
CONSULTATION DRAFT

Construction Health and Safety Awareness Training

Program Standard

Ministry of Labour
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Acknowledgements

The Construction Health and Safety Awareness Training Working Group contributed its time and expertise to developing this draft Standard.

The Working Group was tasked with developing a proposed standard that outlines the learning outcomes and other criteria for Construction Health and Safety Awareness Training Programs. The programs are designed for workers performing work defined as construction under the *Occupational Health and Safety Act* (OHSA) to which the Construction Projects Regulation (O. Reg. 213/91) applies.

The Working Group included the following employer and labour representatives in the construction industry:

- Mike Connor, Ontario Painting Contractors Association
- John Ferreira, Labourers' International Union of North America
- Joe Dowdall, International Union of Operating Engineers, Local 793
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- Carmine Tiano, Provincial Building and Construction Trades Council of Ontario
- Tony Currie, Carpenters Union
- Sean Scott, PCL Constructors Inc.
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The Working Group was assisted by a Resource Group consisting of representatives from:

- Ministry of Training, Colleges and Universities
- Ontario College of Trades
- Infrastructure Health and Safety Association
- Workplace Safety North
- Worker's Health and Safety Centre

If established, this draft Standard will be reviewed at least every five years.

This draft Standard outlines the learning outcomes and other criteria that are expected of a training program in order for it to be approved by the Chief Prevention Officer (CPO).

CPO approval is granted to programs that meet the draft Construction Health and Safety Awareness Training Program Standard after a successful assessment and review of the program submitted. While reasonable efforts are made to ensure that the criteria of the Training Program Standard are met, it is the responsibility of the workplace parties to ensure compliance with the *Occupational Health and Safety Act* and its regulations. In determining what rights or obligations a party may have under the legislation, reference should always be made to the official version of the Act and the regulations.

Scope

Section 7.1 of the *Occupational Health and Safety Act* (OHSA) provides the Chief Prevention Officer (CPO) with the authority to establish standards for training programs required under the OHSA and its regulations, and to approve training programs which meet those standards.

Section 7.2 of the OHSA provides the CPO with the authority to establish standards which must be met in order for a training provider to be approved to deliver one or more approved training programs.

The draft Construction Health and Safety Awareness Training Program Standard outlines the criteria that must be met by training programs seeking approval by the CPO. It should be read in conjunction with the draft Construction Health and Safety Awareness Training Provider Standard, which sets out the criteria that a provider must meet to be considered for approval by the CPO to deliver an approved Construction Health and Safety Awareness Training Program.

In order to be approved by the CPO to deliver an approved Construction Health and Safety Awareness Training Program, training providers must be able to demonstrate they meet both the draft Construction Health and Safety Awareness Training Program and Provider Standards.

1. Introduction

The draft Construction Health and Safety Awareness Training Program Standard is designed to assist workers on construction projects performing work defined as construction under the *Occupational Health and Safety Act* (OHSA) in achieving general knowledge of construction health and safety requirements, as well as an ability to recognize common hazards in construction and a basic understanding of how they may be eliminated or controlled. This draft Standard is not intended to provide workers with advanced knowledge or capabilities for recognizing all hazards in construction, or the ability to eliminate or control those hazards.

The training programs based on this draft Standard can be customized to address the specific hazards of a project and the common equipment and machinery used in that workplace, as long as the learning outcomes outlined in this draft Standard are understood by the learner.

Employers must continue to ensure that training requirements in the OHSA and its regulations are met even where no standards have been published and established by the CPO.

2. Purpose

The purpose of the draft Construction Health and Safety Awareness Training Program Standard is to establish a minimum training standard for high quality and consistent occupational health and safety awareness training for workers who perform work defined as construction in the Province of Ontario.

A training program that meets the criteria set out in this draft Standard will:

- a) Strengthen workplace safety culture by elevating the profile and importance of preventing fatalities, injuries and illnesses on construction projects;
- b) Provide workers with knowledge and comprehension of occupational health and safety that will enable them to recognize common hazards on construction projects and provide a basic understanding of how these hazards may be eliminated or controlled;
- c) Provide workers who work in construction with general awareness of the *Occupational Health and Safety Act* and the Construction Projects Regulation (O. Reg. 213/91), and the knowledge that there are additional training requirements under the Act and regulations that must be complied with prior to performing certain activities in construction; and
- d) Assist workers in recognizing when safe work measures and procedures are necessary to protect the health and safety of workers to prevent illnesses, injuries and fatalities in construction.

3. Overview

The draft Construction Health and Safety Awareness Training Program Standard contains information on four main topics.

