owners report for Lula elevators has been filed with the Director and;

(b) a permanent and readily visible sign viewable from the hall landing has been provided on the apron in lettering not less than 16mm in height, that advises;

(1) of a potential fall hazard below the car,

(2) to lower the car prior to rescue and,

(3) that lower and rescue shall be undertaken by trained personnel only. [CAD Amendment 246-11]

3.13 Door Safety Retainers for Single Slide Doors (61/88 & 109/93)

3.13.1 Every existing passenger elevator with single slide landing doors shall be equipped with safety retainers and shall ensure that;

(a) the retainer shall withstand without detachment or permanent deformation, a force of 1000 Newtons applied upward at any point along the width of the door panel and, while this force is maintained, an additional force of 1000 Newtons applied perpendicular to the door at its centre over an area of 300 x 300mm

(b) the installation of retainers was done in accordance with instructions supplied by the manufacturer of the door safety retainers. [CAD Amendment 246-11]
3.14 Low Pressure Switch *(160/01)*

3.14.1 Every hydraulic elevator where the top of the cylinder when at its highest elevation is above the storage tank, shall be equipped with a low pressure switch to prevent operation of the lowering valve(s) and other requirements specified by the code at time of installation or alteration. [CAD Amendment 246-11]

3.15 Hoarding Between Hoistways Required

3.15.1 No elevator shall be operated where it is located adjacent to a hoistway of another elevating device in which installation or alteration work is being performed and where the operation of the elevator may be hazardous to the persons performing the work, unless the hoistways are separated from the bottom to a level a minimum of 2,000 millimetres above the point where the work is being performed by a separating structure so supported and braced that when subjected to a force of 450 newtons applied horizontally at any point the deflection does not exceed twenty-five millimetres.

3.15.2 Where the separating structure referred to in subsection 3.15.1 is made of perforated material, it shall reject a ball 50 millimetres in diameter.

3.16 Installation Number

3.16.1 Every elevator shall have its installation number engraved or painted on the car crosshead or other conspicuous location on the top of the car, visible from the point of access.

3.17 Attendant Operation

3.17.1 Where an elevator is controlled from one location only, an attendant shall be stationed at the controls while the elevator is available for operation.

3.18 Persons Permitted to Ride

3.18.1 Except for a freight elevator-P, no person other than an attendant(s) or freight handler(s) shall ride or be permitted to ride in a freight elevator.

3.18.2 No person other than an attendant(s) or a designated freight handler(s) shall ride or be permitted to ride in a freight platform lift-Type B or a material lift Type-B.  [CAD Amendment 246-11]

3.18.3 No person shall ride or be permitted to ride on a freight platform lift-Type A or a material lift Type-A.  [CAD Amendment 246-11]

3.18.4 Despite 3.18.1 and 3.18.2, a person(s) may remain inside a motor vehicle that is on an elevating device if the device is designated as a Class B- motor vehicle loading, and the device is operated by a trained attendant or operator.  [CAD Amendment 246-11]

3.19 Escalator Caution Signs

3.19.1 Every escalator installed prior to March 23, 2002 shall be fitted with a caution sign that meets the requirements of clause 8.10 of CSA B44-94; Safety Code for Elevators, as amended by Supplements B44S1-97 and B44S2-98.  [CAD Amendment 246-11]

3.20 Repositioning of an Escalator
3.20.1 Despite subsection 2.5 of this Document repositioning of an escalator within the same building or premises shall not constitute a new installation.

3.21 Escalator Brake Setting Data (85/91)

3.21.1 Escalators installed under B44-M90 or later editions of the code shall have a data tag as required by the code at the time of the installation. Escalators installed under a prior code edition shall have a data tag in conformance with 3.21.2.

3.21.2 Every escalator shall have a permanent and readily visible data plate affixed to the brake or machine, indicating:

(a) the method of checking the brake setting and as a minimum shall include,

(1) the minimum torque, or
(2) the maximum spring length, or
(3) other checking method; and

(b) the maximum no-load stopping distance as related to the torque, spring length, or other method, and;

(c) the testing procedure and interval. [CAD Amendment 246-11]

Part 4

4 MANLIFTS

4.1 Applied Code (174/02)

4.1.1 Every newly installed or altered manlift shall conform to the requirements of CSA Standard B311-02, Safety Code for Manlifts and any applicable changes set out in this document.

4.1.2 Conformance to Appendix A, B, & C is mandatory.

4.1.3 Section 7.32.9 of B311 applies to all Power Type Manlifts. Top-of-car operating stations are not limited to lifts with wireless control and shall be provided on each power-type manlift.

4.1.4 Section 7.32 of B311: Note that requirements of section 7.36, Control and Operating Circuits, apply to "Wireless Control" as well. [CAD Amendment 246-11]

4.2 Top of Car Requirements for Power Type Manlift

4.2.1 Every power type manlift shall be provided with,

(a) a top-of-car operating device; and

(b) a protective guard railing on the top of the car.

4.3 Inspection and Testing of Safety Brake
4.3.1 The inspection and testing of a safety brake on an endless belt type manlift required in subsection 33.(2) of the Regulation shall ensure compliance with clause 5.2.2.3 of CSA Standard B311-M1979, Safety Code for Manlifts and Supplement No. 1 1984.

4.3.2 The inspection and testing of a safety device and overspeed governor on a counter-balanced or power type manlift required in subsection 33.(3) of the Regulation shall ensure compliance with clause 6.11.8 or 7.6.8.2, as the case may be, of CSA Standard B311-M1979, Safety Code for Manlifts and Supplement No. 1 1984.

