Fall Protection Program
Chapter 11

Fall Protection Program
("Working at Heights")
29 CFR 1910.22, 25, et al

PURPOSE

This standard was developed to ensure compliance with Federal, State, and Local regulations regarding Working at Heights and Ladder Safety.

APPLICABILITY/SCOPE

This standard applies to UG2 employees and others performing work on UG2 property.

This standard shall cover the following items:

- Definitions
- Roles and Responsibilities
- Ladders
- Scaffolds
- Fall Prevention and Protection
- Inspections

DEFINITIONS

Anchor/anchorage points - The position on an independent structure to which the lanyard is securely attached. Anchorage points for lanyards and lifelines shall be capable of a sustained load of 5000 lbs per person.

Connector - A component or element that is used to join together parts of a system, or components within the system.

Full Body Harness - A design of straps secured about the wearer to distribute the stopping forces exerted in a fall over the thighs, buttocks, chest and shoulders.

Lanyard - A device to secure the wearer of a full body harness to a connector. One end of the lanyard is fastened to the full body harness D-Ring and the other end is secured to a lifeline or fixed anchorage.

Lifeline - A flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline) or for connection to anchorages at both ends to span horizontally (horizontal lifeline).

Personal Fall Arrest System (PFAS) - A system used to arrest an employee in a fall from a working level.

Qualified Person - Means one with a recognized degree or professional certificate and extensive knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project, or product.

Self-Retracting Lifeline/Lanyard - A deceleration device containing a drum-wound line or strap which can be slowly extracted from or retracted onto the drum under slight tension during normal employee movement, and which, after the onset of a fall, automatically locks the drum and arrests the fall.

Snap-Hook - A connector comprised of a hook shaped employee that may be opened to permit the hook to receive an object. All snap-hooks must be of the locking type with a self-closing, self-locking keeper (Double Action) that remains closed and locked until it's unlocked and pressed open for connection or disconnection.

LADDERS

Ladders shall be maintained in good condition at all times. The joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play.

- Metal bearings of locks, wheels, pulleys, etc. shall be kept lubricated.
- Wooden ladders shall not be painted.
- Frayed or badly worn rope on extension ladders shall be replaced.

- Safety feet and other auxiliary equipment shall be kept in good condition to insure proper performance.
- Rungs should be kept free of grease and oil.
- Fixed ladders that are twelve feet or more in height shall be equipped with a cage. The cage should start at seven feet above the ground and be flared to allow ease of entry.
- Ladders with cracked or loose rungs, cracked or damaged side rails, or weak places in the wood shall not be used. They shall be destroyed.
- While using a ladder, personnel shall maintain three-point contact with ladder.
- The top of a stepladder shall not be used as a step.
- The bracing on the back legs of stepladders is designed solely for increasing stability and not for climbing.
- For maximum stability, there should be a ratio of four feet of vertical distance to every foot of horizontal distance between the base of the straight ladder and the structure it is leaning against
- A straight ladder should extend at least three feet above the edge of the surface to which the user is climbing.
- Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked, locked and/or guarded
- Ladders shall not be placed on boxes, barrels or other unstable bases to obtain additional height
- Ladders shall not be used as a brace, skid, guy or gin pole, gangway, or for other uses than that for which they were intended, unless specifically recommended for use by the manufacturer.
- Ladders with structural defects such as but not limited to broken or missing rungs, cleats, steps, broken or split rails, corroded components or other faulty or defective components, shall either be immediately marked in a manner that readily identifies them as defective, or be tagged with "Do Not Use" or similar language, and shall be withdrawn from service until repaired or destroyed.

All portable ladders shall be inspected at least annually by a qualified professional to ensure safe operating condition. The inspection shall include written documentation and a marking of the ladder that includes the date of the inspection.

SCAFFOLDING

It is not practical for this document to contain all of the numerous OSHA requirements for the various scaffolds constructed. Specific design requirements are contained in General Industry Standard 29 CFR 1910.28, and Construction Standard 29 CFR 1926.450-454. These design requirements not only specify the materials to be used in building the scaffold but also how the scaffold is to be erected, secured, moved, altered and dismantled.

Employees who perform work on a scaffold or are involved in erecting, disassembling, moving, operating, repairing, maintaining or inspecting a scaffold shall be trained to recognize the hazards associated with the type of scaffold being used.