Section 9.1 – Legal Framework and the Role of Workplace Parties

This section contains information on the following:

- a) Rights and responsibilities under the *Occupational Health and Safety Act* related to working in construction, including the legislative framework and the roles of workplace parties

Section 9.2 – Hazard Identification, Assessment and Control

This section contains information on the following:

- a) An introduction to the theory and purpose of hazard identification, assessment and control, with specific attention given to the hierarchy of controls.

Section 9.3 – Common Hazards and Conditions on Construction Projects

This section contains information on the following:

- a) Examples of common hazards and conditions which may be found on construction projects, and where more training is required.

Section 9.4 – Common High Hazards on Construction Projects

This section contains information on the following:

- a) Examples of work activities related to high hazards on construction projects which can result in critical injuries or fatalities to workers.
- b) Examples of how to identify and control common high hazards, and where more training is required.

4. Criteria

All programs submitted must be structured so that Section 9.1 – Legal Framework and the Role of Workplace Parties is successfully completed by the learner before the completion of the learning outcomes in Sections 9.2, 9.3 and 9.4.

Employers shall supplement any training program that meets the criteria of this draft Standard with additional information, instruction and training in workplace-specific policies and procedures, workplace specific hazards and workplace-specific equipment related to working on construction projects. This supplemental information, instruction or training could include topics covered in this draft Standard in greater detail, as well as other topics. In addition, employers shall ensure that they meet the training and other requirements in the *Occupational Health and Safety Act (OHSA)* and its regulations.

Employers must continue to ensure that the training requirements in the OHSA and its regulations are met even where no standards have been published and established by the Chief Prevention Officer.

5. Design

The training program must be designed to allow learners to demonstrate a comprehensive understanding of the learning outcomes set out in this draft Standard.

The training program must meet the following criteria:

- a) Compliance with adult learning principles:
 - i. Ensuring learners know why they need to learn specific content, its relevance to them and their workplace;
 - ii. Relating learning to training participants' own experiences in situations that simulate actual application in the workplace;
 - ii. Engaging training participants using a variety of activities that allow opportunities for participation, feedback and interaction;
 - iii. Recognizing limits of attention span and various ways that adults learn; and
 - iv. Using realistic activities and tools to support transfer of learning to the workplace.
- b) Literacy level appropriate for the learners;
- c) Content accurate, current and with all legal and technical information referenced and verified;
- d) Use of a variety of teaching aids, such as audio-visual;
- e) Learner materials follow principles of instructional writing and good graphic design; and
- f) Compliance with the requirements of the *Occupational Health and Safety Act* and its regulations.

6. Delivery Mode

Regardless of the delivery mode used, programs for Construction Health and Safety Awareness Training must meet the criteria of this draft Standard and the delivery mode must support the learner's ability to attain the applicable learning outcomes.

6.1 Face-to-Face Learning

The proposed maximum allowable ratio of learners to instructor is twenty-four (24) to one (1) for classroom delivery of the Construction Health and Safety Awareness Training Program.

The minimum hours for training delivery are as follows:

Section	Timing
Section 9.1 – Legal Framework and the Role of Workplace Parties	45 minutes
Section 9.2 – Hazard Identification, Assessment and Control	45 minutes
Section 9.3 – Common Hazards and Conditions on Construction Projects	2 hours
Section 9.4 – Common High Hazards on Construction Projects	3 hours
TOTAL	6.5 hours

Timing for the delivery of a training program which meets this draft Standard may be extended for various reasons, such as the inclusion of additional learning outcomes not specified by this draft Standard, instructor experience and/or the learning needs of the training participants.

6.2 Distance Learning

Distance learning such as training via a live video link is an acceptable delivery mode.

All distance learning must include plans for real-time interactivity with a qualified instructor.

6.3 eLearning

eLearning is not an acceptable delivery mode for a Construction Health and Safety Awareness Training Program.

7. Resource Materials

The following resource materials for instructors and learners must be developed:

7.1 Learner Materials

Learner materials must:

- a) Clearly describe learning objectives, agenda, training content and evaluation/testing;
- b) Clearly indicate the date and version number of the materials; and
- c) Include, at a minimum:
 - i. Terms and definitions;
 - ii. Worksheets for learning activities, exercises, role plays and case studies;
 - iii. Quick reference materials such as job aids, tools and templates;
 - iv. A current copy of the *Occupational Health and Safety Act*;
 - v. A current copy of Ontario Regulation 213/91: Construction Projects; and
 - vi. Participant manual.

