

# FALL PROTECTION PROGRAM (SHOP)

**Penn Fencing, Inc.**  
647 Pittsburgh Road  
Butler, PA 16002



Prepared by:



Lancaster Safety Consulting, Inc.  
100 Bradford Road, Suite 100  
Wexford, PA 15090  
(888) 403-6026  
[www.LancasterSafety.com](http://www.LancasterSafety.com)



---

# FALL PROTECTION PROGRAM

Penn Fencing, Inc.

## TABLE OF CONTENTS

Tab 1 – Fall Protection Program

- 1.1 Introduction
- 1.2 Responsibility
- 1.3 General Requirements for Fall Protection
- 1.4 Fall Protection Systems
- 1.5 Ladders
- 1.6 Holes
- 1.7 Openings
- 1.8 Stairways
- 1.9 Dockboards
- 1.10 Scaffolds
- 1.11 Protection from Falling Objects
- 1.12 Training
- 1.13 Enforcement
- 1.14 Accident Investigation Reporting and Analysis
- 1.15 Fall Protection Plan Audit

Tab 2 – Attachment A – OSHA Standard Covering Walking-Working Surfaces

Tab 3 – Attachment B – Inspection Checklists

Tab 4 – Attachment C – Fall Protection Accident Investigation Report Form

Tab 5 – Attachment D – Fall Protection Safety Meeting Report Form

Tab 6 – Attachment E – Fall Protection Safety Audit Check Form

Tab 7 – Attachment F – Training Documentation

Tab 8 – Attachment G – New Hire Training Documentation

---

# FALL PROTECTION PROGRAM

## Penn Fencing, Inc.

### 1.1 INTRODUCTION

This Fall Protection Plan has been prepared for the prevention of injuries associated with falls at Penn Fencing's workplace. It addresses standards established by the Occupational Safety and Health Administration (OSHA) in 29 CFR 1910 - Subpart D, Walking-Working Surfaces. A copy of this standard is provided in Attachment A of this document.

While this plan provides the generic components and parameters for fall protection, it is understood that fall protection must be project-specific, where control measures must be developed and implemented for each identified project and/or job function. In many cases, the fall protection controls are unique to that project and/or job function.

The purpose of this plan is to:

- A. supplement our standard safety policy by providing safety standards specifically designed to cover fall protection, and
- B. ensure that each employee is trained and made aware of the safety provisions which are to be implemented by this plan prior to the start of each job.

Definitions used in this plan can be found in 29 CFR 1910.21 (Attachment A)

### 1.2 RESPONSIBILITY

#### PROGRAM ADMINISTRATOR - CHAD GALBREATH

- Administer, oversee, and maintain this plan.
- Conduct continual observational safety checks of work operations.
- Enforce safety policies and procedures.
- Review and approve any changes or revisions to this plan.

#### MANAGEMENT & FOREMEN

- Provide fall protection systems for employees in work areas where injury from a fall to a lower level is a recognized hazard
- Ensure that fall protection systems meet OSHA's requirements
- Provide all necessary training to employees
- Correct any unsafe acts or conditions immediately

## EMPLOYEES

- Alert management of any unsafe/hazardous convictions in order to prevent injury to either themselves or any other employees.
- Properly use and maintain provided fall protection systems provided

### **1.3 GENERAL REQUIREMENTS FOR FALL PROTECTION**

Each employee on a walking-working surface with an unprotected side or edge that is 4 feet (1.2 meters) or more above a lower level will be protected from falling by one or more of the following measures:

- Guardrail systems
- Safety net systems
- Personal fall protection systems such as fall arrest, travel restraint, or positioning systems.

If Penn Fencing establishes that it is not feasible to use one of the above measures, or that it creates a greater hazard to use a guardrail, safety net, or personal fall protection system on residential roofs, Penn Fencing will develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k) and training that meets the requirements of 29 CFR 1926.503(a) and (c).

Additionally, if Penn Fencing determines that the use of fall protection systems is not feasible on the working side of a platform used at a loading rack, loading dock, or teeming platform, the work may be completed without a fall protection system, provided:

- The work operation for which fall protection is infeasible is in process
- Access to the platform is limited to authorized employees; and,
- The authorized employees are trained in accordance with 1910.30.

In order to comply with OSHA's general requirements covering walking and working surfaces, as outlined in 29 CFR 1910.22 (Attachment A), Penn Fencing will ensure the following are maintained appropriately:

- All places of employment, passageways, storerooms, service rooms, and walking-working surfaces are kept in a clean, orderly, sanitary condition.
- The floor of every workroom is maintained in a clean and, to the extent feasible, dry condition.
- Where wet processes are used, drainage is maintained and false floors, platforms, mats, or other dry standing places are provided where practicable.
- Walking-working surfaces are maintained free from hazards such as sharp or protruding, loose boards, corrosion, leaks, spills, snow, and ice.
- Each walking-working surface must be able to support the maximum intended load for the surface.
- Safe means of access and egress to and from walking-working surfaces are maintained and are required to be used by each employee.

- Walking-working surfaces are inspected regularly and as necessary, and they are maintained in a safe condition.
  - Hazardous conditions on walking-working surfaces are corrected or repaired before an employee uses the surface again. If the correction or repair cannot be made immediately, the hazard will be guarded to prevent employees from using the surface until the hazard is corrected or repaired.
  - When any correction or repair involves the structural integrity of the walking-working surface, a qualified person performs or supervises the correction or repair.

## **1.4 FALL PROTECTION SYSTEMS**

### **GUARDRAIL SYSTEMS**

Guardrail systems will meet OSHA's requirements, as outlined in 1910.29(b), including, but not limited to, the following:

- Top rail installed 39-45 inches above the walking/working level.
- Mid-rail (or suitable alternative) located 21 inches above walking/working level.
- Able to withstand a force of at least 200 pounds in any outward or downward direction.
- Smooth-surfaced to protect employees from injury such as puncture, laceration, or catching/snagging of clothing.
- Designed so as not to constitute a projection hazard.
- Installed on all unprotected sides or edges when used around holes
- When guardrail systems are used around holes that serve as points of access (such as ladderways), the guardrail system opening:
  - Has a self-closing gate that slides or swings away from the hole, and is equipped with a top rail and midrail or equivalent intermediate member, or
  - Is offset to prevent an employee from walking or falling into the hole.
- Guardrail systems on ramps and runways are installed along each unprotected side or edge
- Manila or synthetic rope used for top rails or midrails are inspected as necessary to ensure that the rope continues to meet the strength requirements in 29 CFR 1910.29(b)(3) & (5).

