

Access Scaffolding - Training Program Standard



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comply with the *Manitoba Workplace Safety and Health Act and Regulation*, as may be amended from time to time.

1. Training Standard Topic

Access Scaffolding

2. Purpose

The purpose of the Access Scaffolding training program is to provide employers, supervisors and workers with:

- knowledge of recognizing, evaluating and controlling the hazards associated with using a scaffold
- understanding of the legislative requirements regarding use of scaffolds
- knowledge about the erection, inspection, use and dismantling of access scaffolds

The training is intended for employers, supervisors and workers who use scaffolds or work with connection to access scaffolds in the workplace.

The Access Scaffolding training program outlines the minimum requirements for the development and delivery of Access Scaffolding training programs in Manitoba. It was developed in consideration of the *Manitoba Workplace Safety and Health Act and Regulation* and *Canada Labour Code Part II* and is consistent with *CSA Z797 Code of Practice for Access Scaffold* and *CSA S269.2 Access Scaffolding for Construction Purposes*.

Note: This training program standard does not cover suspended scaffolds, aerial devices, elevated work or mast-climbing platforms.

3. Design

The design of the training program must meet the following criteria:

- Compliance with adult learning principles:
 - a. ensure learners know why they need to learn specific content and its relevance to their workplaces
 - b. relate training to learners' own experiences when simulating workplace scenarios
 - c. challenge and engage learners using a variety of activities that allow opportunities for participation, feedback and interaction
 - d. recognize the limits of attention spans and apply techniques to address the various ways that adults learn
 - e. use realistic activities and tools to support the transfer of learning to the workplace
- Use language that is appropriate for all learners;
- Provide content that is accurate and current;
- Include references to legal and technical information;
- Use a variety of technical teaching aids;
- Provide learner materials that follow the principles of instructional writing and good graphic design;
- Be consistent with provincial and federal legal requirements.

4. Delivery

Regardless of the delivery method, all Endorsed Training programs must meet the requirements of this standard along with ***The Accessibility for Manitobans Act (AMA)***, and the delivery method must be reasonable and practicable to support the learner's ability to attain the applicable learning outcomes.

4.1 Face-to-Face Learning

The following is the maximum ratio of learners to instructor:

- Basic Theory Module: 12:1
- Practical Module: 12:1

The following are the minimum hours for training delivery:

- Basic Theory Module: 4
- Practical Module: 10

The Access Scaffolding Basic Theory Module as well as Working at Heights training must be completed before the Access Scaffolding Practical Module is taken.

The timing for delivery of this training program may be extended for various reasons, such as the amount of equipment available for demonstration of learning outcomes, instructor experience and/or the learning needs of the training participants.

4.2 E-Learning and Blended Learning

The eLearning content should be consistent with Manitoba e-Learning Instructional Design Guidelines ([click here to learn more](#)).

This type of learning is acceptable for:

- Basic Theory Module

4.3 Distance Learning

Distance learning includes training via a live video link: a plan for interactivity with a qualified instructor should be developed and available.

This type of learning is acceptable for:

- Basic Theory Module

5. Learning Outcomes

Employers will need to supplement any training program that meets the requirements of this training program standard with additional information; instruction and training in workplace-specific policies and procedures; and workplace-specific hazards and equipment related to Access Scaffolding.

5.1 Basic Theory Module

5.1.1 Legal Requirement

Content must include:

- an overview of the legal framework, including rights, duties, responsibilities and general requirements pertaining to work that takes place using a scaffold
- a brief overview of the *CSA Z797 Code of Practice for Access Scaffold, CSA S269.2 Access Scaffolding for Construction Purposes* and *ANSI-ASSP A10.8, Scaffolding Safety Requirements*

At the end of this module, learners will be able to:

- identify parts of the *Manitoba Workplace Safety and Health Act and Regulation* and/or *Canada Labour Code Part II*, as applicable, pertaining to work using a scaffold
- identify the roles and responsibilities of the employer, constructor (if applicable), supplier, supervisor and worker with respect to scaffolding
- describe workers' rights and how they relate to workers with regard to scaffolding
- recognize the need for and importance of *CSA Z797 Code of Practice for Access Scaffold*, *CSA S269.2 Access Scaffolding for Construction Purposes* and *ANSI-ASSP A10.8, Scaffolding Safety Requirements*, and how to access them
- describe what a competent person is in relation to supervising scaffold work and inspecting scaffolding