7.2 Instructor Materials

Instructor materials must:

- a) Clearly describe learning outcomes and training content;
- b) Clearly describe instructional methods, learning activities and lesson plan timing;
- c) Clearly indicate the date and version number of the materials;
- d) Include, at a minimum:
 - i. Lesson plans;
 - ii. Detailed instructor manuals that provide step-by-step instructions to guide the instructor through the lessons, including what materials will be used to deliver the topic, the instructional methods, the learning activities, timing and equipment needed;
 - iii. Audio-visual resources;
 - iv. Presentation materials;
 - v. Answer sheets for the learning activities, exercises, role plays, case studies and tests;
 - vi. Evaluation tools;
 - vii. A current copy of the *Occupational Health and Safety Act*;
 - viii. A current copy of Ontario Regulation 213/91: Construction Projects;
 - ix. A current copy of Ontario Regulation 297/13: Occupational Health and Safety Awareness and Training, and other relevant regulatory excerpts applicable to the program being delivered; and
 - x. If equipment is present, the manufacturer's instructions for the equipment or tools used by the instructor in the delivery of the training program.

8. Equipment

The presentation of tools or equipment is not necessary for the purpose of this training program. However, if tools or equipment are present during the training, the following criteria would apply:

Tools and equipment used or presented during the training program must comply with the requirements of the *Occupational Health and Safety Act* and regulations, as applicable. The tools and equipment must also comply with or exceed equipment-specific National Standards of Canada/Canadian Standards Association technical standards, as applicable.

9. Learning Outcomes

A training program developed to meet this draft Construction Health and Safety Awareness Training Program Standard must demonstrate that it provides the following learning outcomes.

Throughout the training program, the concept of hazard identification and hierarchy of controls contained in Section 9.2 should be reinforced.

Employers will need to supplement any training program that meets the criteria of this draft Standard with additional information, instruction and training in workplace-specific policies and procedures and workplace-specific equipment and hazards related to working in construction.

9.1 Legal Framework and the Role of Workplace Parties

By the end of this session, learners will be able to:

- a) Recognize that there are regulations made under the *Occupational Health and Safety Act* (OHSA) that may apply to a construction project, including O. Reg. 213/91: Construction Projects, depending on the construction activity, equipment or machinery being used;
- b) Describe the duties and rights of workers under the OHSA, including the right to refuse unsafe work, and that employer reprisals for exercising worker rights under the OHSA are prohibited;
- c) Describe the duties of supervisors, employers and constructors under the OHSA on construction projects;
- d) Recognize that there are legal consequences for all workplace parties for failing to carry out the duties prescribed by the OHSA;
- e) Explain the roles of a health and safety representative, joint health and safety committee members and trade committee members, on construction projects;

- f) Explain the role of the Ministry of Labour, Workplace Safety and Insurance Board, and designated entities (e.g., health and safety associations) under the OHSA; and
- g) Recognize the requirements for an employer to develop an emergency response plan for every construction project, and that the plan must be posted in a conspicuous location on a project.

9.2 Hazard Identification, Assessment and Control

By the end of this session, learners will be able to:

- a) Recognize the principles and importance of:
 - i. hazard identification;
 - ii. hazard assessment, including risk evaluation based on severity; and
 - iii. hazard communication, including the worker's duty to report the existence of any hazards of which he or she knows to the supervisor or employer, and that ongoing communication should actively occur between all workplace parties.
- b) Explain the hierarchy of controls as it applies to hazards on construction projects, including:
 - i. elimination/substitution;
 - ii. engineering and administrative controls; and
 - iii. personal protective equipment.
- c) Recognize how a common hazard on a project can be controlled:
 - i. at the source
 - ii. along the path; and
 - iii. at the worker.
- d) Identify the consequences of workplace illnesses, injuries and fatalities in construction, including to:
 - i. workplace morale;
 - i. family;
 - ii. society;
 - iii. community; and
 - iv. finances.

9.3 Common Hazards and Conditions on Construction Projects

9.3.1 Housekeeping and Access and Egress

By the end of this session, learners will be able to:

- a) Recognize the hazards of improper access to and egress from work areas;
- b) Provide examples of good housekeeping practices that would be common to most construction projects, including, at a minimum:

- i. proper debris removal;
- ii. properly securing materials;
- iii. proper stacking of materials; and
- iv. eliminating protrusions.

