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Schedule 34-A Standards for Equipment Used in Rope Access Systems

34.1 Definitions

In this Part:

"anchor", also known as an anchorage connector, means a component or subsystem of a rope access system used to connect other parts of the rope access system to an anchorage;

"anchorage" means anything to which an anchor can be connected or secured, including a building, structure, tree or rock;

"full body harness" means a body support device

(a) consisting of connected straps designed to distribute the forces resulting from the suspension or fall of a person over at least the person's thighs, shoulders and pelvis, and

(b) with provision for connecting a lanyard, a rope or other components;

"lanyard" means a flexible length of rope that is used to connect a sit harness or full body harness to other parts of a rope access system or to an anchorage;

"rope" means a length of cord or webbing made of parallel, twisted or braided synthetic fibres or steel wire;

"rope access" means a technique in which a rope access system is used to provide a person with access to and from a workplace, commonly including suspension at the workplace, in such a way that a fall is prevented or arrested;

"rope access system" means a system consisting of

(a) a sit harness or full body harness,

(b) rope, lanyards and other connecting equipment,

(c) anchors, and

(d) other components such as ascenders, descenders, belay devices, backup devices and fall arresters,

that usually employs 2 separately secured subsystems, one as a means of access and the other as a safety, secondary, belay or backup system, but does not include a boatswain's chair, also known as a bosun's chair, or a zipline;

"sit harness" means a body support device consisting of thigh and waist loops.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.2 Scope of application

(1) Subject to subsection (2), this Part applies to the use of rope access in a workplace.

(2) This Part does not apply to the following:

(a) scaling operations described in sections 20.96 to 20.101;

(a.1) a qualified arborist or a trainee arborist, as defined in section 26.1;

(b) a climber, as defined in section 26.7.1(1);

(c) firefighters and firefighting activities under Part 31;

(d) evacuation and rescue, and training in such procedures, under Part 32.

(3) The use of rope access in a workplace is subject to section 11.2.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]
[Amended by B.C. Reg. 207/2021, effective December 1, 2021.]

34.3 Rope access plan

(1) Before a rope access system is installed or used in a workplace, a written rope access plan must be prepared and be available at the workplace.

(2) The rope access plan must include all of the following information:

(a) the hazards associated with the work to be performed;

(b) how the hazards and associated risks will be eliminated or controlled;

(c) a description of the rope access system to be used at the workplace;

(d) a description of the types and locations of anchorages to be used at the workplace;

(e) the procedures to be used to assemble, maintain, inspect, use and disassemble the rope access system;

(f) the name and duties of each member of the work team;

(g) the appropriate personal protective equipment to be used;

(h) the emergency response, evacuation and rescue procedures.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.4 Training and certification

(1) Before allowing a person to perform rope access, the employer must ensure and document that the person

(a) has received training in the safe use of a rope access system, including, as appropriate to the work being done, the safe work practices, skills and practical experience hours described in one of the following groups of publications:

(i) *International Code of Practice* (2013) and *General requirements for certification of personnel engaged in industrial rope access methods*, Edition 6 (June 2009), published by the Industrial Rope Access Trade Association;

(ii) *Safe Practices for Rope Access Work* (August 2012) and *Certification Requirements for Rope Access Work* (November 2012), published by the Society of Professional Rope Access Technicians;

(iii) *Scope of Practice* (2012), *Technical Handbook for Professional Mountain Guides* (1999) and *Climbing Gym Instructor Technical Manual* (2003), published by the Association of Canadian Mountain Guides;

(iv) *Cave Guiding Standards for British Columbia and Alberta* (January 2004), published by the Canadian Cave Conservancy, and *Companion Rescue Workshop* (2011), published by British Columbia Cave Rescue, and

(b) holds a valid certificate of the training referred to in paragraph (a) issued by a body or association referred to in subparagraphs (i) to (iv) of that paragraph.

(2) The certificate referred to in subsection (1)(b) must be available at the workplace and produced for inspection on the request of an officer.

(3) Before allowing a person to perform rope access, the employer must ensure and document that the person is trained in the rope access plan and knows that person's duties under the plan.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]
[Amended by B.C. Reg. 14/2019, effective June 3, 2019.]

34.5 Safe work practices

A person performing rope access must comply with, as appropriate to the work being done, the safe work practices described in one of the

groups of publications set out in section 34.4(1)(a)(i) to (iv).

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.6 Two-rope system

(1) In this section, *"two-rope system"* means a rope access system that includes a working line and a safety, secondary, belay or backup line.