- Scaffolds must be capable of supporting no less than four times the maximum intended load.
- Guardrails and toe boards shall be installed at all open sides more than 10 feet above the ground or floor.
- Scaffolds shall be provided with a screen between the toe board and the guardrail, extending along the entire opening where persons are required to work, walk or pass under the scaffold.
- Do not work on scaffolds during storms and/or high winds.
- Do not work on scaffolds that are covered with ice or snow, unless all ice and snow is removed and sand applied to the planking.
- Use a tag line when hoisting equipment onto a scaffold.
- Wire or fiber rope used for scaffold suspension must be in good condition and capable of supporting at least six times the intended load.
- All planking shall be scaffold grade and extend over their end supports not less than 6 inches nor more than 18 inches.
- An access ladder or equivalent safe access shall be provided.
- Do not allow tools, materials and debris to accumulate and cause a hazard.
- Whenever work is conducted above ground level, consideration should be given to the use of fall prevention and protection equipment.

FALL PREVENTION AND PROTECTION

When an employee's work assignment is more than **six feet above the ground**, floor, liquid or other surface, one of the following personal fall arrest systems shall be applied:

- The employee shall be protected by a perimeter guardrail system that includes mid-rail and toe board; or
- The employee shall use an approved ladder; or
- The employee shall be protected by a safety net; or
- The employee shall use a Personal Fall Arrest System

Only trained and permitted employees shall be allowed to free climb and use a Personal Fall Arrest System as their only means of protection.

Our company will only utilize fall protection equipment that meets or exceeds the requirements of applicable ANSI, ASTM and OSHA requirements.

A full-body harness is the only type of safety harness approved for use by UG2.

Where an employee is exposed to the hazard of falling into a liquid that is of sufficient depth where a life jacket might be effective as protection from the risk of drowning, the employee shall wear a life jacket

There shall be rescue equipment appropriate for the circumstances to ensure the employee's rescue from the liquid.

Lanyards shall be as short as in length as possible but never longer than 6 feet, except for self-retracting lifelines/lanyards.

Connecting to another lanyard shall not be done to lengthen a lanyard.

Lanyards must be equipped with an energy-absorbing device that reduces the force subjected to the body.

Standard lanyards and full body harnesses are rated for employees and tools with a combined weight of up to 310 pounds. Lanyards and full body harnesses for employees and tools with a combined weight of over 310 pounds must be custom built by an authorizing manufacturer.

A qualified person shall identify anchorage points for those jobs that require free climbing.

Lanyards and lifelines shall be attached to anchor points/systems as high as possible to minimize fall distances. Potential free fall distances should not exceed six feet.

A lifeline or lanyard shall not be kinked, tied in a knot, run over sharp corners, used when frozen, left in freezing temperatures when wet and/or exposed to sources of ignition or flame.

INSPECTIONS

Initially, each harness and lanyard must be inspected to ensure it bears the manufacturer's certification. In addition, the manufacturer shall either indelibly print or stamp into a permanently attached tag information identifying the manufacturer, date of manufacture, style and number.

Prior to each use, all fall protection equipment shall be inspected in accordance with the manufacturer's recommendations.

If any defects are noted, the equipment shall be taken out of service and replaced.

Every six months, all lanyards and harnesses shall receive a documented inspection per the manufacturer's recommendations.

Self-Retracting Lanyards (SRL) must be sent out for inspection according to the manufacturer's requirements. Normally, depending on the manufacturer, this will be once every two years.

Personal fall arrest systems or components subjected to impact loading shall be immediately removed from service and shall not be used again for employee's protection unless inspected and determined by the manufacturer to be undamaged or suitable for reuse.

Check with the manufacturer's instructions to determine the life expectancy of fall protection equipment.

Documentation used for inspections of PFAS equipment shall be kept on file for 3 years for tracking/verification purposes.

TRAINING

Each employee whose job requires them to work at heights shall be trained in Working at Heights. This annual training must at least include;

- Application limits of arrest systems
- Proper anchoring and tie-off techniques
- Estimation of free fall distance, including determination of deceleration distance and total fall distance to prevent striking a lower level
- Proper hook-up, anchoring and tie-off techniques, including the proper D-ring or other attachment point to use on the body belt and harness for fall arrest
- Proper climbing techniques;
- Methods of use, inspection, cleaning and storage techniques

Employees required to use ladders shall be trained on basic ladder safety and principles.

Training records shall be permanently maintained for tracking/verification purposes.

RE-TRAINING

UG2 will retrain all applicable employees on this program when any of the following are noted:

- Deficiencies in the original training program are discovered, or
- Workplace changes occur which might impact the fall protection program, or
- Fall protection systems or equipment changes that render previous training obsolete, or
- When a member of our company is observed performing an unsafe act which violates any aspect of the working at heights program.

RESCUE

In the event that an employee or contractor has fallen, prompt rescue of those employee(s) will be provided. If the employee is unable to rescue herself, all employees (working at ground level) are instructed to immediately page the facility manager and/or safety manager. If the determination is made that we cannot rescue the person in a safe manner, our management team will contact the local Fire Department to ensure their willingness and competency to provide third party rescue services.