4.4 Authorized Persons
4.4.1 No person shall use a manlift except those persons designated by the owner of the manlift as being properly trained in its operation and use.

4.5 Maintenance Log Book
4.5.1 The log book shall, as a minimum, contain the following information:

(a) Building name and/or address,
(b) TSSA or MCCR installation number,
(c) Contractor's and Owner's name,
(d) Year and month when a specific task is performed,
(e) The code section, reference or clause number associated with a maintenance task, a description of the task performed and the prescribed maintenance frequency of the task,
(f) The printed name and signature of the persons who completed the required maintenance task. [CAD Amendment 246-11]

4.5.2 Where a part directly affecting the safety of the operation is found to be defective, the record of the maintenance task shall not be signed off until the defect is adjusted repaired or replaced. [CAD Amendment 246-11]

4.6 Location of the Log Book
4.6.1 The log book will be retained in the machine room or at the device location. If it is kept in another location in the building, a notice will be posted in the machine room indicating the alternate location. [CAD Amendment 246-11]

Part 5

5 PASSENGER ROPEWAYS AND PASSENGER CONVEYOR [CAD Amendment 246-11]

5.1 Applied Code
5.1.1 Every passenger ropeway and passenger conveyor shall conform to the requirements of CSA-Z98-07, Passenger ropeways and passenger conveyors, including Update No. 1 Z98-07 February 2010, and any additional applicable changes set out in this document.

5.1.2 Annexes “A, B, C, D, E, F, G, H, I, J and K” referenced in the Z98 standard are also adopted and apply to “post-2011” installations (as defined in 5.3).

5.2 General Technical Requirements for Passenger Ropeways and Passenger Conveyors

5.2.1 The general technical requirements in Part II of the Code Adoption Document do not apply to passenger ropeways and passenger conveyors.

5.2.2 Passenger Ropeways and Passenger Conveyors shall conform to the following general technical requirements,

(a) Electrical equipment shall conform to the Ontario Electrical Safety Code as amended from time to time;

(b) In addition to CSA-Z98-07 requirements, welding on a passenger ropeway or passenger conveyor shall conform to the requirements of CSA W59-03 (R2008) Welded Steel Construction (Metal Arc Welding);

(c) Where a passenger ropeway or passenger conveyor is relocated it shall meet the requirements of 5.5 for post-2011 installations;

(d) Where an alteration is made to a passenger ropeway or passenger conveyor the altered components and functions and those components and functions that are affected by the alterations shall conform to the requirements of 5.5.

5.3 Definitions

5.3.1 In Part 5 of this document,

(a) “safety circuits” means E/E/PES of a passenger ropeway or passenger conveyor having an ability to carry out the functions necessary for mitigation of unacceptable failures by preventing movement or limiting speed of passenger ropeway or conveyor.

(b) NOTE:
   1) Preventing movement may require a passenger ropeway or conveyor to stop or to prevent unwanted start-up
   2) Limiting speed may require appropriate acceleration, deceleration or speed.

(c) “electrical/electronic/programmable electronic system” or “(E/E/PES)” means a system for control, protection, or monitoring based on one or more electrical/electronic/programmable electronic (E/E/PE) devices, including all elements of the system such as power supplies, sensors and other input devices, data highways and other communication paths, and actuators and other output devices.

(d) “electrical/electronic/programmable electronic” or “(E/E/PE)” means that based on electrical (E), and/or electronic (E), and/or programmable electronic (PE) technology.

(e) “programmable electronic” or “(PE)” means that based on computer technology which may be comprised of hardware, software, and of input and/or output units

(f) “pre-2011” means a passenger ropeway or passenger conveyor for which a design submission (initial or alteration) was registered before October 1, 2011.

(g) “post-2011” means a passenger ropeway or passenger conveyor for which a design submission (initial or alteration) was registered on or after October 1, 2011.
5.4 Requirements for PRE-2011 Passenger Ropeways and Passenger Conveyors

5.4.1 In the case of pre-2011 passenger ropeways or passenger conveyors the application of the code adopted in 5.1 is restricted to:

(a) Clause 11 “Ropes and chains” as further detailed in 5.4.2;
(b) Clause 12 “Inspection, testing, and maintenance” as further detailed in 5.4.3;
(c) Clause 13 “Operation of passenger ropeways and passenger conveyors” as further detailed in 5.4.4;
(d) Annex’s “B, C, D, E, F, G, H, I, J and K”, and any changes set out in part 5 of this document, and
(e) any applicable requirements in 5.16 through 5.31.

5.4.2 The following requirements within Clause 11 “Ropes and chains” apply to “pre-2011” installations:

(a) Clause 11.8.2 “Wire rope tows”,
(b) Clause 11.9.5 “Wire rope clips and thimbles”
(c) Clause 11.10 “Non-destructive testing of ropes, sleeves, and sockets”,
(d) Clause 11.11 “Wire rope maintenance”,
(e) Clause 11.12 “Protruding broken wires”,
(f) Clause 11.13 “Replacement of repair of wire rope”,
(g) Clause 11.14 “Locked coil track rope broken wires”
(h) Clause 11.15 “Wire rope log”,
(i) Clause 11.16 “Splice Certificate”,
(j) Clause 11.18 “Maintenance” for chains used in tensioning systems.

5.4.3 The requirements of Clause 12 “Inspection, testing, and maintenance” shall be complemented and supplemented with a maintenance manual produced in accordance with clause 4.38.4 “Maintenance manual”.

