	Elevating and Amusement Devices Safety Division	Ref. No.: 298 / 22
	GUIDELINE	Date: February 1, 2022

IN THE MATTER OF:

THE *TECHNICAL STANDARDS AND SAFETY ACT* 2000,
S.O. 2000, c. 16
- and -
ONTARIO REGULATION 209/01 (Elevating Devices) made under the
***Technical Standards and Safety Act,* 2000**
- and -
the Elevating Devices Code Adoption Document dated June 1, 2001, as amended by ED CAD 295/21

Subject: Referenced Standards and Cross Reference Guideline for Parking Garage Lifts (PGL's) as adopted in ED CAD 295 / 22 Part 9

Distribution: Posted on TSSA website

1. Effective Date

1.1 This Directors Guideline becomes effective March 1, 2022 and is to be used in conjunction with the code adopted in Part 9 of ED CAD 295/21.

2. Introduction

2.1 The purpose of this Director's Guideline is to provide a cross reference of documents (codes or standards) acceptable in lieu of the specific editions of codes, standards or specifications that are referenced in;

BS EN 14010:2003+A1:2009 Safety of machinery - Equipment for power driven parking of motor Vehicles - Safety and EMC requirements for design, manufacturing, erection, and commissioning stages.

2.2 EN 14010 references several EN and ISO standards which are less common in North American markets. *Table 1 – EN 14010 Cross-Reference Document* provides a complete listing of documents used in EN 14010 and lists alternative acceptable documents that may be used for the installation, alteration, repair or maintenance of Parking Garage Lifts in Ontario.

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Roger Neate.

Director, Ontario Regulation 209/01 (Elevating Devices), appointed under the *Technical Standards & Safety Act, 2000*

TABLE 1
EN 14010 Cross-Reference of Documents

EN 14010 Referenced Standard			**Alternate Acceptable Documents by TSSA** (Published by a Standards Council of Canada accredited Standards Development Organization)	
Standard	Title	Referenced in	Standard	Title
EN 294:1992	*Safety of machinery — Safety distance to prevent danger zones being reached by the upper limbs*	2, 5.1, 5.7.6, 5.11.8, 5.11,10.1	CAN/CSA-ISO 13857:2015	Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs
EN 349:1993	*Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*	2, 5.11.8	ISO 13854:2017	Safety of machinery — Minimum gaps to avoid crushing of parts of the human body
EN 418:1992	*Safety of machinery — Emergency stop equipment, functional aspects; principles for design*	2, 5.2.3.4, 5.2.5.2b)	ISO 13850:2015	Safety of machinery — Emergency stop function — Principles for design
EN 457	*Safety of machinery — Auditory danger signals — General requirements, design and testing*	2, 5.1, 5.11.10.3, 5.11.14	ISO 7731:2003	Ergonomics — Danger signals for public and work areas — Auditory danger signals
EN 811	*Safety of machinery — Safety distances to prevent danger zones being reached by the lower limbs*	2, 5.8.2, 5.8.3,	CAN/CSA-ISO 13857:2015	Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs
EN 842	*Safety of machinery — Visual danger signals — General requirements, design and testing*	2, 5.1, 5.9.4, 5.11.14	IEC 61310-1:2007	Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals
EN 894-2	*Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*	2, 5.2.3.1	IEC 61310-1:2007	Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals
EN 953	*Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*	2, 5.1, 5.7.6, 5.11.8,	ISO 14120:2015	Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards
EN 954 -1:1996	*Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*	2, 5.1, 5.2.2, 5.2.2.1, 5.2.2.2, 5.2.4.1, 5.2.4.2	ISO 13849-1:2015	Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design
EN 982 :1996	*Safety of machinery — Safety requirements for fluid power systems and their components —Hydraulics12*	2, 5.2.4.2, 5.4.1, 5.4.2.2, 5.4.2.3, 5.4.2.4, 5.4.2.6, 5.4.3.1, 5.4.3.2, 5.4.3.4, 5.4.4, 7.2.1h),	ISO 4413:2010	Hydraulic fluid power — General rules and safety requirements for systems and their components
EN 1005-2	*Safety of machinery — Human physical performance — Part 2: Manual handling of machinery and component parts of machinery*	2, 5.1	ISO 14738:2002	Safety of machinery — Anthropometric requirements for the design of workstations at machinery
EN 1005-3	*Safety of machinery — Human physical performance — Part 3: Recommended force limits for machinery operation*	2, 5.1	ISO 14738:2002	Safety of machinery — Anthropometric requirements for the design of workstations at machinery
EN 1037:1995	*Safety of machinery — Prevention of unexpected start-up*	2, 5.2.5.2b), 5.3.2, 5.4.2.3	ISO 14118:2017	Safety of machinery — Safety of machinery – Prevention of unexpected start-up
EN 1050:1996	*Safety of machinery — Principles for risk assessment*	2, 4	ISO 14121-1:2007	Safety of machinery — Risk assessment — Part 1: Principles
EN 1088	*Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*	2, 5.2.5.2b)	ISO 14119:2013	Safety of machinery — Interlocking devices associated with guards — Principles for design and selection
EN 1760-2	*Safety of machinery — Pressure sensitive protective devices — Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*	2, 5.11.8	ISO 13856-2:2013	Safety of machinery — Pressure-sensitive protective devices — Part 2: General principles for design and testing of pressure-sensitive edges and pressure-sensitive bars
EN 1837	*Safety of machinery — Integral lighting of machines*	2, 5.1, 7.1.2.2	Referenced standard may be used.	