### **SAFETY NET SYSTEMS**

Safety Net Systems will meet OSHA's requirements, as outlined in 29 CFR 1926, Subpart M, including, but not limited to, the following:

- Installed as close as practicable under the walking/working surface, but in no case more than 30 feet (9.1 meters) below such level.
- Extend outward from outermost projection of the work surface.
- Installed with sufficient clearance under them to prevent contact with the surface due to impact on the net.

- Capable of absorbing an impact force equal to that produced by the drop test specified in OSHA's fall protection standard.
- Inspected at least weekly for wear, damage, and/or deterioration defective components removed.
- Mesh opening not to exceed 36 square inches (230 square centimeters) nor be longer than 6 inches (15 centimeters) on any side.

## COVERS

Each cover for a hole in a walking-working surface will be engineered so that it is capable of supporting without failure, at least twice the maximum intended load that may be imposed on the cover at any one time; and secured to prevent accidental displacement.

## HANDRAILS AND STAIR RAIL SYSTEMS

Penn Fencing will ensure that all handrail and stair rail systems meet the following criteria:

- Handrails are not less than 30 inches (76 cm) and not more than 38 inches (97 cm), as measured from the leading edge of the stair tread to the top surface of the handrail (see Figure D-12 of this section).
- The height of stair rail systems meets the following:
  - The height of stair rail systems installed before January 17, 2017 is not less than 30 inches (76 cm) from the leading edge of the stair tread to the top surface of the top rail; and
  - The height of stair rail systems installed on or after January 17, 2017 is not less than 42 inches (107 cm) from the leading edge of the stair tread to the top surface of the top rail.
- The top rail of a stair rail system may serve as a handrail only when:
  - The height of the stair rail system is not less than 36 inches (91 cm) and not more than 38 inches (97 cm) as measured at the leading edge of the stair tread to the top surface of the top rail (see Figure D-13 of this section); and
  - The top rail of the stair rail system meets the other handrail requirements in paragraph (f) of this section.
- The minimum clearance between handrails and any other object is 2.25 inches (5.7 cm).
- Handrails and stair rail systems are smooth-surfaced to protect employees from injury, such as punctures or lacerations, and to prevent catching or snagging of clothing.
- No opening in a stair rail system exceeds 19 inches (48 cm) at its least dimension.
- Handrails have the shape and dimension necessary so that employees can grasp the handrail firmly.
- The ends of handrails and stair rail systems do not present any projection hazards.
- Handrails and the top rails of stair rail systems are capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied in any downward or outward direction within 2 inches (5 cm) of any point along the top edge of the rail.

## PERSONAL FALL ARREST SYSTEMS

Personal fall arrest systems are used in general industry if fall hazards of 4 feet or more cannot be controlled with standards rails or covers or if the work cannot be performed with scaffolds, lifts, or ladders. Penn Fencing will ensure that personal fall protection systems meet OSHA's outlined requirements.

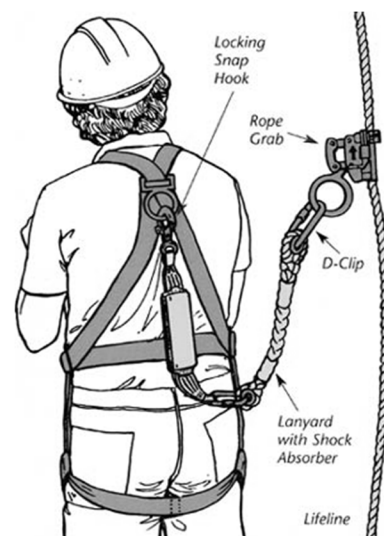
- Connectors, D-rings, snap-hooks, lanyards, lifelines and anchorage are designed, constructed and installed according to specifications addressed in OSHA's fall protection standard.
- Limit maximum arresting force on an employee to 900 pounds when used with a body belt, 1,800 pounds when used with a body harness.
- Rigged such that employees can neither free fall more than 6 feet (1.8 meters) nor contact any lower level.
- Body belts and related components may be used only for employee positioning and not for fall protection.
- Personal fall arrest systems and components subject to impact loading shall be removed from service until inspected and approved for use by the Competent Person.
- Prompt rescue of employees in the event of a fall.
- Inspected prior to each use for wear, damage and/or deterioration with defective components removed.
- Not to be attached to guardrail systems.
- Components of a fall arrest system must be used only for employee fall protection or positioning and not to hoist materials.

## HARNESS INSPECTION

**BELTS AND RINGS:** For harness inspections begin at one end, hold the body side of the belt toward you, grasping the belt with your hands six to eight inches apart. Bend the belt in an inverted "U." Watch for frayed edges, broken fibers, pulled stitches, cuts or chemical damage. Check D-rings and D-ring metal wear pads for distortion, cracks, breaks, and rough or sharp edges. The D-ring bar should be at a 90-degree angle with the long axis of the belt and should pivot freely.

Attachments of buckles and D-rings should be given special attention. Note any unusual wear, frayed or cut fibers, or distortion of the buckles. Rivets should be tight and un-removable with fingers. Body side rivet base and outside rivets should be flat against the material. Bent rivets will fail under stress.

Inspect frayed or broken strands. Broken webbing strands generally appear as tufts on the webbing surface. Any broken, cut or burnt stitches will be readily seen.



**TONGUE BUCKLE:** Buckle tongues should be free of distortion in shape and motion. They should overlap the buckle frame and move freely back and forth in their socket. Rollers should turn freely on the frame. Check for distortion or sharp edges.

**FRICTION BUCKLE:** Inspect the buckle for distortion. The outer bar or center bars must be straight. Pay special attention to corners and attachment points of the center bar.

## LANYARD INSPECTION

When inspecting lanyards, begin at one end and work to the opposite end. Slowly rotate the lanyard so that the entire circumference is checked. Spliced ends require particular attention. Hardware should be examined under procedures detailed below.

### **HARDWARE**

1. *Snaps:* Inspect closely for hook and eye distortion, cracks, corrosion, or pitted surfaces. The keeper or latch should seat into the nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to firmly close the keeper. Keeper rocks must provide the keeper from opening when the keeper closes.
2. *Thimbles:* The thimble (protective plastic sleeve) must be firmly seated in the eye of the splice, and the splice should have no loose or cut strands. The edges of the thimble should be free of sharp edges, distortion, or cracks.