5.1.2 Hazard Identification, Risk Assessment and Control

Content must include:

- an overview of the common hazards associated with scaffolding erection and dismantling
- an overview of other scaffolding hazards, including but not limited to, falls, slips and trips, electrical and musculoskeletal hazards
- an overview of the process for conducting a job hazard analysis and risk assessment, including the factors to be considered for prioritizing hazards
- an overview of the hierarchy of controls and the different types of control measures to eliminate or reduce the risk associated with scaffolding
- a description of safe work procedure requirements for work using and maintaining a scaffold

At the end of this module, learners will be able to:

- identify the common hazards of scaffolding erection and dismantling
- identify other hazards where workers are exposed to the hazard while using scaffolding
- describe the process for conducting a job hazard analysis and risk assessment
- perform a risk assessment on identified hazards
- describe various control measures to eliminate or reduce the risk associated with scaffolding
- identify various ergonomic measures to control the identified musculoskeletal hazards
- explain the importance and requirements of safe work procedures for scaffolding

5.1.3 Different Types of Scaffolds

Content must include:

- an overview of the different scaffold types used in various workplace environments, including lean-to scaffold, ladder-jack scaffold, tubular frame scaffold, bracket scaffold, outrigger scaffold, single-pole scaffold and mobile scaffolds, as well as the safety factors, allowable load ratings and inspection criteria for each

At the end of this module, learners will be able to:

- identify the different scaffold types
- state the safety factors for each type of scaffold
- recognize the allowable load ratings for the different types of scaffolds
- describe the inspection criteria for each type of scaffold

5.1.4 Scaffold Erection and Bracing

Content must include:

- an overview of scaffold foundation and support requirements
- an overview of the different components involved in scaffold erection and bracing, including but not limited to, fitting and accessories, base plates and screw jacks, plumbing and levelling, bracing, coupling devices, wheels or casters, hoisting materials and dismantling
- an overview of fall protection requirements while working with scaffolding

At the end of this module, learners will be able to:

- state the criteria required for scaffold foundation and support
- identify the prohibited practices in scaffold foundation and support
- describe the purpose of various scaffold fittings and accessories
- explain what base plates and screw jacks are used for on scaffolds
- illustrate the importance of scaffold plumbness
- explain when bracing is required on different types of scaffolds
- describe where coupling devices are needed on scaffolds
- identify the requirements for use of wheels and castors on scaffolds
- state the requirements for hoisting materials
- describe how a scaffold is dismantled
- explain the requirements for use of fall protection during scaffold erection and dismantling

5.1.5 Scaffold Stability

Content must include:

- an overview of the various methods of stabilizing a scaffold and the associated requirements

At the end of this module, learners will be able to:

- explain the various methods of stabilizing a scaffold
- explain the requirements of using rope, wire rope and tiebacks
- state any additional requirements for hoarding-in of scaffolds

5.1.6 Work Platforms

Content must include:

- an overview of the different work platform types used in various workplace environments, including safety factors, allowable load ratings and inspection criteria

At the end of this module, learners will be able to:

- identify the different types of work platforms
- recognize the allowable load ratings for the various types of work platforms
- define allowable load, live load and dead load
- state the safety factors for each type of work platform
- describe the inspection criteria for each type of work platform

5.1.7 Scaffold Access and Egress

Content must include:

- an overview of the various types of scaffold access and applications of each

At the end of this module, learners will be able to:

- identify the different scaffold access types
- explain the application for each type of scaffold access
- apply ladder safety basics

5.1.8 Emergency and Specific Procedures

Content must include:

- an overview of emergency and specific procedures with regard to scaffolding, including posting protocol and procedure review

At the end of this module, learners will be able to:

- identify different types of emergencies that may occur
- explain the purpose of emergency and specific procedures
- describe the procedure posting protocol
- identify the requirements for reviewing procedures

5.2 Practical Module

Practical Module Details:

In this training module, participants will perform scaffold erection, inspection, application and dismantling of the appropriate types of scaffolds.