5.4.4 The requirements of Clause 13 “Operation of passenger ropeways and passenger conveyors” shall be complemented and supplemented with the following:

(a) an operations manual produced in accordance with clause 4.38.3 “Operations manual”
(b) loading and unloading areas shall be maintained during the operation of passenger ropeways and passenger conveyors in accordance with clause 4.26 “Loading and unloading areas”

5.5 Requirements for POST-2011 and Altered Passenger Ropeways and Passenger Conveyors

5.5.1 Post-2011 and altered passenger ropeways or passenger conveyors, shall conform to the code adopted in 5.1, except as modified by 5.6 to 5.31 excluding 5.17.

5.6 Protection Against Overspeed for Surface Ropeways & Conveyors

5.6.1 Surface ropeways and conveyors shall incorporate protection against the possibility of the device speed exceeding more than 10% of the maximum design speed.

5.7 Z98 clause 4.23.2.4 “Evacuation drive”

5.7.1 Clause 4.23.2.4 of Z98 is revoked and replaced with the following;

\textit{CAD 4.23.2.4}

The emergency brake, antirollback device, deropement switches required in clauses 4.30.6.1 through 4.30.6.4 inclusive, and emergency stops required in clause 4.30.5 shall be capable of operation while the evacuation drive is in operation.
5.8  **Z98 clause 4.243.2(c) “Emergency Brake”**

5.8.1 Clause 4.243.2(c) of Z98 is revoked and replaced with the following:

**CAD 4.243.2(c)**
(c) 15% overspeed, as detected from the speed of the drive sheave or haul rope; and

5.9  **Z98 clauses 4.30.1.8 “Safety levels” and 4.30.1.9 “Safety Considerations” (General Applicability)**

5.9.1 The general applicability of clauses 4.30.1.8 “Safety levels” and 4.30.1.9 “Safety Considerations” shall not apply if all applicable prescriptive requirements of the code are met.

5.9.2 Any variance to or deviation from the prescriptive requirements related to the design of safety circuits (see definitions) shall comply with clauses 4.30.1.8 “Safety levels” and 4.30.1.9 “Safety Considerations”.

5.9.3 New configurations or novel designs which cannot be precisely classified in CSA Z98-07, shall ensure that their safety circuit designs comply with 4.30.1.8 “Safety levels” and 4.30.1.9 “Safety Considerations”.

5.9.4 Where feature(s) of safety circuits for a passenger ropeway or conveyor is not specified in CSA Z98-07, safety circuits shall comply with 4.30.1.8 “Safety levels” and 4.30.1.9 “Safety Considerations”.

5.10  **Z98 clauses 4.30.1.8 “Safety levels” and 4.30.1.9 “Safety Considerations” (Compliance to)**

5.10.1 Where conformance to clauses 4.30.1.8 “Safety levels” and 4.30.1.9 “Safety Considerations” is required as specified in 5.9, compliance shall be demonstrated as required in 5.10.2 or 5.10.3.

5.10.2 Safety circuits function shall conform to highest requirement class (RC/AK) specific to hazard situation/safety function tabulated in Annex C of EN 13243:2004 or,

5.10.3 Safety circuits function shall conform to EN 12929:2004, EN 13243:2004 and EN 13223:2004 or equivalent.

5.11  **Z98 clause 4.30.1.11 “Safety circuits”**

5.11.1 Clause 4.30.1.11 of Z98 is revoked and replaced with the following:

**CAD 4.30.1.11 “Safety circuits”**
Safety circuits shall incorporate redundancy and monitoring mechanisms. Monitoring of redundancy incorporated in safety circuits shall be done as a minimum, once per day. Relays and contactors used in safety circuits shall have force guided, mirrored, or mechanically linked contacts for monitoring purposes. Redundancy in safety circuits using software systems shall use diversification to avoid common mode failure.

5.12  **Z98 clause 4.30.1.13 “Contactors, relays or magnetically operated switches”**

5.12.1 An acceptable deviation from clause 4.30.1.12 “Redundancy” as allowed by Z98 shall comply with 5.10.3.

5.13  **Z98 clause 4.30.8.3 “Photoelectric safety switches”**

5.13.1 An acceptable use of photoelectric safety switches as allowed by Z98 shall comply with 5.10.2 or 5.10.3.
5.14 **Z98 clause 4.32.3 “Two-Way Communication”**

5.14.1 Clause 4.32.3 “Two-Way Communication” of Z98 is revoked and replaced with the following:

**CAD 4.32.3**
An audible two-way voice communication system shall be provided for machine rooms when the ropeway can be operated from those areas.

5.15 **Z98 clause 5.10.2(c) “Service Brake”**

5.15.1 Clause 5.10.2(c) of Z98 is revoked and replaced with the following:

**CAD 5.10.2(c)**
(c) when a service stop in a cabin is actuated;

5.16 **Z98 clauses 13.15.1 and 13.15.2 “Evacuation with evacuation drive”**

5.16.1 Clause 13.15.1 and 13.15.2 of Z98 is revoked and replaced with the following;

**CAD 13.15.1**
The deropement switches and emergency stops required in clause 4.30.5 shall be operable while operating with the evacuation drive.

**CAD 13.15.1**
If deropement switches and/or emergency stops are not operational due to a malfunction, the ropeway may be evacuated with the evacuation drive if the:
(a) full length of the ropeway is kept under surveillance; and
(b) observers are in communication with the operator throughout the evacuation.

5.17 **Single Failure Protection**

5.17.1 Every passenger ropeway installed before June 1, 2001 shall be so constructed and installed that the failure of any single, magnetically operated switch, contactor containing metal-to-metal contacts or relay to release does not prevent the passenger ropeway from stopping in response to an emergency stopping device nor permit the passenger ropeway to start or run if any emergency stopping device is activated.