EN 14010 Referenced Standard			**Alternate Acceptable Documents by TSSA** (Published by a Standards Council of Canada accredited Standards Development Organization)	
Standard	Title	Referenced in	Standard	Title
EN 12150-1	*Glass in building — Thermally toughened soda lime silicate safety glass — Part 1: Definition and description*	2, 5.11.10.1,	ISO 12540:2017	Glass in building — Tempered soda lime silicate safety glass
EN 12385-4	*Steel wire ropes — Safety — Part 4: Stranded ropes for general lifting applications*	2, 5.6.2.1	ASME A17.6	Standard for Elevator Suspension, Compensation, and Governor Systems
EN 12385-5	*Steel wire ropes — Safety — Part 5: Stranded ropes for lifts*	2, 5.6.2.1	ASME A17.6	Standard for Elevator Suspension, Compensation, and Governor Systems
EN 12433-1	*Industrial, commercial and garage doors and gates —Terminology — Part 1: Types of doors*	2, 3.5.6, 5.11.10	Garage Door Standards	
			ANSI/DASMA 207-2012	Standard for Rolling Sheet Doors
EN 12453	*Industrial commercial and garage doors and gates — Safety in use of power operated doors —Requirements*	2, 5.11.10, 5.11.10.5	ANSI/DASMA 204-2004	Standard for Fire Rated Rolling Door Assemblies
			ANSI/DASMA 203-2004	Standard for Non-Fire Rated Rolling Doors
			ANSI/DASMA 102-2018	Specification for Sectional Overhead-Type Doors
EN 12604	*Industrial, commercial and garage doors and gates — Mechanical aspects — Requirements*	2, 5.11.10	ANSI/DASMA 107-2012	Room Fire Test Standard for Garage Doors Using Foam Plastic Insulation
prEN 12624	*Industrial, commercial and garage doors and gates — Operational noise — Requirements and test methods*	2, 5.11.10	ANSI/DASMA 108-2017	Standard Method for Testing Section Garage Doors and Rolling Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference
EN 12635	*Industrial, commercial and garage doors and gates — Installation and use*	2, 5.11.10	ANSI/DASMA 109-2017	Standard Method for Testing and Rating Sectional Doors: Determination of Life cycling Performance
EN 12978	*Industrial, commercial and garage doors and gates — Safety devices for power operated doors and gates — Requirements and test methods*	2, 5.11.10, 5.11.10.5		
prEN 13241	*Industrial, commercial and garage doors and gates — Product standard*	2, 5.11.10,	ANSI/DASMA 115-2017	Standard Method for Testing Sectional Garage Doors: Determination of Structural Performance Under Missile Impact and Cyclic Wind Pressure
EN 13411-2	*Terminations for steel wire ropes — Safety — Part 2: Splicing of eyes for wire rope slings*	2, 5.6.2.5	ISO 8794:1986 (R2012)	Steel wire ropes — Spliced eye terminations for slings
prEN 13411-3	*Terminations for steel wire ropes — Safety — Part 3: Ferrules and ferrule-securing*	2, 5.6.2.5	ISO 8793:1986 (R2017)	Steel wire ropes — Ferrule-secured eye terminations
prEN 13411-6	*Terminations for steel wire ropes — Safety — Part 6: Asymmetric wedge socket*	2, 5.6.2.5	CSA B44-10	Safety Code for Elevators and Escalators
EN 60204-1:1997	*Safety of machinery — Electrical equipment of machines — Part 1: General requirements*	2, 5.1, 5.2.2.1, 5.2.2.2, 5.2.3.3, 5.2.3.4.2, 5.2.4.1, 5.2.5.1, 5.2.5.2b), 5.3.1, 5.3.2, 5.3.3, 5.3.4,	IEC 60204-1:2016	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
EN 60529	*Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*	2, 5.3.3,	CAN/CSA-C22.2 No. 60529:16	Degrees of protection provided by enclosures (IP Code)
EN 60947-5-1:1997	*Low-voltage switchgear and control gear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices (IEC 60947-5-1:1997)*	2, 3.6.1, 5.2.2.1.1,	IEC 60947-5-1:2016	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices
EN 61000-6-2	*Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity for industrial environments (IEC 61000-6-2:1999, modified)*	1.4(c), 2, 5.2.5.1, 5.2.5.2,	CAN/CSA-IEC 61000-6-2:18	Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity standard for industrial environments
EN 61000-6-3	*Electromagnetic compatibility (EMC) — Part 6-3: Generic standards - Emission standard for residential, commercial and*	2, 5.2.5.1	IEC 61000-6-3:2006	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential,