### **LANYARDS**

1. *Steel Lanyards:* While rotating a steel lanyard, watch for cuts, frayed areas, or unusual wear patterns on the wire. The use of steel lanyards for fall protection without a shock-absorbing device is not recommended.
2. *Web Lanyard:* While bending webbing over a piece of pipe, observe each side of the webbed lanyard. This will reveal any cuts or breaks. Due to the limited elasticity of the web lanyard, fall protection without the use of a shock absorber is not recommended.
3. *Rope Lanyard:* Rotation of the rope lanyard while inspecting from end to end will bring to light any fuzzy, worn, broken or cut fibers. Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout, following a short break-in period. When a rope lanyard is used for fall protection, a shock-absorbing system should be included.

### **SHOCK-ABSORBING PACKS**

1. The outer portion of the shock-absorbing pack should be examined for burn holes and tears. Stitching on areas where the pack is sewn to the D-ring, belt or lanyard should be examined for loose strands, rips and deterioration.



## VISUAL INDICATION OF DAMAGE TO WEBBING AND ROPE LANYARDS

**HEAT** - In excessive heat, nylon becomes brittle and has a shriveled brownish appearance. Fibers will break when flexed and should not be used above 180 degrees Fahrenheit.

**CHEMICAL** - Change in color usually appears as a brownish smear or smudge. Transverse cracks appear when belt is bent over tight. This causes a loss of elasticity in the belt.

**ULTRAVIOLET RAYS** - Do not store webbing and rope lanyards in direct sunlight, because ultraviolet rays can reduce the strength of some material.

**MOLTEN METAL OR FLAME** - Webbing and rope strands may be fused together by molten metal or flame. Watch for hard, shiny spots or a hard and brittle feel. Webbing will not support combustion, nylon will.

**PAINT AND SOLVENTS** - Paint will penetrate and dry, restricting movements of fibers. Drying agents and solvents in some paints will appear as chemical damage.

## CLEANING OF EQUIPMENT

Basic care for fall protection safety equipment will prolong and endure the life of the equipment and contribute toward the performance of its vital safety function. Proper storage and maintenance after use is as important as cleaning the equipment of dirt, corrosives or contaminants. The storage area should be clean, dry and free of exposure to fumes or corrosive elements.

**NYLON AND POLYESTER** - Wipe off all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent. Work up a thick lather with a vigorous back and forth motion. Then wipe the belt dry with a clean cloth. Hang freely to dry but away from excessive heat.

**DRYING** - Harness, belts and other equipment should be dried thoroughly without exposure to heat, steam or long periods of sunlight.

System consists of:

- Anchorage Connector
- Shock Absorbing Lanyard
- Full Body Harness

## **REQUIREMENTS:**

- Limit maximum arresting force on an employee to 1,800 pounds when used with a body harness;
- Be rigged so that an employee can neither free fall more than 6 feet (1.8 meters) nor contact any lower level;
- Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 meters); and

- Have sufficient strength to withstand twice the potential impact energy of a person who is free falling a distance of 6 feet (1.8 meters) or the free fall distance permitted by the system, whichever is less.
- The anchorage connector must be attached to a suitable and strong attachment point
- Effective January 1, 1998, body belts are prohibited as a fall arrest device.
- Body belts can still be used as a positioning device.

## **1.5 LADDERS**

All ladders used by Penn Fencing must meet OSHA & ANSI specifications, and ladder use must comply with OSHA's requirements for ladders, which are covered under 29 CFR 1910.23. These sections prescribe rules and provide requirements for the construction, care, and use of the common types of ladders. See Attachment A for a copy of these standards.

### **Ladder Inspections**

Ladders are inspected before initial use in each work shift and more frequently as necessary, in order to identify any visible defects that could cause employee injury, including, but not limited to, the following:

- Defects such as broken side rails, missing steps, or corrosion corroded components, structural defects
- Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced when the ladder is in position for use.
- Ensure that the ladder is not loaded beyond its maximum intended load for which it was built, nor beyond the manufacturer's rated capacity
- Ensure that rungs and steps are not coated with any material that may obscure structural defects, and are free of oil, grease, dirt, etc.
- Ladder surfaces must be free of puncture and laceration hazards
- Confirm that fittings are tight
- Make sure that spreaders or other locking devices are in place
- Non-skid safety feet are not damaged
- If a ladder is found to be unsafe, inform your foreman. If the unsafe condition is found to be valid, the ladder must be immediately tagged "Dangerous: Do Not Use" and remove from service until repaired or replaced.
- Portable ladder rungs must be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping.
- Stepladders and combination ladders are equipped with a metal spreader or locking device to securely hold the front and back sections in an open position while in use

## **Ladder Set Up & Storage**

The following precautions must be followed when setting up a ladder for use:

1. Assess the job and determine the proper ladder type that is needed for the task. Ladders shall be used only for the purpose for which they were designed, and may not be loaded beyond their maximum capacity.
2. Determine the best placement for the ladder. Consider surroundings such as piping, traffic, electric lines, and other workers in the area. Do not block closed doors that might interfere with the ladder. If a ladder must be placed in a location where they can be displaced by other activities or traffic, the ladder must be secured to prevent accidental displacement or be guarded by a temporary barricade.
3. Inspect the ladder to ensure there are no defects. (see Ladder Inspections)
4. Place ladder on a stable and level surface or stabilize the ladder to prevent accidental displacement. Ladders may not be placed on boxes, barrels, or other unstable bases to obtain additional height.
5. If using an extension ladder, make sure that the base of the ladder is  $\frac{1}{4}$  the height of the ladder from the wall.
6. Portable ladders used to gain access to an upper landing surface must have the side rails extended at least 3 feet above the upper landing surface.
7. Fully open and lock spreaders for stepladders in place.
8. Never tie ladders together to make longer sections, unless designed for such use

The following precautions will be followed when storing ladders:

- Store ladders in areas where they cannot be damaged (warping or sagging)
- Do not hang anything on ladders that are in storage

## **Safe Climbing Procedures**

- If you have a fear of heights – do not climb a ladder.
- Wear shoes or boots with heels to prevent slippage through the rungs
- Do not carry anything in the hands when climbing a ladder. Carry tools on belt or raise and lower with hand line.
- Never allow more than one person on a ladder.
- Climb and descend ladders cautiously.
- Face the ladder and hold on with both hands maintaining 3 points of contact at all times
- Never reach too far to either side. Do not lean to the side further than your belt buckle
- Never use second step from the top on a step ladder or the third step from the top for a straight/extension ladder
- Never attempt to move, shift, or extend ladder while in use

## Ladder Safety Systems

Ladder safety systems will meet the following requirements:

- Each ladder safety system allows the employee to climb up and down using both hands and does not require that the employee continuously hold, push, or pull any part of the system while climbing;
- The connection between the carrier or lifeline and the point of attachment to the body harness or belt does not exceed 9 inches (23 cm);
- Mountings for rigid carriers are attached at each end of the carrier, with intermediate mountings spaced, as necessary, along the entire length of the carrier so the system has the strength to stop employee falls;
- Mountings for flexible carriers are attached at each end of the carrier and cable guides for flexible carriers are installed at least 25 feet (7.6 m) apart but not more than 40 feet (12.2 m) apart along the entire length of the carrier;
- The design and installation of mountings and cable guides does not reduce the design strength of the ladder; and
- Ladder safety systems and their support systems are capable of withstanding, without failure, a drop test consisting of an 18-inch (41-cm) drop of a 500-pound (227-kg) weight.