5.17.2 Every passenger ropeway installed on or after June 1, 2001 that is considered a “pre-2011” device shall be so constructed and installed that none of the following events prevents the passenger ropeway from stopping in response to an emergency stopping device nor permits the passenger ropeway to start or run if any emergency stopping device is activated;

(a) the occurrence of a single ground;
(b) the failure of a single magnetically operated switch, contactor or relay;
(c) the failure of a single solid-state device; or
(d) a software system failure.

5.17.3 The devices used to satisfy the requirements of 5.17.2 shall be checked prior to starting of the passenger ropeway, as a minimum, once per day.

5.17.4 Where a single ground is detected as set out in clause 5.17.2(a) or an event referred to in 5.17.2(b) to 5.17.2(d) is detected, the passenger ropeway shall not restart.
5.17.5 Implementation of redundancy in a passenger ropeway by a software system is permitted provided that there is diversification to avoid common mode failure.

5.18 Log Books

5.18.1 In addition to data specified in section 34 of the Regulation, the log book of a passenger ropeway or passenger conveyor shall contain,

(a) all data required in the code adopted in section 5.1 of this document;
(b) all data on any increases or decreases to the mass of the carriers;
(c) a record of all pre-season inspections carried out in accordance with section 5.19 of this document;
(d) a record of all major and minor alterations; and
(e) a record of all five-year periodic tests referred to in section 5.30 of this document.

5.18.2 In addition to the requirements of subsection 34.(2) of the Regulation,

(a) non-destructive testing (NDT) records shall be kept from a historical reference date of October 1, 2001 or from the date any passenger ropeway or passenger conveyor was commissioned if after October 1, 2001, until the passenger ropeway or passenger conveyor is dismantled.

(b) major and minor alteration records shall be kept until the passenger ropeway or passenger conveyor is dismantled.

(c) a record of all engineering and assessment reports referred to in 5.20 of this document shall be kept until the above-surface passenger ropeway is dismantled.

5.19 Preseason Inspection (168/02)

5.19.1 The holder of a licence for a passenger ropeway shall perform a preseason inspection prior to the start of each ski season to ensure that the lift is in compliance with requirements as set out in part 5 of this document.

5.19.2 The results of the inspection shall be recorded in a form acceptable to the director.

5.20 Aging Ski Lift Assessment

5.20.1 Every above-surface passenger ropeway shall be subjected periodically to a complete engineering review and assessment to ensure its continued operational safety in accordance with guidelines set by the director. Note: see Director’s guideline 224/07.

5.21 Requirements to Limit Tube Tow Detachment (178/03 & 182/03)

5.21.1 The word “tube(s)” has the same meaning as “secondary carrier(s)” used in Z98.

5.21.2 In addition to Parts 5.4 and 5.5, tube tows shall comply with the requirements of 5.21.3 through 5.21.7

5.21.3 The designer shall specify the method to verify the haul rope tension.

5.21.4 Connection of Tubes to Towing Attachments
(a) Manufacturers/designers of tube tows shall verify that the type of tube attachment connection is compatible for their towing attachment design.

(b) Manufacturers/designers of tube tows must allow for a safety margin that will ensure that the tubes will not detach as a result of changes in the tension force on the tether connecting the towing attachment to the tube. Changes of tension force on tether due to uneven tow path, foreseeable movement of passengers in tubes, passengers feet dragging on snow while seated in an acceptable position in tubes and acceleration/deceleration feature of tube tows shall be considered.

(c) For tube tows with automatic detachment at a predetermined unloading point, manufacturers/designers of tube tows shall specify minimum and maximum weight restrictions of tube users.

5.21.5 Tubes

(a) Tube sizes shall match tow path design so that a detached tube will slide clear of the uphill path of any of the following tubes.

(b) Tubes shall be designed to accommodate the passenger size.

5.21.6 Towing attachments

(a) The length of tube towing attachment shall be designed to maintain a minimum operational clearance from the snow along the tube tow-path and hauling rope while the tube is being hauled along the tow path.

(b) Factor of safety of all attachments to the haul rope and components for pulling tubes shall be based upon their impact strength at low temperatures.

(c) The designer/manufacturer shall specify the maximum tension force on all attachments to the haul rope and components for pulling tubes along their tow path.

(d) The designer/manufacturer shall specify procedures for inspection of all attachments to the haul rope and components for pulling tubes to verify their safety. Inspection procedures shall include criteria to evaluate the necessity of their replacement.

5.21.7 Tow Path, Crossfall and Containment Barriers

(a) Means to protect passenger in a tube against contacting any part of tube tow including grips shall be provided along the entire length of the tow path.

(b) Means shall be provided to keep tubes on the pre-defined tow path.

5.22 Alterations

5.22.1 Where an alteration is made to a passenger ropeway or passenger conveyor the altered components and functions and those components and functions that are affected by the alterations shall conform to the requirements of 5.5.

5.22.2 One or more of the following actions on a passenger ropeway or passenger conveyor shall constitute a major alteration:

(a) an increase or decrease in,

(1) the rated speed of the carriers,

(2) the maximum capacity of the ropeway;
(b) an increase or decrease by more than ten per cent, or an accumulated increase or decrease by more than ten per cent, of the dead weight of the carriers or counter-weight system;

(c) an increase or decrease in the length or rise of the travel of the passenger ropeway;

(d) a change,

(1) in the carrier design or manufacturer,

(2) in the line sheaves and sheave assemblies design,

(3) in the type of power supply to the machine,

(4) in the type of driving machine,

(5) in the location of a machine or tensioning system,

(6) in the type of tensioning system,

(7) that would result in a reclassification of the passenger ropeway,

(8) in tower length or an addition of a new tower.