EN 14010 Referenced Standard			**Alternate Acceptable Documents by TSSA** (Published by a Standards Council of Canada accredited Standards Development Organization)	
Standard	Title	Referenced in	Standard	Title
	light-industrial environments (IEC 61000-6-3:1996, modified)			commercial and light-industrial environments
EN 61310-1	*Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, auditory and tactile signals (IEC 61310-1:1995)*	2, 5.11.14, 7.2.2	IEC 61310-1:2007	Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals
EN 61310-2	*Safety of machinery — Indication, marking and actuation — Part 2: Requirements for marking (IEC 61310-2:1995)*	2, 5.9.4, 7.2.1	IEC 61310-2:2007	Safety of machinery - Indication, marking and actuation - Part 2: Requirements for marking
EN 61496-1	*Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (IEC 61496:1997)*	2, 5.2.2.1.1ii), 5.9.3, 5.11.8	IEC 61496-1:2012	Safety of machinery - Electro-sensitive protective equipment - Part 1: General requirements and tests
IEC 61496-2	*Safety of machinery — Electro-sensitive protective equipment — Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)*	2, 5.9.3	IEC 61496-2:2013	Safety of machinery - Electro-sensitive protective equipment - Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)
EN ISO 12100-1:2003	*Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*	2, 3	ISO 12100-1:2003	Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology
EN ISO 12100-2:2003	*Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles (ISO 12100-2:2003)*	2, 3, 5.1, 7.1.1, 7.1.3.1, 7.1.4	ISO 12100-2:2003	Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles
EN ISO 12543-2	*Glass in building — Laminated glass and laminated safety glass — Part 2: Laminated safety glass (ISO 12543-2:1998)*	2, 5.11.10.1	ISO 12543-2:2011	Glass in building — Laminated glass and laminated safety glass — Part 2: Laminated safety glass
EN ISO 14122-1	*Safety of machinery — Permanent means of access to machinery — Part 1: Choice of fixed means of access between two levels (ISO 14122-1:2001)*	2, 5.11.9,	ISO 14122-1:2016	Safety of machinery — Permanent means of access to machinery — Part 1: Choice of fixed means and general requirements of access
EN ISO 14122-2	*Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2:2001)*	2, 5.11.9	ISO 14122-2:2016	Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways
EN ISO 14122-3	*Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001)*	2, 5.11.9	ISO 14122-3:2016	Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard-rails
prEN ISO 14122-4	*Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders (ISO/FDIS 14122-4:2002)*	2, 5.11.9	ISO 14122-4:2016	Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders
ISO 3864	*Graphical symbols — Safety colours and safety signs*	2, 5.2.3.1, 5.10.6	ISO 3864-3:2012	Graphical symbols — Safety colours and safety signs — Part 3: Design principles for graphical symbols for use in safety signs
ISO 7000	*Graphical symbols for use on equipment — Index and synopsis*	2, 5.2.3.1	ISO 7000:2019	Graphical symbols for use on equipment — Registered symbols
ISO 13050:1999	*Curvilinear toothed synchronous belt drive systems*	2, 5.6.4.2, 5.6.4.6	ISO 13050:2014	Synchronous belt drives — Metric pitch, curvilinear profile systems G, H, R and S, belts and pulleys

Colour Coding Used in Cross-Reference

Blue Shading	Standards are considered equivalent and either may be used
Yellow Shading	Standards are considered equivalent. The latest edition should be used
Green Shading	Garage Door Standards. Either standard may be used or the design shall be acceptable to the local building authority
Peach Shading	No equivalent standard. Referenced standard may be used