### FIXED LADDERS

Fixed ladders that extend more than 24 feet (7.3 m) above a lower level will meet the following requirements:

- **Existing fixed ladders.** Each fixed ladder installed before November 19, 2018 is equipped with a personal fall arrest system, ladder safety system, cage, or well;
- **New fixed ladders.** Each fixed ladder installed on and after November 19, 2018, is equipped with a personal fall arrest system or a ladder safety system;
- **Replacement.** When a fixed ladder, cage, or well, or any portion of a section thereof, is replaced, a personal fall arrest system or ladder safety system is installed in at least that section of the fixed ladder, cage, or well where the replacement is located; and
- **Final deadline.** On and after November 18, 2036, all fixed ladders must be equipped with a personal fall arrest system or a ladder safety system.
- When a one-section fixed ladder is equipped with a personal fall protection or a ladder safety system or a fixed ladder is equipped with a personal fall arrest or ladder safety system on more than one section, Penn Fencing will ensure:
  - The personal fall arrest system or ladder safety system provides protection throughout the entire vertical distance of the ladder, including all ladder sections; and
  - The ladder has rest platforms provided at maximum intervals of 150 feet (45.7 m).
- Ladder sections having a cage or well will be offset from adjacent sections and have landing platforms provided at maximum intervals of 50 feet (15.2 m).

- A cage or well may be used in combination with a personal fall arrest system or ladder safety system provided that the cage or well does not interfere with the operation of the system.

Cages, wells, and platforms used with fixed ladders will meet the following criteria:

- Cages and wells installed on fixed ladders are designed, constructed, and maintained to permit easy access to, and egress from, the ladder that they enclose (see Figures D-14 and D-15 of this section);
- Cages and wells are continuous throughout the length of the fixed ladder, except for access, egress, and other transfer points;
- Cages and wells are designed, constructed, and maintained to contain employees in the event of a fall, and to direct them to a lower landing; and
- Platforms used with fixed ladders provide a horizontal surface of at least 24 inches by 30 inches (61 cm by 76 cm).

#### MOBILE LADDER STANDS AND MOBILE LADDER STAND PLATFORMS

- Mobile ladder stands and platforms have a step width of at least 16 inches (41 cm);
- The steps and platforms of mobile ladder stands and platforms are slip resistant. Slip-resistant surfaces must be either an integral part of the design and construction of the mobile ladder stand and platform, or provided as a secondary process or operation, such as dimpling, knurling, shotblasting, coating, spraying, or applying durable slip-resistant tapes;
- Mobile ladder stands and platforms are capable of supporting at least four times their maximum intended load;
- Wheels or casters under load are capable of supporting their proportional share of four times the maximum intended load, plus their proportional share of the unit's weight;
- Unless otherwise specified in this section, mobile ladder stands and platforms with a top step height of 4 feet (1.2 m) or above have handrails with a vertical height of 29.5 inches (75 cm) to 37 inches (94 cm), measured from the front edge of a step. Removable gates or non-rigid members, such as chains, may be used instead of handrails in special use applications;
- The maximum work-surface height of mobile ladder stands and platforms does not exceed four times the shortest base dimension, without additional support. For greater heights, outriggers, counterweights, or comparable means that stabilize the mobile ladder stands and platforms and prevent overturning must be used;
- Mobile ladder stands and platforms that have wheels or casters are equipped with a system to impede horizontal movement when an employee is on the stand or platform; and
- No mobile ladder stand or platform moves when an employee is on it.

#### **DESIGN REQUIREMENTS FOR MOBILE LADDER STANDS**

Steps are uniformly spaced and arranged, with a rise of not more than 10 inches (25 cm) and a depth of not less than 7 inches (18 cm). The slope of the step stringer to which the steps are attached must not be more than 60 degrees, measured from the horizontal;

- Mobile ladder stands with a top step height above 10 feet (3 m) have the top step protected on three sides by a handrail with a vertical height of at least 36 inches (91 cm); and top steps that are 20 inches (51 cm) or more, front to back, have a midrail and toeboard. Removable gates or non-rigid members, such as chains, may be used instead of handrails in special-use applications; and
- The standing area of mobile ladder stands is within the base frame.

#### **DESIGN REQUIREMENTS FOR MOBILE LADDER STAND PLATFORMS**

- Steps of mobile ladder stand platforms meet the requirements of paragraph (e)(2)(i) of this section. When the employer demonstrates that the requirement is not feasible, steeper slopes or vertical rung ladders may be used, provided the units are stabilized to prevent overturning;
- Mobile ladder stand platforms with a platform height of 4 to 10 feet (1.2 m to 3 m) have, in the platform area, handrails with a vertical height of at least 36 inches (91 cm) and midrails; and
- All ladder stand platforms with a platform height above 10 feet (3 m) have guardrails and toeboards on the exposed sides and ends of the platform.
- Removable gates or non-rigid members, such as chains, may be used on mobile ladder stand platforms instead of handrails and guardrails in special-use applications.

