

Occupational health and safety (OHS) fall protection plan

OHS information for workers and employers

KEY INFORMATION

A fall protection plan must include

- the potential hazards to the worker
- the fall protection system being used
- appropriate anchors to be used
- the clearance distance below work area, and
- inspection and maintenance of fall protection equipment

Section 140 of Alberta's Occupational Health and Safety (OHS) Code requires employers to prepare a fall protection plan when work-at-height situations meet *both* of the following requirements:

- (1) a worker may fall 3 metres or more, and
- (2) the worker is not protected by guardrails.

Why put together a fall protection plan?

The purpose of the fall protection plan is to:

- (a) Ensure that employers and workers do enough planning before beginning work at height to eliminate or control workers' risk of falling. This includes choosing the most appropriate fall protection system and equipment for the specific work site conditions.
- (b) Show that the employer determined the clearance distance below the work area to ensure that if a worker falls, they do not strike the ground, an

object, or level below the work area. Inadequate clearance can result in serious injury. A different type of fall protection system may be required or the work must be done differently.

- (c) Ensure that workers using the fall protection system have access to all the most up-to-date information they need to assemble, maintain, use, and disassemble it.
- (d) Ensure that practical rescue procedures have been prepared and are understood by workers. Training to these procedures, particularly complex procedures requiring additional skills and equipment, will be required.

What information is required in a fall protection plan?

The fall protection plan must include the following information:

- (a) **The fall hazards at the work site**
Workers and the employer must conduct a hazard assessment and list the circumstances under which a worker could be exposed to a fall situation e.g., a leading edge, unguarded opening, boom-supported work platform, etc.
- (b) **The fall protection system to be used at the work site**
Provide a brief description of the system being used e.g., fall arrest, travel restraint, fall restrict, horizontal lifeline, safety net, work positioning, control zone, etc.
- (c) **The anchors to be used during work**
Describe the permanent and improvised (if used) anchors, their locations, any special requirements such as the materials and structures into which they can be installed, performance and load limits, etc.

- (d) Clearance distances below the work area, if applicable, have been confirmed as sufficient to prevent a worker from striking the ground or an object or level below the work area
 Clearance distances vary based on the type of fall protection equipment used and anchor location. The fall protection plan template shown below helps calculate clearance distance for the most commonly used system that uses a fixed length lanyard.

(e) The procedures used to assemble, maintain, inspect, use and disassemble the fall protection system, where applicable

To be useful, the procedures must be readily available for reference at the work site by workers and other work site parties affected by the procedures. This can mean a paper copy of the instructions on site or an electronic copy that is downloaded to a storage device such as a tablet, laptop, or smartphone. The information must be retrievable without an internet connection so that the person needing it has access to it at all times.

The complexity of the fall protection system or the number of individual devices used may make it impractical to provide all the procedures in writing as part of the fall protection plan. In such cases it is acceptable for the fall protection plan to reference the procedures, which appear as a separate document(s).

For example, a multi-person crew works at height daily using a fall protection system consisting of a variety of devices from multiple manufacturers. The resulting procedures for assembling, inspecting, using, and disassembling the equipment involve instructions that appear in several manuals. Rather than reproducing this information in the fall protection plan, the plan refers to this information which is held in a binder or electronic storage device in each crew vehicle.

(f) The rescue procedures to be used in the event of a fall

If a worker falls and is suspended by a personal fall arrest system or safety net and needs to be rescued, rescue procedures must already be in place.

Only calling 9-1-1 and waiting for rescue services personnel is considered to be an insufficient emergency response. The employer must have some basic level of on-site rescue capability in case rescue services personnel are delayed or unable to attend the scene.

While calling 9-1-1 may be *part of* a rescue response, Alberta Occupational Health and Safety requires an employer to have some means of basic rescue capability at the work site. Basic means of rescue may include:

- having access to a man lift or scissor lift at the work site that is capable of reaching a suspended worker, and someone that is able to competently operate the equipment;
- having ladders on-site that are capable of reaching a suspended worker;
- equipping workers with leg loop extensions for their full body harnesses (i.e. suspension relief straps) - these attach to the full body harness, providing foot loops into which a suspended worker can place their feet and then raise the legs;
- from above the fallen worker's suspended position, a worker can lower a loop of rope into which the fallen worker places their feet and can then stand up - it may also allow the worker to connect to a descent system followed by disconnection from their fall arrest system;
- using a self-retracting device that includes an integral hand winch that allows the suspended worker to be raised upwards or lowered to safety; and
- equipping workers in certain situations with self-rescue devices such as specialized descenders that allow a suspended worker to remove themselves from their lanyard and descend to safety.