9.3.2 Occupational Health Hazards

By the end of this session, learners will be able to:

- a) Identify common occupational health hazards found on construction projects, including, at a minimum:
 - i. physical;
 - ii. chemical;
 - iii. biological; and
 - iv. ergonomic.
- b) Explain that occupational illnesses from exposure to hazardous chemical and biological substances on construction projects may be delayed (latency period);
- c) Provide an example of a method to control one occupational health hazard identified in 9.3.2 (a); and
- d) Understand that Regulation 860 (Workplace Hazardous Materials Information System/WHMIS) requires the employer to ensure workers have access to health and safety information about hazardous workplace chemicals provided through labels, safety data sheets and education.

9.3.3 Slips, Trips and Falls on the Same Level

By the end of this session, learners will be able to:

- a) Describe the hazard of slips, trips and falls on the same level;
- b) Identify common workplace conditions that contribute to slips, trips and falls on the same level in construction using at least three examples from the following list:
 - i. slippery surfaces (e.g., wet, oily or greasy);
 - ii. seasonal slip hazards (e.g., snow and ice);
 - iii. spills of wet or dry substances;
 - iv. changes in elevation (curbs), uneven surfaces and protrusion hazards;
 - v. unsecured mats;
 - vi. inadequate lighting;
 - vii. debris and materials stored in walkways;
 - viii. cords and cables in pedestrian walkways; or
 - ix. smoke, steam or dust obscuring view.
- c) Identify one control to prevent slips, trips and falls to the same level for each of the three examples used to satisfy 9.3.3 (b).

9.3.4 Ladders and Work Platforms

By the end of this session, learners will be able to:

- a) Identify a common construction situation in which ladders could be used safely, and describe how to safely position and use ladders; and
- b) Recognize that specific instruction or training is required prior to operating or working on scaffolds, powered elevating work platforms (PEWPs) and suspended access equipment on a construction project, under O. Reg. 213/91: Construction Projects.

9.3.5 Confined Space

By the end of this session, learners will be able to:

- a) Define a confined space;
- b) Recognize a hazard associated with working in or around a confined space; and
- c) Recognize that a confined space must not be entered into without having specific training and instruction, a rescue plan and other specific workers available as required by O. Reg. 632/05: Confined Spaces.

9.4 Common High Hazards on Construction Projects

9.4.1 Electrical & Energy Hazards

By the end of this session, learners will be able to:

- a) Identify sources of electrical energy that could be found on a construction project, including, at a minimum:
 - i. power cords;
 - ii. overhead power lines;
 - iii. generators;
 - iv. exposed wires; and
 - v. damaged insulation on electrical cables/power lines.
- b) Identify common scenarios in construction that could lead to direct or indirect electrical contact, including, at a minimum, with:
 - i. overhead;
 - ii. buried;
 - iii. encased; and
 - iv. exposed conductors.

- c) Describe a method to control the hazard of electrical contact for the scenarios outlined in 9.4.1 (b) above, including, at a minimum:
 - i. proximity;
 - ii. signage;
 - iii. work area assessment; and
 - iv. post-contact procedures.
- d) Recognize that only qualified workers are allowed to perform work on electrical equipment or installations, with the exception of plugging in or unplugging low voltage tools or extension cords;
- e) Identify sources of stored energy, including, at a minimum:
 - i. thermal;
 - ii. hydraulic; and
 - iii. pneumatic.
- f) Give examples of potential consequences of working on electrical equipment without verifying that the energy sources listed in (e) are de-energized, locked out and tagged out; and
- g) Identify that additional training and instruction on specific measures and procedures are required prior to undertaking any work that involves lockout and tag out.

9.4.2 Falls from Heights

By the end of this session, learners will be able to:

- a) Recognize hazards of working at heights, including, at a minimum:
 - i. unprotected edges;
 - ii. missing, defective or inadequate guardrails;
 - iii. unprotected openings in floors, roofs or other work surfaces;
 - iv. falls into water or another liquid; and
 - v. falls into or onto operating machinery or hazardous substances.
- b) Identify common methods to control fall hazards in construction, including, at a minimum:
 - i. guardrails; and
 - ii. covers of adequate strength that are secured over work surface openings.
- c) Identify that additional training is required prior to using a travel restraint system, fall restricting system, fall arrest system, work belts, safety belts, and safety nets on a construction project, under O. Reg. 213/91: Construction Projects and O. Reg. 297/13: Occupational Health and Safety Awareness and Training.