## **1.6 HOLES**

Penn Fencing will ensure that each employee is protected from falling, tripping, or stepping through:

- any hole (including skylights) that is 4 feet (1.2 m) or more above a lower level by one or more of the following: covers, guardrail systems, travel restraint systems, or personal fall arrest systems.
- any hole that is less than 4 feet (1.2 m) above a lower level by covers or guardrail systems.
- a stairway floor hole by a fixed guardrail system on all exposed sides, except at the stairway entrance. However, for any stairway used less than once per day where traffic across the stairway floor hole prevents the use of a fixed guardrail system (e.g., holes located in aisle spaces), the employer may protect employees from falling into the hole by using a hinged floor hole cover that meets the criteria in § 1910.29 and a removable guardrail system on all exposed sides, except at the entrance to the stairway.
- a ladderway floor hole or ladderway platform hole by a guardrail system and toeboards erected on all exposed sides, except at the entrance to the hole, where a self-closing gate or an offset must be used.
- a hatchway and chutefloor hole by:
  - A hinged floor-hole cover that meets the criteria in § 1910.29 and a fixed guardrail system that leaves only one exposed side. When the hole is not in use, the employer must ensure the cover is closed or a removable guardrail system is provided on the exposed sides;

- A removable guardrail system and toeboards on not more than two sides of the hole and a fixed guardrail system on all other exposed sides. The employer must ensure the removable guardrail system is kept in place when the hole is not in use; or
- A guardrail system or a travel restraint system when a work operation necessitates passing material through a hatchway or chute floor hole.

## **1.7 OPENINGS**

Each employee on a walking-working surface near an opening, including one with a chute attached, where the inside bottom edge of the opening is less than 39 inches (99 cm) above that walking-working surface and the outside bottom edge of the opening is 4 feet (1.2 m) or more above a lower level is protected from falling by the use of guardrail systems, safety net systems, travel restraint systems, or personal fall arrest systems.

## **1.8 STAIRWAYS**

Penn Fencing will ensure that all stairways meet OSHA's requirements for stairways (29 CFR 1910.25), including:

- Each employee exposed to an unprotected side or edge of a stairway landing that is 4 feet (1.2 m) or more above a lower level is protected by a guardrail or stair rail system;
- Handrails, stair rail systems, and guard rail systems are provided in accordance with 1910.28.
- Handrails and stair rail systems are installed
- Vertical clearance above any stair tread to any overhead obstruction is at least 6 feet, 8 inches (203 cm), as measured from the leading edge of the tread. Spiral stairs must meet the vertical clearance requirements outlined below.
- Stairs have uniform riser heights and tread depths between landings.
- Stairway landings and platforms are at least the width of the stair and at least 30 inches (76 cm) in depth, as measured in the direction of travel.
- When a door or a gate opens directly on a stairway, a platform is provided, and the swing of the door or gate does not reduce the platform's effective usable depth to:
  - Less than 20 inches (51 cm) for platforms installed before January 17, 2017;
  - Less than 22 inches (56 cm) for platforms installed on or after January 17, 2017.
- Each stair can support at least five times the normal anticipated live load, but never less than a concentrated load of 1,000 pounds (454 kg) applied at any point.
- Standard stairs are used to provide access from one walking-working surface to another when operations necessitate regular and routine travel between levels, including access to operating platforms for equipment. Winding stairways may be used on tanks and similar round structures when the diameter of the tank or structure is at least 5 feet (1.5 m).
- Spiral, ship, or alternating tread-type stairs are used only when Penn Fencing has demonstrated that it is not feasible to provide standard stairs. These types of stairs will be installed, used, and maintained in accordance with manufacturer's instructions.

- Penn Fencing will refer to 1910.25 & 1910.28(b) for additional specifications regarding stair angles, riser height, tread depth, and stair height.

## 1.9 DOCKBOARDS

- Penn Fencing will ensure that each employee on a dockboard is protected from falling 4 feet (1.2 m) or more to a lower level by a guardrail system or handrails.
  - A guardrail system or handrails are not required when:
    - Dockboards are being used solely for materials-handling operations using motorized equipment;
    - Employees engaged in these operations are not exposed to fall hazards greater than 10 feet (3 m); and
    - Those employees have been trained in accordance with § 1910.30.
- Additionally, all dockboards used will meet the following requirements:
  - Dockboards must be strong enough to support the maximum intended load.
  - For any dockboards put into initial services on or after January 17, 2017, Penn Fencing will evaluate if there is a hazard of transfer vehicles running off of the dockboard's edge. If such a hazard exists, the dockboards will be designed, constructed, and maintained to prevent transfer vehicles from running off of the dockboards edge.
  - Portable dockboards will be secured in position, either by being anchored or equipped with devices which will prevent their slipping.
  - Measures such as wheel chocks or sand shoes will be utilized to prevent the transport vehicle on which a dockboards is placed from moving while employees are on the dockboards.
  - Handholds, or other effective means, will be provided on portable dockboards to permit safe handling.

## 1.10 SCAFFOLDS

OSHA requires that scaffolds used in general industry meet the requirements in 29 CFR 1926, subpart L (Scaffolds). OSHA's general requirements for scaffolds are summarized below. This includes capacity, construction, criteria for supported scaffolds, criteria for suspension scaffolds, access, use, fall protection, and falling object protection. These standards do not apply to aerial lifts. For complete details and exact language refer to 29 CFR 1926.451. See Attachment A for a copy of these standards.

### CAPACITY

- Except as provided in the OSHA scaffold regulations, each scaffold and scaffold component must be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied or transmitted to it.
- Direct connections to roofs and floors, and counterweights used to balance adjustable suspension scaffolds, must be capable of resisting at least 4 times the tipping moment imposed by the scaffold operating at the rated load of the hoist, or 1.5 (minimum) times the tipping moment imposed by the scaffold operating at the stall load of the hoist, whichever is greater.



- Each suspension rope, including connecting hardware, used on non-adjustable suspension scaffolds must be capable of supporting, without failure, at least 6 times the maximum intended load applied or transmitted to that rope.
- Each suspension rope, including connecting hardware, used on adjustable suspension scaffolds must be capable of supporting, without failure, at least 6 times the maximum intended load applied or transmitted to that rope with the scaffold operating at either the rated load of the hoist, or 2 (minimum) times the stall load of the hoist, whichever is greater.
- The stall load of any scaffold hoist may not exceed 3 times its rated load.
- Scaffolds must be designed by a qualified person and be constructed and loaded in accordance with that design. Non-mandatory Appendix A of the OSHA scaffold standard (see Attachment A of this document) contains examples of criteria that will enable compliance with capacity specifications.