(e) a change in,

(1) the method or type of operation,

(2) the method or type of motion control location of the controller

(f) a replacement of the controller,

(g) an alteration to the controller, other than an alteration to the motor starters.

5.22.3 Any action or work performed on a passenger ropeway that results in a change to the original design or the operational characteristics of the passenger ropeway or affects the inherent safety of the passenger ropeway and not listed in subsection 5.22.2 shall constitute a minor alteration.

5.22.4 Minor alterations shall be reported and inspected as required by section 19 of the Regulation.

5.23 Bar Lift Requirements

5.23.1 Every bar lift shall,

(a) be equipped with an anti-rollback device in accordance with 7.8 of Z98;

(b) have a tow path designed and maintained in accordance with 7.2.4 of Z98;

(c) be so constructed that maximum stopping shall be maintained in accordance with 7.7.1.2 of Z98; and

(d) be so constructed that, where a brake is used in order to obtain conformance with the requirement of subsection 5.23.1(c) the brake shall conform to code adopted in part 5.

5.24 Rope Tow Requirements
5.24.1 Every rope tow shall,

(a) be equipped with an anti-rollback device in accordance with 8.13 of Z98;

(b) have a tow path designed and maintained in accordance with 8.2.5 of Z98;

(c) be so constructed that maximum stopping shall be maintained in accordance with 8.12.1.2 of Z98; and

(d) be so constructed that, where a brake is used in order to obtain conformance with the requirement of subsection 5.24.1(c) the brake shall conform to code adopted in part 5.

5.25 Fibre Rope Tow Requirements

5.25.1 The return rope on a fibre rope tow shall have vertical clearances in accordance with 8.4.1 of Z98.

5.26 Chair Lift or Gondola Lift Requirements

5.26.1 Every chair lift or gondola lift shall,

(a) have a service brake that is located in accordance with 4.24.2.1 of Z98;

(b) be so equipped that the evacuation drive that drives the circulating rope is rendered inoperative in accordance with section 5.7 (CAD 4.23.2.4);

(c) be equipped with a readily available work carrier in accordance with 4.27.10 and Annex B of Z98.

5.27 Carrier Grip Requirements

5.27.1 Where a work carrier is affixed to a lift line by means of rope grips that use friction as a gripping method, rope grips shall be installed in accordance with the code adopted in part 5.

5.27.2 A grip referred to in subsection 5.27.1 shall be so designed so as not to cause any damage to the hauling rope sheave, bullwheel or the liners of the sheave or bullwheel in accordance with the code adopted in part 5.

5.28 Restraining Bar Requirements

5.28.1 Each chair of a chair lift shall be equipped with a restraining device in accordance with 6.13.2 of Z98.

5.29 Haul Rope Retention on Chairlifts

5.29.1 Support, hold-down, and combination sheave assemblies on all chair lifts shall meet the requirements of the code adopted in part 5.

5.30 Load Test Requirements (111/93)

5.30.1 All above-surface passenger ropeways shall be load-tested periodically at intervals not exceeding five (5) years. The periodic load testing of the ropeway shall be carried out under the direction and supervision of the designer/manufacturer of the ropeway or a qualified professional engineer.

5.30.2 The results of five-year periodic tests shall be performed in accordance with the code adopted in part 5 and recorded on the form provided in Annex H of Z98.
5.30.3 Original copies of the test shall be signed by either the designer/manufacturer of the ropeway or a qualified professional engineer and shall be kept on site in the log book.

5.31 Manufacturers/Designers Bulletins

5.31.1 Manufacturer(s) of passenger ropeway(s) or conveyor(s) shall inform owners about the requirements associated with their safety bulletins or alerts in addition to the requirement of Section 35 of the Regulation.

5.31.2 In addition to the requirement of Section 35 of the Regulation, owner(s) of passenger ropeway(s) or conveyor(s) shall inform manufacturer(s) about findings which may require the issuing of a safety bulletin or alerts.

5.31.3 Owners are responsible to carry out the requirements of manufacturer’s safety bulletin or alerts.

Part 6

6 CONSTRUCTION HOISTS

6.1 Applied Code [CAD Amendment 216-07]

6.1.1 Every construction hoist shall conform to the following:

(a) workers’ rail guided construction hoists shall conform to CAN/CSA Standard Z185-M87(R2001), Safety Code for Personnel Hoists; [CAD Amendment 216-07]

(b) workers’ rope-guided construction hoist shall conform to American National Standard ANSI/ASSE A10.22 – 2007 Safety Requirements for Rope-guided and Non-guided Workers’ Hoist; and [CAD Amendment 216-07]

(c) material construction hoist, CSA Standard Z 256-M87(R2006), Safety Code for Material Hoists, [CAD Amendment 216-07]

and any applicable changes set out in this document. [CAD Amendment 246-11]

6.2 Rated Load

6.2.1 For the purpose of this Document and subsection 31.(3) of the Regulation, “rated load” or “rated loading” in the codes referred to in section 6.1 means “maximum capacity”.

6.3 Continuously Controlled by Power

6.3.1 Every construction hoist shall be so designed that the car movement in both the up and down direction is continuously controlled by power.

6.4 Broken Rope Safety

6.4.1 A material construction hoist that is equipped with a broken rope type safety shall not be registered unless a type test indicates that the safety is capable of stopping the car when it is free falling with its rated load.
6.5 Limitation on Speed

6.5.1 Where the load-carrying unit of a workers' rope-guided construction hoist passes through a restricted area at a platform or floor, a control device that positively and automatically lowers the speed of the load-carrying unit to that specified in the related design submission while the load-carrying unit passes through the restricted area shall be installed on the hoist, except where the design submission indicates that no speed limitation is required.