9.4.3 Mobile Equipment and Vehicles

By the end of this session, learners will be able to:

- a) Give examples of the hazards associated with working in proximity to mobile equipment, including, at a minimum:
 - i. being struck by mobile equipment or the load;
 - ii. being pinned between or crushed against mobile equipment or another surface; and
 - iii. electric shock and electrocution due to electrical contact with buried or overhead power lines.
- b) Describe various ways to control the hazards of working in proximity to mobile equipment, including, at a minimum:
 - i. adhering to traffic protection plans, barriers and route controls;
 - ii. making eye contact and signalling intentions to the operators and signallers;
 - iii. having knowledge and awareness of blind spots, using one example of mobile equipment and vehicles used on a construction project;
 - iv. using pedestrian routes and avoiding equipment routes and pathways;
 - v. avoiding standing near equipment, whether in operation or not;
 - vi. using high-visibility clothing; and
 - vii. using a designated signaller.
- c) Recognize that specific training is required to operate mobile equipment on a construction project, under O. Reg. 213/91: Construction Projects;
- d) Recognize that specific training and instruction are required to function as a designated signaller on a construction project, under O. Reg. 213/91: Construction Projects;
- e) Recognize the differences between the role of a worker directing vehicular traffic and that of a signaller;
- f) Recognize that a worker involved in the setup and removal of vehicular control measures requires adequate specific instruction prior to performing that function on a construction project, under O. Reg. 213/91: Construction Projects; and
- g) Recognize that a worker directing vehicular traffic requires specific instruction prior to performing that function on a construction project, under O. Reg. 213/91: Construction Projects.

9.4.4 Materials Handling

By the end of this session, learners will be able to:

- a) Identify the hazards associated with handling materials, including, at a minimum:
 - i. objects falling from elevated surfaces;
 - ii. swinging loads near or over workers;
 - iii. stacking materials; and
 - iv. releasing tie-downs or straps on materials.
- b) Identify ways to control the hazard of being struck or crushed by materials, including, at a minimum:
 - i. staying clear of suspended loads;
 - ii. obeying signs that identify hazards;
 - iii. securing tools and materials from unintended movement; and
 - iv. housekeeping.
- c) Identify that additional instruction or training in hoisting and rigging is required prior to undertaking work or using equipment involving hoisting and rigging on a construction project, under O. Reg. 213/91: Construction Projects.

9.4.5 Excavations and Trenches

By the end of this session, learners will be able to:

- a) Identify common hazards associated with working in or around excavations and trenches, including, at a minimum:
 - i. soil collapse;
 - ii. soil or equipment/material rolling into the excavation or trench; and
 - iii. excavating or trenching around underground utilities.
- b) Recognize the purpose of colour-coded flags for marking underground utility lines prior to engaging in excavation and trench operations;
- c) Identify a method to control the hazards associated with working in or around excavations and trenches; and
- d) Identify that there are sloping and shoring requirements for the different soil types and conditions for working in and around excavations and trenches on a construction project, under O. Reg. 213/91: Construction Projects.

10. Learner Evaluation

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

10.1 Evaluation Methods

- a) The evaluator must ensure the learner can demonstrate a comprehensive understanding of all the learning outcomes set out in Section 9 of this draft Standard (i.e. assessments and continuous evaluation of knowledge transfer should be integrated throughout the program to ensure that the learner can demonstrate an understanding and comprehension of all of the learning outcomes in Section 9, through active participation in group discussions and activities).
- b) For learners with language, literacy or accommodation needs, alternative evaluation methods may be employed to verify satisfactory demonstration of learning outcomes by the learner. These evaluation methods must be clearly outlined in the evaluation plan and the corresponding results must be documented by the evaluator.

11. Validity and Refresher Training

Construction Health and Safety Awareness Training is one-time training for learners who successfully complete an approved program that meets the criteria outlined in this draft Standard.

No refresher training is required for this training program.

12. Glossary of Terms

This draft Standard may refer to the following terms:

Construction Health and Safety Awareness Training Program

A training program that has been determined to have met the criteria set out in the Construction Health and Safety Awareness Training Program Standard

Construction Health and Safety Awareness Training Provider

A training provider who has been determined to have met the criteria set out in the Construction Health and Safety Awareness Training Provider Standard.

Distance Learning

An educational situation in which the instructor and learners are separated by location. Education or training courses are delivered to remote locations via synchronous or real-time instruction.

eLearning (Electronic Learning)

A term covering a wide set of applications and processes such as web-based learning, computer-based learning.

Evaluator

A person who evaluates learners. The evaluator and instructor can be the same individual.

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 interchangeably with on-site training and classroom training and instructor-led training.

Instructor

A person who delivers training programs. The instructor and evaluator can be the same individual.

Qualification

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

Subject Matter Expert (SME)

A person who has extensive knowledge and skills in a particular subject area (ASTD definition).

Training Provider

An individual, sole proprietor, corporation or not-for-profit organization delivering training.