#### SCAFFOLD PLATFORM CONSTRUCTION

- Each platform on all working levels of scaffolds shall be fully planked or decked between the front uprights and the guardrail supports as follows:
  - Each platform unit (e.g., scaffold plank, fabricated plank, fabricated deck, or fabricated platform) shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch (2.5 cm) wide, except where the employer can demonstrate that a wider space is necessary (for example, to fit around uprights when side brackets are used to extend the width of the platform).
  - Where the employer makes the demonstration that a wider space is necessary, the platform must be planked or decked as fully as possible and the remaining open space between the platform and the uprights shall not exceed 9 1/2 inches (24.1 cm).
  - Exception - The requirement to provide full planking or decking does not apply to platforms used solely as walkways or solely by employees performing scaffold erection or dismantling. In these situations, only the planking that is necessary to provide safe working conditions is required.
- Each scaffold platform and walkway must be at least 18 inches (46 cm) wide, except noted below
  - Each ladder jack scaffold, top plate bracket scaffold, roof bracket scaffold, and pump jack scaffold must be at least 12 inches (30 cm) wide. There is no minimum width requirement for boatswains' chairs.
  - Exception - Where scaffolds must be used in areas that the employer can demonstrate are so narrow that platforms and walkways cannot be at least 18 inches (46 cm) wide, such platforms and walkways must be as wide as feasible, and employees on those platforms and walkways have to be protected from fall hazards by the use of guardrails and/or personal fall arrest systems.
- All platforms may not be more than 14 inches (36 cm) from the face of the work, unless guardrail systems are erected along the front edge and/or personal fall arrest systems are used to protect employees from falling. Exceptions are noted below.

- The maximum distance from the face for outrigger scaffolds shall be 3 inches (8 cm);
- The maximum distance from the face for plastering and lathing operations shall be 18 inches (46 cm).
- Each end of a platform, unless cleated or otherwise restrained by hooks or equivalent means, should extend over the centerline of its support at least 6 inches (15 cm).
- Each end of a platform 10 feet or less in length may not extend over its support more than 12 inches (30 cm) unless the platform is designed and installed so that the cantilevered portion of the platform is able to support employees and/or materials without tipping, or has guardrails which block employee access to the cantilevered end.
- Each platform greater than 10 feet in length should not extend over its support more than 18 inches (46 cm), unless it is designed and installed so that the cantilevered portion of the platform is able to support employees without tipping, or has guardrails which block employee access to the cantilevered end.
- On scaffolds where scaffold planks are abutted to create a long platform, each abutted end must rest on a separate support surface. This provision does not preclude the use of common support members, such as "T" sections, to support abutting planks, or hook on platforms designed to rest on common supports.
- On scaffolds where platforms are overlapped to create a long platform, the overlap may occur only over supports and not be less than 12 inches (30 cm), unless the platforms are nailed together or otherwise restrained to prevent movement.
- At all points of a scaffold where the platform changes direction, such as turning a corner, any platform that rests on a bearer at an angle other than a right angle shall be laid first, and platforms which rest at right angles over the same bearer shall be laid second, on top of the first platform.
- Wood platforms may not be covered with opaque finishes, except that platform edges except for marking for identification. Platforms may be coated periodically with wood preservatives, fire-retardant finishes, and slip-resistant finishes; however, the coating may not obscure the top or bottom wood surfaces.
- Scaffold components manufactured by different manufacturers may not be intermixed unless the components fit together without force and the scaffold's structural integrity is maintained by the user. Scaffold components manufactured by different manufacturers are not allowed to be modified in order to inter-mix them unless a competent person determines the resulting scaffold is structurally sound.
- Scaffold components made of dissimilar metals may not be used together unless a competent person has determined that galvanic action will not reduce the strength of any component in accordance with OSHA scaffold standards (see Attachment A of this document).

#### SUPPORTED SCAFFOLDS

- Supported scaffolds with a height to base width (including outrigger supports, if used) ratio of more than four to one (4:1) must be restrained from tipping by guying, tying, bracing, or equivalent means, as follows:

- Guys, ties, and braces shall be installed at locations where horizontal members support both inner and outer legs.
- Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 feet (6.1 m) or less thereafter for scaffolds 3 feet (0.91 m) wide or less, and every 26 feet (7.9 m) or less thereafter for scaffolds greater than 3 feet (0.91 m) wide.
- The top guy, tie or brace of completed scaffolds must be placed no further than the 4:1 height from the top. Such guys, ties and braces should be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet (9.1 m) (measured from one end [not both] towards the other).
- Ties, guys, braces, or outriggers have to be used to prevent the tipping of supported scaffolds in all circumstances where an eccentric load, such as a cantilevered work platform, is applied or is transmitted to the scaffold.
- Supported scaffold poles, legs, posts, frames, and uprights must bear on base plates and mud sills or other adequate firm foundation.
- Footings are to be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
- Unstable objects may not be used to support scaffolds or platform units, nor used as working platforms.
- Front-end loaders and similar pieces of equipment may not be used to support scaffold platforms unless they have been specifically designed by the manufacturer for such use.
- Fork-lifts may not be used to support scaffold platforms unless the entire platform is attached to the fork and the fork-lift is not moved horizontally while the platform is occupied.
- Supported scaffold poles, legs, posts, frames, and uprights must be plumb and braced to prevent swaying and displacement.

#### SUSPENSION SCAFFOLDS

- All suspension scaffold support devices, such as outrigger beams, cornice hooks, parapet clamps, and similar devices, must rest on surfaces capable of supporting at least 4 times the load imposed on them by the scaffold operating at the rated load of the hoist (or at least 1.5 times the load imposed on them by the scaffold at the stall capacity of the hoist, whichever is greater).
- Suspension scaffold outrigger beams, when used, may only be made of structural metal or equivalent strength material, and must be restrained to prevent movement.
- The inboard ends of suspension scaffold outrigger beams are to be stabilized by bolts or other direct connections to the floor or roof deck, or must have their inboard ends stabilized by counterweights.
- Masons' multi-point adjustable suspension scaffold outrigger beams may not be stabilized by counterweights.
- Before the scaffold is used, direct connections has to be evaluated by a competent person who is to confirm, based on the evaluation, that the supporting surfaces are capable of supporting

the loads to be imposed. In addition, masons' multi-point adjustable suspension scaffold connections must be designed by an engineer experienced in such scaffold design.