6.5.2 In lieu of the control device referred to in subsection 6.5.1, an operator utilising a system of signals may be used to manually control the speed of the hoist.

6.6 Attendant Operation

6.6.1 Every workers' rail-guided construction hoist, shall while in operation, be attended by an attendant who shall be stationed in the load-carrying unit, and who shall operate the construction hoist and also supervise the loading, passage and unloading of persons and freight.

6.6.2 Every material construction hoist shall while in operation be,

(a) attended by one or more attendants stationed at each location where freight is being loaded or unloaded; and

(b) operated by,

(1) an attendant stationed at the location of the operating devices, provided that the operating devices can be automatically rendered inoperative should an unsafe condition for operation of the construction hoist exist, or

(2) an operator stationed at the driving unit where the driving unit and its operating devices cannot automatically be rendered inoperative should an unsafe condition for operation of the construction hoist exist.

6.6.3 Subsections 6.6.1 and 6.6.2 apply with necessary modifications to the providing of attendants and operators for workers' rope-guided construction hoists.

6.7 Up Overspeed Protection

6.7.1 Every workman’s construction hoist that is equipped with a counterweight having a mass greater than the mass of the empty car shall be provided with a means for protecting against uncontrolled car speed in the up direction and such means shall conform to the following:

(a) It shall detect any uncontrolled movement of the car prior to or at least when the car reaches a predetermined overspeed and shall cause the car to stop prior to the time when the counterweight strikes its buffers, or at least reduce car speed to the speed for which the buffers are designed.

(b) It shall be capable of performing as required in paragraph (a) without assistance from any hoist component which solely without built in redundancy, controls the speed, or deceleration, or stops the car during normal operation.

(c) It shall not develop an average retardation of the car in excess of 9.81 m/sec² during the stopping phase.

(d) It shall prevent uncontrolled movement of the car through control of the speed of, and acting upon the,

(1) car;
(2) counterweight;
(3) suspension or compensating rope system; and
(4) drive sheave, provided that the traction between the suspension ropes and the drive sheave are continuously monitored and the construction hoist is automatically removed from service when the rope slippage exceeds a predetermined amount.

(e) When it is activated or during the stopping phase, it or another hoist component shall cause the power supply of the driving machine to be interrupted.

(f) It shall be capable of performing at least ten operations without any adjustments.

(g) All components that require periodic examination and maintenance for the purpose of maintaining their operational reliability, shall be readily accessible.

(h) Its performance shall be checked during the initial and periodic inspections unless its performance reliability is substantiated otherwise.

(i) It shall be provided with a making plate indicating maximum capacity for which it may be used and the speed at which it is set to operate.

6.8 Additional Requirements for Workers’ Rail Guided Construction Hoists [CAD Amendment 216-07]

6.8.1 In addition to the requirements of 6.1.1(a), workers’ rail-guided construction hoists shall conform to the following:

(a) Clause 14.4.2 of CAN/CSA-Z185-M87 (R2001) shall be replaced with the following;

(1) The occurrence of a single ground or a software system failure or the failure of

   a) a switch which does not have contacts that are positively separated;
   b) a contactor;
   c) a relay; or
   d) a solid state device;

   shall not render any electrical protective device ineffective.

(b) Redundant software systems used to satisfy the requirements of (a) shall have a level of diversification sufficient to avoid common mode failures.

(c) Clause 18.1.1(c) of CAN/CSA-Z185-M87 (R2001) shall be replaced with:

   Control equipment incorporating solid state devices and/or software systems in operating and control circuits shall be tested in accordance with the testing requirements of EN 12016:2004 by exposing it to interference levels at the test values specified for “safety circuits.” The interference shall not render any electrical protective device ineffective and shall not cause the car to move. If enclosure doors or suppression equipment must remain installed to meet the above requirements, warning signs to that effect shall be posted on the control equipment.

(d) The normal terminal stopping device and final terminal stopping devices shall not control the same controller devices unless two or more separate and independent controller devices are provided, two of which shall complete both the driving-machine motor and the driving machine brake circuits in either direction of travel.
6.9 Additional Requirements for Workers’ Rope-Guided Construction Hoists [CAD Amendment 216-07]

6.9.1 In addition to the requirements of 6.1.1(b), workers’ rope-guided construction hoists shall conform to the following:

(a) The occurrence of a single ground or a software system failure or the failure of

(1) a switch which does not have contacts that are positively separated;
(2) a contactor;
(3) a relay; or
(4) a solid state device;

shall not render the deadman control switch, the limit switches which prevent overtravel, or the automatic friction brake ineffective.

Note: Requirements only apply to the circuits in which the deadman control switch, the limit switches which prevent overtravel, or the automatic friction brake are used and not to the devices themselves.

(b) Redundant software systems used to satisfy the requirements of (a) shall have a level of diversification sufficient to avoid common mode failures.

(c) Control equipment incorporating solid state devices and/or software systems in operating and control circuits shall be tested in accordance with the testing requirements of EN 12016:2004 by exposing it to interference levels at the test values specified for “safety circuits.” The interference shall not render the Deadman Control Switch, Limit Switches, or the Automatic Friction Brake ineffective and shall not cause the cage to move. If enclosure doors or suppression equipment must remain installed to meet the above requirements, warning signs to that effect shall be posted on the control equipment.