(2) A person performing rope access must use a two-rope system unless one or both of the following apply:

(a) the primary means of support for the person performing rope access is provided by a building, a structure or the ground and not by a rope access system;

(b) in the case of rope access performed

(i) in the course of mountaineering or caving, or

(ii) in a climbing gym,

using a two-rope system may result in a greater hazard than if a single-rope system is used.

(3) In a two-rope system, the working line and the safety, secondary, belay or backup line must

(a) have independent connection points to the system's anchor or anchorage, and

(b) be independently connected to the harness of the person performing rope access.

(4) For the purposes of subsection (3)(b), the working line and the safety, secondary, belay or backup line may be independently connected to a single connection point on the harness of the person performing rope access.

(5) A person must not connect a safety, secondary, belay or backup line to a sternal connection point on the person's full body harness except as permitted by the manufacturer of the harness.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.7 Personal log

(1) A person who performs rope access must maintain a personal log containing a record of the rope access performed by the person.

(2) The records in the personal log must be kept in chronological order and, unless otherwise provided for in a group of publications set out in section 34.4(1)(a)(i) to (iv) that is appropriate to the work being done, the entry for each day of work must be verified and signed by the rope access supervisor or the manager in charge.

(3) The records in the personal log must include all of the following information:

(a) the date on which the rope access was performed;

(b) the type of work performed;

(c) the type of rope access system used for the work;

(d) the type of building or structure worked on;

(e) the number of hours worked using rope access.

(4) The person must keep the personal log current and available at the workplace for inspection by an officer.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.8 Rescue

The employer must ensure that a person performing rope access can be promptly rescued, in accordance with the procedures described in the rope access plan referred to in section 34.3(1), in the event of an equipment malfunction, a fall or an injury or the person's incapacity to self-rescue.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.9 Equipment

(1) Equipment used for a rope access system must

(a) consist of components that are compatible and suitable for the intended use, and

(b) be suitable for the environment in which the equipment is used.

(2) Unless otherwise provided for under section 34.12(1) or 34.13(2), equipment of a type set out in Column 1 of Schedule 34-A must meet the requirements of, and be used in accordance with, one of the applicable standards set out opposite that type of equipment in Column 2.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.10 Inspection and maintenance

Equipment used for a rope access system must be

(a) inspected for defects by a person intending to use the rope access system before the rope access system is first used on each work shift,

(b) inspected in the manner and at the frequency required by the manufacturer of the equipment, and

(c) kept free from substances and conditions that could contribute to the deterioration of the equipment.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.11 Anchors and anchorages

(1) An anchor for a rope access system must be reliable.

(2) A person must not connect or secure a rope access system to an anchorage unless the anchorage is reliable and capable of safely withstanding any forces that may be applied to the anchorage by persons using the rope access system.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.12 Permanent anchors

(1) A permanent anchor for a rope access system must have an ultimate load capacity, in any direction in which the load may be applied, of at least 22.2 kN (5000 lbf) for each person connected to the permanent anchor.

(2) In addition to the requirement under section 34.10 (b) and in accordance with sections 7.3.2, 7.3.3 and 7.4, as applicable, of *CSA Standard Z91-02 (R2013) Health and Safety Code for Suspended Equipment Operations*,

(a) a permanent anchor for a rope access system must be inspected, at least once a year, and tested, and

(b) the results of the inspection and testing must be documented.

(3) A permanent anchor for a rope access system, and its installation, must be certified by a professional engineer.

(4) Subsections (2) and (3) do not apply to a permanent anchor for a rope access system used in the course of mountaineering or caving.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.13 Temporary anchors

(1) In this section, *"temporary anchor"* means an anchor that is removed from service immediately after use.

(2) A temporary anchor for a rope access system must have an ultimate load capacity, in any direction in which the load may be applied, of at least 12 kN (2700 lbf) for each person connected to the temporary anchor.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.14 Safety headgear

Despite section 8.11, a person performing rope access must wear headgear that

(a) is appropriate for the work being done,

(b) is equipped with a chin strap having at least 3 separate points of connection to the helmet shell,

(c) is secured in accordance with the specifications of the manufacturer of the headgear, and

(d) meets the requirements of one or more of the following standards:

(i) *CSA Standard CAN/CSA-Z94.1-05* or *CAN/CSA-Z94.1-15, Industrial protective headwear â€“ Performance, selection, care, and use*;

(ii) *ANSI Standard ANSI/ISEA Z89.1-2009* or *ANSI/ISEA Z89.1-2014, American National Standard for Industrial Head Protection*;

(iii) *British Safety Institution Standard BS EN 12492:2012 Mountaineering equipment â€“ Helmets for mountaineers â€“ Safety requirements and test methods*;

(iv) *British Safety Institution Standard BS EN 397:2012+A1:2012 Industrial safety helmets*;

(v) *UIAA Standard UIAA 106 Mountaineering and Climbing Equipment â€“ Helmets*.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]
[Amended by B.C. Reg. 14/2019, effective June 3, 2019.]