- Counterweights
  - Counterweights are only to be made of non-flowable material. Sand, gravel and similar materials that can be easily dislocated may not be used as counterweights.
  - Only those items specifically designed as counterweights may be used to counterweight scaffold systems. Construction materials such as, but not limited to, masonry units and rolls of roofing felt, are not be used as counterweights.
  - Counterweights must be secured by mechanical means to the outrigger beams to prevent accidental displacement.
  - Counterweights shall not be removed from an outrigger beam until the scaffold is disassembled.
  - Outrigger beams which are not stabilized by bolts or other direct connections to the floor or roof deck must be secured by tiebacks.
  - Tiebacks have to be equivalent in strength to the suspension ropes.
  - Outrigger beams are to be placed perpendicular to its bearing support (usually the face of the building or structure). However, where the employer can demonstrate that it is not possible to place an outrigger beam perpendicular to the face of the building or structure because of obstructions that cannot be moved, the outrigger beam may be placed at some other angle, provided opposing angle tiebacks are used.
  - Tiebacks should be secured to a structurally sound anchorage on the building or structure. Sound anchorages include structural members, but do not include standpipes, vents, other piping systems, or electrical conduit.
  - Tiebacks must be installed perpendicular to the face of the building or structure, or opposing angle tiebacks shall be installed. Single tiebacks installed at an angle are prohibited.
- Suspension scaffold outrigger beams must be equipped with and conform to the following.
  - Stop bolts or shackles at both ends
  - Securely fastened together with the flanges turned out when channel iron beams are used in place of I-beams
  - Installed with all bearing supports perpendicular to the beam center line
  - Set and maintained with the web in a vertical position; and
  - When an outrigger beam is used, the shackle or clevis with which the rope is attached to the outrigger beam shall be placed directly over the center line of the stirrup.
- Suspension scaffold support devices such as cornice hooks, roof hooks, roof irons, parapet clamps, or similar devices shall be the following.
  - Made of steel, wrought iron, or materials of equivalent strength
  - Supported by bearing blocks; and
  - Secured against movement by tiebacks installed at right angles to the face of the building or structure, or opposing angle tiebacks shall be installed and secured to a structurally sound point of anchorage on the building or structure. Sound points of

anchorage include structural members, but do not include standpipes, vents, other piping systems, or electrical conduit.

- Tiebacks should be equivalent in strength to the hoisting rope.
- When winding drum hoists are used on a suspension scaffold, they have to contain not less than four wraps of the suspension rope at the lowest point of scaffold travel. When other types of hoists are used, the suspension ropes are to be long enough to allow the scaffold to be lowered to the level below without the rope end passing through the hoist, or the rope end configured or provided with means to prevent the end from passing through the hoist.
- The use of repaired wire rope as suspension rope is prohibited.
- Wire suspension ropes may not be joined together except through the use of eye splice thimbles connected with shackles or cover plates and bolts.
- The load end of wire suspension ropes must be equipped with proper size thimbles and secured by eye splicing or equivalent means.
- Ropes are to be inspected for defects by a competent person prior to each shift and after every occurrence which could affect a rope's integrity.
- Replacement of Ropes - Ropes must be replaced if any of the following conditions exist:
  - Any physical damage which impairs the function and strength of the rope.
  - Kinks that might impair the tracking or wrapping of rope around the drum(s) or sheave(s).
  - Six randomly distributed broken wires in one rope lay or three broken wires in one strand in one rope lay.
  - Abrasion, corrosion, scrubbing, flattening or peening causing loss of more than one-third of the original diameter of the outside wires.
  - Heat damage caused by a torch or any damage caused by contact with electrical wires.
  - Evidence that the secondary brake has been activated during an over-speed condition and has engaged the suspension rope.
- Swaged attachments or spliced eyes on wire suspension ropes may not be used unless they are made by the wire rope manufacturer or a qualified person.
- The following applies to wire rope clips are used on suspension scaffolds:
  - There shall be a minimum of 3 wire rope clips installed, with the clips a minimum of 6 rope diameters apart
  - Clips are to be installed according to the manufacturer's recommendations
  - Clips must be retightened to the manufacturer's recommendations after the initial loading
    - Clips are required to be inspected and retightened to the manufacturer's recommendations at the start of each shift thereafter
    - U-bolt clips shall not be used at the point of suspension for any scaffold hoist
    - When U-bolt clips are used, the U-bolt shall be placed over the dead end of the rope, and the saddle shall be placed over the live end of the rope
- Suspension scaffold power-operated hoists and manual hoists must be tested by a qualified testing laboratory.

- Gasoline-powered equipment and hoists may not be used on suspension scaffolds.
- Gears and brakes of power-operated hoists used on suspension scaffolds must be enclosed.
- In addition to the normal operating brake, suspension scaffold power-operated hoists and manually operated hoists have to have a braking device or locking pawl which engages automatically when a hoist makes an instantaneous change in momentum or an accelerated over-speed.
- Manually operated hoists must have a positive crank force to descend.
- Two-point and multi-point suspension scaffolds must be tied or otherwise secured to prevent them from swaying, as determined to be necessary based on an evaluation by a competent person. Window cleaners' anchors may not be used for this purpose.
- Devices whose sole function is to provide emergency escape and rescue shall not be used as working platforms. This provision does not preclude the use of systems which are designed to function both as suspension scaffolds and emergency systems.

## ACCESS

- When scaffold platforms are more than 2 feet (0.6 m) above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stair towers (scaffold stairways/towers), stairway-type ladders (such as ladder stands), ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist, or similar surface have to be used.
- Cross braces may not be used as a means of access.
- Portable, hook-on, and attachable ladders must meet the following criteria.
  - They must be positioned so as not to tip the scaffold and should be positioned so that their bottom rung is not more than 24 inches (61 cm) above the scaffold supporting level;
  - When hook-on and attachable ladders are used on a supported scaffold more than 35 feet (10.7 m) high, they have to have rest platforms at 35-foot (10.7 m) maximum vertical intervals.
  - Hook-on and attachable ladders must be specifically designed for use with the type of scaffold used; have a minimum rung length of 11 1/2 inches (29 cm); and have uniformly spaced rungs with a maximum spacing between rungs of 16 3/4 inches.
- Stairway-type ladders must be positioned such that their bottom step is not more than 24 inches (61 cm) above the scaffold supporting level provided with rest platforms at 12 foot (3.7 m) maximum vertical intervals; have a minimum step width of 16 inches (41 cm), except that mobile scaffold stairway-type ladders have to have a minimum step width of 11 1/2 inches (30 cm); and have slip-resistant treads on all steps and landings.
- Stair towers (scaffold stairway/towers) are to be positioned such that their bottom step is not more than 24 inches (61 cm.) above the scaffold supporting level.
- A railing consisting of a top rail and a mid-rail must be provided on each side of each scaffold stairway.