(d) All references to NFPA 70 (Clause 2.1, Clause 3.24, and Clause 4.13 of ANSI A10.22-2007) shall be replaced with Ontario Electrical Safety Code as referenced in 2.2.1(b) of this document. [CAD Amendment 216-07], [CAD Amendment 246-11]

6.10 Additional Requirements for Material Construction Hoist [CAD Amendment 216-07]

6.10.1 In addition to the requirements of 6.1.1(c), material construction hoists shall conform to the following:

(a) Clause 15.3.2 of CAN/CSA-Z256-M87 (R2006) shall be replaced with the following:

(1) The occurrence of a single ground or a software system failure or the failure of

a) a switch which does not have contacts that are positively separated;
b) a contactor;
c) a relay; or
d) a solid state device;

shall not render any electrical protective device ineffective.

(b) Redundant software systems used to satisfy the requirements of (a) shall have a level of diversification sufficient to avoid common mode failures.

(c) Clause 19.1.3 of CAN/CSA-Z256-M87 (R2006) shall be replaced with:

Control equipment incorporating solid state devices and/or software systems in operating and control circuits shall be tested in accordance with the testing requirements of EN 12016:2004 by exposing it to interference levels at the test values specified for “safety circuits.” The interference shall not render any electrical protective device ineffective and shall not cause the car to move. If enclosure doors or suppression equipment must remain installed to meet the above requirements, warning signs to that effect shall be posted on the control equipment.

(d) The normal terminal stopping device and final terminal stopping devices shall not control the same controller devices unless two or more separate and independent controller devices are provided, two of which shall complete both the driving-machine motor and the driving machine brake circuits in either direction of travel.

(e) Material construction hoists employing a two- or three-phase alternating-current driving machine motor, which is not driven from a direct current source through a static inverter, shall be provided with a means to inhibit the flow of alternating-current in each phase. [CAD Amendment 216-07]

---

7 ELEVATING DEVICES FOR PERSONS WITH PHYSICAL DISABILITIES

7.1 Applied Code [CAD Amendment 238-09]

7.1.1 Each newly installed elevating device for persons with physical disabilities shall conform to the requirements of CSA Standard B355-09, Lifts for persons with physical disabilities including and any applicable changes set out in the CAD. [CAD Amendment 238-09]

7.2 Maintenance [CAD Amendment 238-09]

7.2.1 All lifts for persons with physical disabilities shall conform to the maintenance requirements of CSA-B355-09 Lifts for persons with physical disabilities including Annex B and any applicable changes set out in the CAD. [CAD Amendment 238-09]

7.3 Maintenance Log Book [CAD Amendment 238-09]

7.3.1 The log book shall, as a minimum, contain the following information:

(a) Building name and/or address,

(b) TSSA or MCCR installation number,

(c) Contractor's and Owner’s name,

(d) Year and month when a specific task is performed,
(e) The code section, reference or clause number associated with a maintenance task, a description of the task performed and the prescribed maintenance frequency of the task,

(f) The printed name and signature of the persons who completed the required maintenance task. [CAD Amendment 238-09]

7.3.2 Where a part directly affecting the safety of the operation is found to be defective, the record of the maintenance task shall not be signed off until the defect is adjusted repaired or replaced. [CAD Amendment 238-09]

7.4 Location of the Log Book [CAD Amendment 238-09]

7.4.1 The log book will be retained in the machine room or at the device location. If it is kept in another location in the building, a notice will be posted in the machine room indicating the alternate location. [CAD Amendment 238-09]

7.5 Access to Lift

7.5.1 Every owner of an unenclosed vertical platform lift and every owner of an unenclosed stair platform lift or stairchair lift shall ensure that the public does not have access to the area where the lift is installed while the lift is in operation.

7.5.2 Subsection 7.5.1 does not apply in the case of an unenclosed stair platform lift or stairchair lift where,

(a) the owner of the lift is able to control and identify persons who will be using the lift or the area where the lift is installed and the owner familiarizes those persons in advance of using the area or lift with the safety rules and procedures concerning the use of the area and the lift; and

(b) and the lift meets the requirements of subsection 7.6.

7.6 Lift Operation with Persons Nearby

7.6.1 Where an unenclosed stair platform lift or stairchair lift is being operated at the same time that other persons are using the area in which the lift is installed,

(a) audio-visual signals shall be emitted that warn persons using the lift and persons in the area where the lift is installed at all times when the platform is unfolded and until the lift is parked in a safe position at a terminal; and

(b) every leading edge or surface of that portion of the lift and its carriage that carries the passengers in both directions of travel shall be equipped with sensitive devices that meet the requirements of clause 7.2.4, and 8.5.4, of the standard adopted in section 7.1 of this Document and that are operational whenever the carriage is in motion.

7.7 Usage of Device

7.7.1 The owner of a lift for persons with physical disabilities shall ensure that,

(a) the device is used primarily for the transportation of persons with physical disabilities;

(b) detailed operating instructions are posted at every operating station;
(c) the operation of the device is restricted to attendants designated by the owner or those persons who in the opinion of the owner are able to use the device without an attendant; and

(d) the persons using the device receive instruction and training that emphasizes the hazards associated with improper use of the device.

7.8 Requirements for Restricted Operation

7.8.1 The operation of a lift for persons with physical disabilities shall be restricted by means of a key-control for the operating device as set out in subsection 7.8.2 and 7.8.3 or by a method acceptable to the director that provides the same degree of safety.

7.8.2 A key-control for an operating device may be by means of an on/off lockable switch located near and controlling one or more operating devices or each operating device may be directly key-controlled.

7.8.3 The key for a key-control for an operating device shall be removable only when the switch is in an “off” position.

7.8.4 Folding down of a platform on a stair platform lift shall be restricted to persons authorised to use the lift, by the following means:

(a) in the case of a platform that is folded down by power – by means of a key-controlled switch or by a method acceptable to the director; and

(b) in the case of a platform that is folded down manually – by means of a keyed lock or by a method acceptable to the director.