34.15 Maximum arrest force, clearance

(1) In this section, *"maximum arrest force"* means the peak shock load that a rope access system imposes on the body of a person connected to the rope access system when stopping the person's fall.

(2) A rope access system must

(a) limit the maximum arrest force to not more than 6 kN (1350 lbf), and

(b) minimize the risk of a person connected to the rope access system striking a lower surface or object, or swinging and striking a surface or object, in a manner that could cause injury.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

34.16 Removal from service

(1) Equipment used for a rope access system must be removed from service

(a) as specified by the manufacturer of the equipment, or

(b) if the equipment is defective.

(2) Equipment that is removed from service must not be returned to service until it has been inspected and recertified, by the manufacturer or a professional engineer, as meeting the requirements of section 34.9.

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]

Schedule 34-A
Standards for Equipment Used in Rope Access Systems

Column 1 **Type of Equipment**	**Column 2** **Standards**
Anchors	*CAN/CSA Z259.15-12 Anchorage Connectors* (published January, 2012)
	CAN/CSA Z271-10 Safety code for suspended platforms (published September, 2010)
	EN 795:2012 Personal fall protection equipment — Anchor devices (published September 30, 2013)
Connectors	*ANSI/ASSE 359.12-2009 Connecting Components for Personal Fall Arrest Systems* (published November 16, 2009)
	CSA Z259.12-11 Connecting components for personal fall arrest systems (PFAS) (published November, 2011)
	EN 362:2004 Personal protective equipment against falls from a height — Connectors (published June 30, 2005)
	EN 12275:2013 Mountaineering equipment — Connectors — Safety requirements and test methods (published October 31, 2013)
	UIAA 121 Mountaineering and Climbing Equipment — Connectors/Karabiners (published March 8, 2013)

Energy absorbers	*EN 355:2002 Personal protective equipment against falls from height — Energy absorbers* (published November 30, 2002)
Harnesses	*CAN/CSA Z259.10-12 Full body harnesses* (published February, 2012)
	EN 361:2002 Personal protective equipment against falls from a height — Full body harnesses (published July 4, 2002)
	EN 813:2008 Personal fall protection equipment — Sit harnesses (published February 28, 2009)
	EN 12277:2007 Mountaineering equipment — Harnesses — Safety requirements and test methods (published August 31, 2007)
	UIAA 105 Mountaineering and Climbing Equipment — Harnesses (published May 30, 2014)
Lanyards	*EN 354:2010 Personal fall protection equipment — Lanyards* (published January 31, 2011)
Rope	*Cordage Institute CI 1801-07 Low Stretch and Static Kernmantle Life Safety Rope* (published October, 2007)
	EN 892:2012 Mountaineering equipment — Dynamic mountaineering ropes — Safety requirements and test methods (published February 28, 2013)
	EN 1891:1998 Personal protective equipment for the prevention of falls from a height — Low stretch kernmantel ropes (published October 31, 1998)
	NFPA 1983 Standard on Life Safety Rope and Equipment for Emergency Services, 2012 Edition (published January 2, 2012)
	UIAA 101 Mountaineering and Climbing Equipment — Dynamic Ropes (published June 26, 2014)
	UIAA 107 Mountaineering and Climbing Equipment — Low Stretch Ropes (published March 8, 2013)
Rope adjustment devices, including ascenders, back up devices, belay devices, descenders, fall arresters and rope clamps.	*CAN/CSA Z259.2.3-12 Descent devices* (published January, 2012)
	EN 341:2011 Personal fall protection equipment — Descender devices for rescue (published December 31, 2011)
	EN 353-2:2002 Personal protective equipment against falls from a height — Part 2: Guided type fall arresters including a flexible anchor line (published November 30, 2002)
	EN 567:2013 Mountaineering equipment — Rope clamps — Safety requirements and test methods (published September 30, 2013)
	EN 12841:2006 Personal fall protection equipment — Rope access systems — Rope adjustment devices (published February 28, 2007)
	UIAA 126 Mountaineering and Climbing Equipment — Rope Clamps (published March 8, 2013)

[Enacted by B.C. Reg. 199/2014, effective February 1, 2015.]