



TYNDALE

• UNIVERSITY COLLEGE & SEMINARY •

Joint Health and Safety Committee

Tyndale University College & Seminary Fall Prevention & Protection; Scaffolding & Ladders

March 2008

Scope and Intent

To all Tyndale University College & Seminary (Tyndale) employees who regularly or occasionally work at heights and are exposed to a hazard of falling. Everyone who carries out work at a height of or who is exposed to the risk of falling from a height of 3 or more meters (10 feet) must receive training. This includes work on sloped or flat roofs when adequate railings are not provided. This policy provides an overview of applicable legislation and prevention strategies to eliminate accidents and severity of fall-related accidents.

Legislation

The Ontario Regulation, Industrial Establishments (851), Section 85, under the Occupational Health and Safety Act specifies that a worker who is exposed to a risk of falling from a height of more than 3 meters must wear a CSA recognised full body harness (NOT a safety belt) and lifeline adequately secured to a fixed support so that the worker cannot fall freely for a vertical distance of more than 1.5 meters. In circumstances when a worker cannot be secured to a fixed support, another work method must be used (ex. a lifting device). Mandatory training would be required for use of a lifting device.

Employees should never be required nor allowed to perform any duties, which require the employee to get close (2 meters) to an unprotected edge, platform or walkway of any building, nor to utilize elevated equipment unless the employee is properly trained and secured from falling. Everyone, even those who don't usually work at heights have to have fall protection training and wear protective equipment if they are to perform activities described previously.

All health and safety regulations applying to construction, industrial establishments, etc. have the same basic requirement for fall protection, i.e., a worker exposed to a hazard of falling of 3 meters or more must wear protective equipment and must be trained to use it properly.

Fall Prevention and Protection

The best protection is to prevent falls from happening in the first place. Fall prevention uses physical means to keep workers away from situations where they might fall. Fall protection and prevention include:

- (1) Proper use of ladders (see Appendix 1) and scaffolds (see Appendix 2).
- (2) Visual warnings such as signs, tape, cones, or paint.
- (3) Physical barriers such as warning barriers, handrails, fencing, guardrail systems (where required), and travel restraints.
- (4) Protective covers over floor and roof openings where applicable. Protective covers must be secured in place and must be constructed to meet the structural requirements for loads due to the use of floors and roofs as set out in the Building Code.
- (5) A full body harness is required for all fall arrest applications (see Appendix 2). These harnesses should be snug fitting and worn with all hardware and straps intact and properly fastened. A fall arrest system consists of:
 - (a) Full body harness
 - (b) 5/8" diameter nylon or equivalent lanyard
 - (c) Rope grab/shock absorber
 - (d) Lifeline and lifeline anchor.
- (6) A competent person trained on the proper use and wear of a fall arrest system. Each worker must have written record they have undergone proper training. This training not only deals with when to wear, but, how to wear, adjust and inspect the equipment to be used to ensure it is in proper working order.

EDUCATION AND TRAINING

Every employee who may be exposed to fall hazards must be trained. Once trained, employees must be able to recognize common fall hazards and identify and apply basic fall protection controls. Training records must be kept of completed training, and shall include the workers name and training date.

APPENDIX 1 – LADDERS

LADDERS

- (1) Must be properly suited for the task.
- (2) Must be in good working condition. Check all parts before each use.
- (3) Should be CSA approved, especially for construction purposes.
- (4) Should use the heavy duty or grade 1 type.
- (5) Verify the rating load and respect limitations.
- (6) Must have non-slip feet.
- (7) Must be on a firm footing and secure against slipping.
- (8) Avoid twisting or turning.
- (9) Never step on the top 2 rungs.
- (10) Face the ladder and use both hands to climb up or down and maintain three-point contact at all times. To keep your hand free, use a tool belt, or hoist tools and materials up after you reach the top.
- (11) Don't overreach. Keep your centre of gravity between the side rails. A general rule is that if your buckle is in line with the uprights you are leaning too far.
- (12) Never paint or coat with an opaque material a wooden ladder.
- (13) Never use aluminium ladders or conductive materials where electrical contact is possible.
- (14) Ensure areas surrounding the base and top is clear of obstructions.
- (15) Never use horizontally.
- (16) If work is conducted at more than 3 metres with a hazard of falling, must wear safety harness and tie the lanyard off to the structure or to a lifeline before beginning work
- (17) Ensure you are wearing slip-resistant footwear.