7.8.5 Lowering of a barrier arm, if provided, shall be restricted to persons authorised to use the lift by means of a keyed switch or lock or by a method acceptable to the director.

7.9 Instructions for Use and Owner Requirements

7.9.1 Every owner of an elevating device for persons with physical disabilities shall,

(a) ensure that the instructions for the device are posted at the location of each operating device that will inform a person with physical disabilities of the established procedure to gain access to and to use the device and, in the case of unenclosed devices, that such instructions include, but are not limited to, cautioning the user to observe the lift runway for possible obstructions;

(b) ensure that an attendant is available to operate the device when a person with physical disabilities requires assistance;

(c) where an attendant is required and is not permanently stationed at the location of the operating device ensure that a notice is posted at the entrance to the elevating device that indicates the procedure to be followed to obtain assistance; and

(d) provide instruction that an unoccupied platform of an unenclosed stair platform lift should not be called or sent from a landing station unless it is in the raised and folded position. [CAD Amendment 238-09]

7.9.2 A person shall only operate an unenclosed vertical platform lift, an unenclosed stair platform lift or a stairchair lift, if the person is satisfied that only persons using the lift have access to the area where the lift is installed.

7.9.3 Subsection 7.9.2 does not apply to a person operating an unenclosed stair platform lift or a stairchair lift while other persons are using the area in which the lift is installed where,
(a) the conditions set out in subsection 7.5.2 exist;

(b) the person operating the lift is an attendant and has, while operating the lift in the folded down position, a clear view of the lift runway in the direction of its movement by walking along with the carriage while it is in motion or has by being stationed at a point, a clear view of the runway;

(c) the person using the lift has, while using the lift, a clear view of the lift runway in the direction of travel; and

(d) the audio-visual signals required under subsection 7.6.1(a) are operational.

7.10 Notice Required Regarding Restricted Use

7.10.1 A notice that the use of a lift for persons with physical disabilities is restricted to persons with physical disabilities shall be posted at each location of a device, at landing or runway entrances of the device and at the load-carrying unit of the device.

7.11 Supplementary Owners Report

7.11.1 In addition to those requirements set out in sections 15 and 16 of the Regulation, the design submission for a lift for persons with physical disabilities shall include a detailed report, completed on a form provided by the director, from the owner of the elevating device, in which the proposed methods of compliance with sections 7.5 to 7.8 and 7.9.1 of this Document shall be described.

7.12 Change of Ownership & Supplementary Owners Report

7.12.1 In addition to the requirements of section 29 of the Regulation, where there is change in the ownership of a lift for persons with physical disabilities or a substantive change in the type of occupancy of a building in which a lift for persons with physical disabilities is installed, the new owner of the lift shall submit to the director, a detailed report on a form provided by the director in which the proposed methods of compliance with sections 7.5 to 7.8 and 7.9.1 of this Document shall be described.

C. Explanatory Notes:

1 General

1.1 This Code adoption amendment provides the following regulatory function;
   a) Consolidates requirements from existing Code Adoption Document Amendments,
   b) corrects date references of externally referenced documents to latest edition where appropriate
   c) Implements a new numbering format for ease of use and future amendments,
   d) adopts the latest edition of Z98, modifies sections of Z98 to provide clarity or revises technical requirements where issues present, and supplements Z98 requirements with specific CAD requirements, and
   e) incorporates the requirements of specific Directors Orders or similarly issued documents whose content is suitable for inclusion in a CAD document.

2 Safety Levels and Safety Considerations Referenced in 5.9 and 5.10 of this document

2.1 To bring some specific requirements as to how conformance to 4.30.1.8 & 4.30.1.9 should be demonstrated, the CAD amendment references specific EN standards which are suitable for this purpose.

2.2 The following EN standards have been referenced:

<table>
<thead>
<tr>
<th>Standard No.</th>
<th>Title of Standard</th>
</tr>
</thead>
</table>

---
EN 12929: 2004  | Safety requirements for cableways installations designed to carry persons. General requirements. Additional requirements for reversible bi-cable aerial ropeways without carrier truck brakes
---|---
EN 13243: 2004  | Safety requirements for cableways installation designed to carry persons. Electrical equipment other than for drive systems
EN 13223: 2004  | Safety requirements for cableways installations designed to carry persons. Drive systems and other mechanical equipment

2.2.1 EN standards can be purchased from

IHS Energy (Canada) Ltd
Stampede Station, Suite 200
1331 Macleod Trail SE
Calgary, AB T2G 0K3 Canada
Tel: (613) 237-4250 Toll Free: 1-800-267-8220
Fax: (613) 237-4251
Email: global@ihs.com

2.3 A reference to (RC/AK) in section 5.10.2 of this document means requirement class as described in EN 13243.

3 Reference Symbols Used in this CAD

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>is a reference to a section in the CAD</td>
</tr>
<tr>
<td>7.2.4</td>
<td>is a reference to a section in an external document or code</td>
</tr>
<tr>
<td>(197/06)</td>
<td>is a reference to a predecessor document related to this CAD requirement</td>
</tr>
</tbody>
</table>

Roland Hadaller, P.Eng.,
Director, Ontario Regulation 209/01 (Elevating Devices), appointed under the Technical Standards and Safety Act, 2000.

This Code Adoption Document amendment has been developed in consultation with; the Elevating Devices Advisory Council, the Ski Lift Advisory Council, the Field Advisory Committee, and the Task Group for the adoption of Z98.