How often must the plan be updated?

The employer must ensure that the plan is updated when conditions affecting fall protection change. For example, this may involve physical changes at the work site requiring the use of different anchors or anchor locations, the introduction of new fall protection devices that have

different procedures, or using an altogether different approach to fall protection, etc.

Availability and review by workers

The employer must ensure that the fall protection plan is available at the work site and is reviewed with workers before work with a risk of falling begins.

In the plan template shown below, workers are required to sign off as evidence of having reviewed the plan.

Can I use a single fall protection plan for multiple work sites?

Yes. A unique fall protection plan isn't required for each work site. If an employer faces the same hazards at multiple work sites, and the fall protection equipment and rescue procedures are identical at each work site, then a single plan applicable to all the work sites is acceptable. Alternatively, an employer can create a single fall protection plan that covers all the fall hazards likely to be encountered during normal operations. Only in the event of a unique work situation is a new or amended fall protection plan required.

Other points to consider in the fall protection plan

In some situations, rescue services personnel may not have the equipment or skills to perform a rescue e.g. a worker suspended 100 metres above ground level following the failure of a swing stage scaffold. In such cases the employer's on-site rescue capability must be such that the work site is virtually self-sufficient in returning a rescued worker to safety.

Special situations

Travel restraint systems

A fall protection plan is required if a travel restraint system is used so that workers know which equipment and anchors to use. However, rescue procedures are not necessary since a worker will not fall and be left suspended in the air.

Aerial work platforms

Boom-supported aerial work platforms, fork-mounted elevating work platforms, and scissor lifts normally have guardrails in place to protect workers from falling. Therefore a fall protection plan is not required. (The bucket of a "bucket truck" is considered to functionally have fully enclosed guardrails.)

However, workers in boom-supported platforms (including fork-mounted platforms supported by a boom) are required to use a personal fall arrest system because of the possibility of being ejected out of the platform while working at height – the guardrails may be insufficient to protect the worker. A fall protection plan is recommended in such cases so that workers know about the equipment and procedures they are required to use.

In the case of fork-mounted elevating work platforms that are limited to moving only vertically, the platform's guardrail system provides worker protection against falls. However, if a portion of the guardrail system is missing or has been removed while in an elevated position and its absence exposes the worker to an edge from which the worker could fall 3 metres or more, then the worker must use either a travel restraint system (preferred) or a personal fall arrest system. A fall protection plan is required under such circumstances.

Fall Protection Plan Template

Name of employer (and work site if necessary):

Period for which this plan is valid:

Fall hazard(s) at the work site

The circumstances under which a worker could be exposed to a fall situation e.g. leading edge, unguarded opening, boom-supported work platform, etc.

Fall protection system(s) to be used at the work site

Brief description of the system(s) being used i.e. fall arrest, travel restraint, fall restrict, horizontal lifeline, safety net, work positioning, control zone, etc.