Additional requirements if using an extension ladder:

- (18) Follow the 4 to 1 rule. Ladders should be inclined such there is than one rung length out from the wall for every four rungs height to the point the ladder touches the wall (not less than 1/4 and no greater than 1/3).
- (19) Should extend at least a metre above the edge of the working surface.
- (20) Have someone hold the bottom of a tall ladder until it can be tied off to a firm anchoring point.
- (21) Don't use in high winds.
- (22) If exceeds 6 metres in length and is not securely fastened or is likely to be endangered by traffic, must be held in place by one or more workers while being used.
- (23) Never erect ladders near power lines unless you are a competent electrician and follows restricted rules.

Additional requirements if using a stepladder:

- (24) Ensure to lock stepladder in place by spreading the legs to their limit and locking the spreader.
- (25) Never use the pail shelf as a step.

APPENDIX 2 – ROLLING SCAFFOLDING

- (1) Only a competent person may erect a scaffold.
- (2) Fall protection must be worn when erecting or dismantling a scaffold that exceeds 3 meters (10 feet) in height.
- (3) Rolling scaffolds must have brakes on all wheels. All brakes must be applied when the scaffold reaches the desired position.
- (4) Scaffolds over one frame in height must not be moved while a worker is on the platform.
- (5) The floor area where the scaffold is to be moved should be free of bumps or depressions and cleared of all debris.
- (6) Rolling scaffolds must be securely pinned together and should always be fitted with horizontal bracing as recommended by the manufacturer. Scaffolds, which are not securely pinned together, can separate if they drop into a hole or depression or run into an obstacle at ground level. Horizontal bracing is necessary on a standard frame scaffold to keep it from folding up because the connections between frames and braces are essentially pinned joints.
- (7) Wheels must be positively secured to the frame. Wheels must be properly sized according to the manufacturer specifications. A wheel dropping off in a hole or depression in floors can cause serious accidents and injuries.
- (8) On a scaffold the ratio of height to least lateral dimension should not exceed 3 to 1 unless:
 - (a) the scaffold is tied into the structure using appropriate equipment
 - (b) the scaffold is properly stabilized by guide cables or manufactures hold-off
 - (c) the scaffold is secured by outrigger stabilizers sufficient to maintain the ratio
- (9) Outriggers or stabilizers are used to provide base stability and maintain the 3-to-1 rule. Length b may not exceed 3 times length a. They must be properly deployed and "snuggled up" so that sufficient contact is made with the surface to prevent settlement or movement due to side thrusts.
- (10) Bracing (frames and ends) should be inspected prior to use. Any bracing frames with kinks, bends or deformation should NOT be used; such damage can significantly weaken them. Any braces with cracked ends should be discarded.

APPENDIX 3 - FALL ARREST EQUIPMENT

Please consult the Ontario Occupational Health and Safety Act and its regulations for detailed information.

- (1) Any worker required to use fall arrest equipment must be trained in its safe use and proper maintenance.
- (2) Equipment must be properly suited for the task.
- (3) Equipment must be in good working condition. Inspect all parts of the equipment for damage, wear, and obvious defects before each use if equipment is not used regularly.
- (4) Replace defective equipment. If there is any doubt about the safety of the equipment, do not use it.
- (5) Replace any equipment, including ropes, involved in a fall. A trained inspector must confirm the equipment can be used safely if a potential defect is found.
- (6) Always refer to manufacturer's instructions regarding the use and care of the equipment.
- (7) A trained inspector should examine equipment at least yearly.
- (8) Equipment must include a CSA-approved full body harness.
- (9) Equipment must include a lanyard equipped with a shock absorber unless the shock absorber could cause a falling worker to hit the ground or an object or level below the work.
- (10) Equipment must be attached to a CSA approved lifeline or by the lanyard to an adequate fixed support (Anchor).
- (11) Fall arrest equipment shall bear manufacturer identification marks.
- (12) Equipment must prevent a falling worker from hitting the ground or any object or next level below the work area.

Appendix A: Updates

February 2010

(1) Added top 2 rungs to Appendix 1.9.

(2) Removed statement "stand on the top or" (under Appendix 1.25) also under 1.9.