Content must include an overview of:

- selection of appropriate hardware/equipment/PPE
- inspection and identification of damaged hardware/equipment/PPE
- safe erection, inspection, use and dismantling of scaffolds
- systems for effective communication of inspection results, including scaffold tagging
- importance of square, level and plumb
- tie-in procedures
- hoisting procedures
- different ways to access scaffolds

The practical skills outlined above are taught in a classroom session and demonstrated during practical training exercises. Participants will need to demonstrate the practical skills.

At the end of this module, learners will be able to:

- select the appropriate hardware/equipment/PPE used for scaffolds
- inspect and identify any damaged hardware/equipment/PPE
- erect, use and dismantle scaffolds
- inspect and tag the various components of scaffolds, platforms, clamps, tubes and accessories
- effectively communicate inspection results
- square, level and plumb scaffold
- demonstrate tie-in and hoisting procedures
- access scaffolds appropriately

6. Resource Material

The Access Scaffolding Training Program Standard has material requirements for both learners and instructors.

The date and version number should be indicated on all resource materials, which include:

- terms and definitions
- job aids, evaluation tools and templates
- copies of applicable provincial or federal safety legislation
- manufacturers' instructions for equipment
- participant and instructor manuals with copies of activities
- instructor manual and lesson plan

Learner materials will include:

- learning objectives, agenda, training content and evaluation/testing

Instructor materials will include:

- instructional methods, learning activities and lesson plan timing
- detailed instructor manual and lesson plans, including all learning activities and audio-visual resources

7. Equipment

For the practical module (if applicable), learners must have hands-on, practical experience and must be trained on the proper use, care and limitations of personal protective equipment (PPE) according to manufacturer specifications and what is listed below. The PPE provided must comply with the requirements of the Manitoba Workplace Safety and Health Act and Regulation, such as meeting or exceeding the equipment specified in the National Standards of Canada and/or the Canadian Standards Association technical standards, as applicable.

7.1 Equipment for Demonstrating Learning Outcomes

The equipment listed below may be used for the delivery of the practical module.

Equipment required:

- class A harness as required
- class D harness as required
- gloves
- safety footwear
- eye/hearing protection

- hard hats
- hammers
- levels
- tape measures
- wrenches
- tags
- screw jacks
- end frames (standard, half and masonry)
- cross braces
- gooser
- work platforms
- standards
- base collars
- ledgers
- bay braces
- locking connectors
- guard rails and posts
- gates
- clamps (right angle, swivel, wedge, bolt, end to end)
- toe boards
- ladder sections
- starter brackets
- aluminum tubes (for guard rails, gates, ladder bracing)
- castors
- base plates
- sills

- Ratio of equipment available to learner shall be 1:4

7.2 Other Equipment

The equipment listed below may be used in the delivery of the Practical Module so that learners become familiar with the look and function of this equipment.

Equipment required:

- various types of harness other than what is supplied for practical
- life lines
- ladders

- Ratio of equipment available to learner shall be 1:4

7.3 Damaged Equipment

The equipment listed below may be used in the delivery of the Practical Module so that learners are able to inspect the equipment and identify damage.

Equipment required:

- Equipment listed above which is no longer in service
 - Ratio of equipment available to learner shall be 1:12

8. Learner Evaluation

The training program must include a plan for learner evaluation that meets the requirements below. There must be a variety of evaluation methods available to the instructor and/or evaluator that are appropriate to the learning outcomes.

8.1 Evaluation Methods

The training program will include methods to evaluate whether key concepts have been understood by the learner, using a variety of evaluation methods that are appropriate to the learning outcomes, including:

- open discussion
- group discussion
- questions and answers
- written and/or oral test, where applicable

Evaluation methods must be clearly outlined in the evaluation plan, and the corresponding results must be documented by the evaluator.

8.2 Evaluation of Demonstration Learning Outcomes

- a. Learning outcomes requiring demonstration must be performed satisfactorily in order to successfully complete the Practical Module;
- b. For learners with language, literacy or accommodation needs, alternative evaluation methods may be employed to verify satisfactory demonstration of learning outcome by the learner. These evaluation methods must be clearly outlined in the evaluation plan, and the corresponding results must be documented by the evaluator.

9. Validation/Refresher Requirements

Learners who have successfully completed an approved training program should periodically refresh their training in order to maintain its validity. This supports learners in maintaining their foundational knowledge and skills.