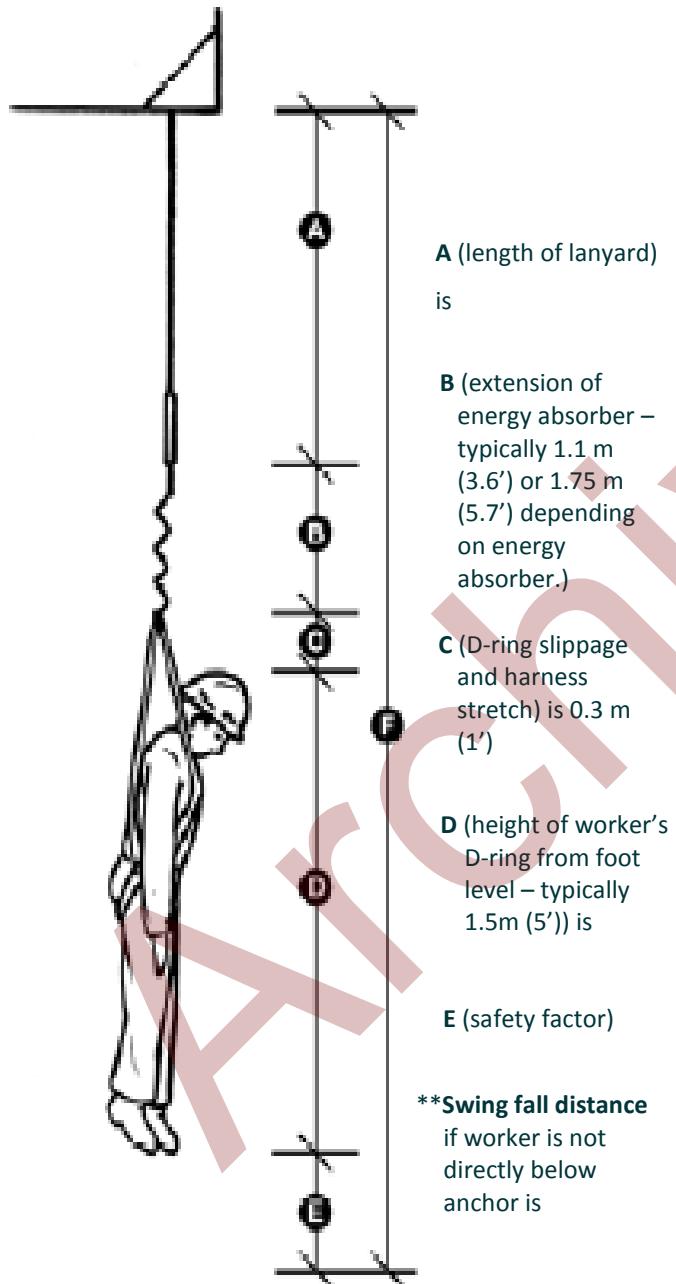
Anchor(s) to be used

Locations of permanent and improvised (if used) anchors, any special requirements such as connecting hardware, type, thickness, and condition of material to which the anchor is connected to ensure minimum required strength, etc.

Archived

Clearance requirement

This must be calculated. The distance the worker falls must be less than the distance to the ground or an object or level below the work area.



Calculating clearance required

Add **A + B + C + D + E + ****, to determine minimum distance from anchor point to nearest surface or object below worker.

Clearance required

Actual distance to surface below

The actual distance to the surface below must be greater than the clearance required. If not, a falling worker will strike that lower surface. A different anchor location or type of fall protection system may be required.

Note: A typical fall arrest system using a 1.8 m (6') lanyard and normal energy absorber requires a minimum clearance distance of 5.6 m (18.5'). A self-retracting device used according to the manufacturer's instructions typically requires a minimum clearance distance of 4.4 m (14.5'). Actual distances can be greater.

Procedures to assemble, maintain, inspect, use and disassemble the fall protection system

Procedures for simple systems can be listed here. For complex systems it is acceptable to reference procedures that appear elsewhere as a separate document. The procedures must be readily available for reference at the work site. This can mean a paper copy of the instructions on site or an electronic copy that is downloaded to a tablet, laptop, or smartphone. The information must be retrievable without an internet connection so that the person needing it has access to it at all times.

Rescue procedure

Calling 9-1-1 and waiting for rescue services personnel is an insufficient emergency response. The employer must have some basic level of on-site rescue capability in case rescue services personnel are delayed or unable to attend the scene. Examples include ladders, aerial devices, self-rescue fall protection equipment such as leg loop extensions, self-retracting devices with integral winches, etc. The employer must ensure that workers are trained in rescue procedures and conduct practice drills.

Worker sign-off

The employer must ensure that all workers affected by this fall protection plan have reviewed it. As evidence of that, the template requires workers to sign off on the plan each time it is used.

Workers Involved:

Worker Name:	Signature:

Contact Us

OHS Contact Centre

Throughout Alberta

- 1-866-415-8690

Edmonton & surrounding area

- 780-415-8690

Deaf or hearing impaired:

- 1-800-232-7215 (Alberta)
- 780-427-9999 (Edmonton)

PSI Online Reporting Service

alberta.ca/report-potentially-serious-incidents.aspx

Website

alberta.ca/occupational-health-safety.aspx

FOR MORE INFORMATION

OHS Ticketable Provisions (CI004)

<https://ohs-pubstore.labour.alberta.ca/ci004>

Role and duties of government occupational health and safety officer (LI046)

<https://ohs-pubstore.labour.alberta.ca/li046>

The Prime Contractor (LI018)

<https://ohs-pubstore.labour.alberta.ca/li018>

Get Copies of *OHS Act, Regulation and Code*

Alberta Queen's Printer

gp.gov.ab.ca

Occupational Health and Safety

alberta.ca/ohs-act-regulation-code.aspx

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