9.1 Validation/Refresher Requirements

Completion of both the Basic Theory Module and Practical Module in accordance with the criteria set out in this standard and the training provider standard is required to confirm a successful training program has been completed.

Training remains valid for a period of three years from the date of successful completion of the Access Scaffolding Basic Theory Module and the Access Scaffolding Practical Module.

9.2 Refresher Training

A worker's training is revalidated for another three-year period after successfully completing the refresher training of the Access Scaffolding Basic Theory Module 5.1.1 Legal Requirement and the Access Scaffolding Practical Module.

Glossary

General Terms

Asynchronous Instruction (ASTD)

A general term used to describe forms of education, instruction and learning that do not occur in the same place or at the same time. It uses resources that facilitate information sharing outside the constraints of time and place among a network of people.

Blended Learning

Describes the practice of using several training delivery mediums in a single training program and typically refers to the combination of classroom instruction and eLearning.

Distance Learning

An educational situation in which the instructor and students are separated by time, location or both. Education or training courses are delivered to remote locations via synchronous or ASTD.

ELearning (Electronic Learning)

A term covering a wide set of applications and processes that includes web-based learning, computer-based learning, virtual classrooms and digital collaboration.

Face-to-Face Training

Usually refers to traditional classroom training in which an instructor teaches a course to a room of training participants. The term is used synonymously with on-site training, classroom training and instructor-led training (slightly modified from ASTD definition).

Minimum Hours for Training Delivery

The timing for instruction of a training program that excludes breaks and lunch:

- 3.5 hours of instruction is equal to a half-day of delivery;
- 7 hours of instruction is equal to a full-day of delivery.

Module

A unit of instruction that can be measured, evaluated for change, assembled to form complete courses or bypassed as a whole, and that is usually intended to teach one or a group of skills or areas of knowledge (slightly modified from ASTD definition).

Evaluator

A person who evaluates learners.

Instructor

A person who delivers training programs.

Qualification

A skill, quality or attribute that makes somebody suitable for a job, activity or task.

Access Scaffolding Terms

Bracing

A system of members connecting frames or sections of scaffolding to make the scaffold structure while adding strength and rigidity between members.

Base Plates

Devices used to support and distribute the vertical leg load of a scaffold system over a large area of a sill, and sized according to the manufacturer's specification.

Castor

Also known as a "caster." A small rigid wheel, one of a set, attached to a scaffold to allow manual rolling.

Coupling Device

A connecting device used to secure scaffold frames together.

Foundation

The surface upon which a scaffold is erected.

Gooser

Also known as a "plan brace." A brace installed in a horizontal plane.

Job Hazard Analysis

A method used to perform an assessment of a job task by breaking the job task into steps to help identify hazards and measures to control workers' exposure to harm.

Platform

A working surface provided on a scaffold to support the weight of workers, tools and materials.

Plumbness

When the scaffold is balanced and erected at a 90-degree angle straight up from a level surface.

Safe Work Procedure

A document that outlines a precise sequence of steps that describe how to do a specific task safely.

Safety Factor

The ratio of a material's strength to an expected strain. This is the ratio between the Ultimate Design Load (UDL) and the Safe Working Load (SWL). $UDL:SWL = 4:1$

Screw Jack

A threaded screw device used for adjusting the elevation of scaffolds.

Sills

A footing of minimum 50 mm x 250 mm (2 in. x 10 in.) or wider, used in creating scaffolding platforms. All lumber dimensions are nominal.

Tie-in

A reinforcing connection device that secures a scaffold to a fixed structure.

Toe Board

A barrier secured along the sides and ends of a platform to help stop materials or tools from falling.

Acknowledgements Statement

The Access Scaffolding working group has developed an Access Scaffolding Training Program Standard that outlines the minimum requirements for program objectives, training

requirements and learning outcomes that are designed to educate Manitoba workers on working in compliance.

Please note that while reasonable efforts have been made to ensure that the criteria of the Training Program Standard is met, responsibility resides with employers to ensure compliance with training requirements under the *Manitoba Workplace Safety and Health Act and Regulation*. In determining what rights or obligations a party may have under the province's legislation, reference should always be made to the official version of the WSH Act and Regulation.

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