- The top rail of each stair rail system must also be capable of serving as a handrail, unless a separate handrail is provided.
- Handrails, and top rails that serve as handrails, should provide an adequate handhold for employees grasping them to avoid falling.
- Stair rail systems and handrails are to be surfaced to prevent injury to employees from punctures or lacerations, and to prevent snagging of clothing and the ends constructed so that they do not constitute a projection hazard.
- Handrails, and top rails that are used as handrails, must be at least 3 inches (7.6 cm) from other objects.
- Stair rails may be not less than 28 inches (71 cm), nor more than 37 inches (94 cm) from the upper surface of the stair rail to the surface of the tread, in line with the face of the riser at the forward edge of the tread.
- A landing platform at least 18 inches (45.7 cm) wide by at least 18 inches (45.7 cm) long must be provided at each level.
- Each scaffold stairway has to be at least 18 inches (45.7 cm) wide between stair rails.
- Treads and landings are to have slip-resistant surfaces.
- Stairways must be installed between 40 degrees and 60 degrees from the horizontal.
- Guardrails meeting the requirements of paragraph (g)(4) of this section shall be provided on the open sides and ends of each landing.
- Riser height should be uniform, within 1/4 inch, (0.6 cm) for each flight of stairs. Greater variations in riser height are allowed for the top and bottom steps of the entire system, not for each flight of stairs.
- Tread depth must be uniform, within 1/4 inch, for each flight of stairs.
- Ramps and walkways.
  - Ramps and walkways 6 feet (1.8 m) or more above lower levels must have guardrail systems which comply with the OSHA Fall Protection standards
  - No ramp or walkway is allowed to be inclined more than a slope of one (1) vertical to three (3) horizontal (20 degrees above the horizontal).
  - If the slope of a ramp or a walkway is steeper than one (1) vertical in eight (8) horizontal, the ramp or walkway shall have cleats not more than fourteen (14) inches (35 cm) apart which are securely fastened to the planks to provide footing.
- Integral prefabricated scaffold access frames must:
  - Be specifically designed and constructed for use as ladder rungs
  - Have a rung length of at least 8 inches (20 cm)
  - Not be used as work platforms when rungs are less than 11 1/2 inches in length, unless each affected employee uses fall protection, or a positioning device, which complies with 1926.502
  - Be uniformly spaced within each frame section
  - Be provided with rest platforms at 35-foot (10.7 m) maximum vertical intervals on all supported scaffolds more than 35 feet (10.7 m) high

- Have a maximum spacing between rungs of 16 3/4 inches (43 cm). Non-uniform rung spacing caused by joining end frames together is allowed, provided the resulting spacing does not exceed 16 3/4 inches (43 cm)
- Steps and rungs of ladder and stairway type access have to line up vertically with each other between rest platforms.
- Direct access to or from another surface may be used only when the scaffold is not more than 14 inches (36 cm) horizontally and not more than 24 inches (61 cm) vertically from the other surface.
- Access for employees erecting or dismantling supported scaffolds should be in accordance with the following:

USE

- Scaffolds and scaffold components may not be loaded in excess of their maximum intended loads or rated capacities, whichever is less
- The use of shore or lean-to scaffolds is prohibited.
- Scaffolds and scaffold components must be inspected for visible defects by a competent person before each work shift and after any occurrence which could affect a scaffold's structural integrity.
- Any part of a scaffold damaged or weakened such that its strength is less than that required by paragraph (a) of this section has to be immediately repaired or replaced, braced to meet those provisions, or tagged and removed from service until repaired.
- Scaffolds may not be moved horizontally while employees are on them, unless they have been designed by a registered professional engineer specifically for such movement or, for mobile scaffolds, where the provisions of applicable OSHA standards are followed.
- The clearance between scaffolds and power lines must be as follows: Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as detailed in the table below.

*Insulated Lines		
Voltage	Minimum distance	Alternatives
0-300 volts	3 feet (0.9 m)	
300 volts to 50 kV.	10 feet (3.1 m)	
More than 50 kV	10 feet (3.1 m) plus 0.4 inches (1.0 cm) for each 1 kV over 50 kV	Two times the length of the line insulator, but never less than 10 feet.
*Un-insulated Lines		
Voltage	Minimum distance	Alternatives
0-50 kV	10 feet (3.1 m)	
More than 50 kV	10 feet (3.1 m) plus 0.4 inches (1.0 cm) for each 1 kV over 50 kV	Two times the length of the line insulator, but never less than 10 feet.



- **Exception:** Scaffolds and materials may be closer to power lines than specified above where such clearance is necessary for performance of work only after the utility company, or electrical system operator, has been notified of the need to work closer and the utility company, or electrical system operator, has de-energized the lines, relocated the lines, or installed protective coverings to prevent accidental contact with the lines.
  - Scaffolds must be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or alteration. Such activities shall be performed only by experienced and trained employees selected for such work by the competent person.
  - Employees shall be prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of such materials.
  - Where swinging loads are being hoisted onto or near scaffolds such that the loads might contact the scaffold, tag lines or equivalent measures to control the loads are to be used.
  - Suspension ropes supporting adjustable suspension scaffolds is to be of a diameter large enough to provide sufficient surface area for the functioning of brake and hoist mechanisms.
  - Suspension ropes shall be shielded from heat-producing processes. When acids or other corrosive substances are used on a scaffold, the ropes shall be shielded, treated to protect against the corrosive substances, or must be of a material that will not be damaged by the substance being used.
  - Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system or wind screens. Wind screens shall not be used unless the scaffold is secured against the anticipated wind forces imposed.
  - Debris shall not be allowed to accumulate on platforms.
  - Makeshift devices, such as but not limited to boxes and barrels, shall not be used on top of scaffold platforms to increase the working level height of employees.
  - Ladders shall not be used on scaffolds to increase the working level height of employees, except on large area scaffolds where employers have satisfied the following criteria:
    - When the ladder is placed against a structure which is not a part of the scaffold, the scaffold shall be secured against the sideways thrust exerted by the ladder;
    - The platform units shall be secured to the scaffold to prevent their movement;
    - The ladder legs shall be on the same platform or other means shall be provided to stabilize the ladder against unequal platform deflection, and
    - The ladder legs shall be secured to prevent them from slipping or being pushed off the platform.
  - Platforms are not allowed to deflect more than 1/60 of the span when loaded.

- To reduce the possibility of welding current arcing through the suspension wire rope when performing welding from suspended scaffolds, the following precautions are to be taken, as applicable:
  - Use an insulated thimble to attach each suspension wire rope to its hanging support (such as cornice hook or outrigger). Excess suspension wire rope and any additional independent lines from grounding must be insulated;
  - Cover the suspension wire rope with insulating material extending at least 4 feet (1.2 m) above the hoist. If there is a tail line below the hoist, insulate it to prevent contact with the platform. The portion of the tail line that hangs free below the scaffold must be guided or retained, or both, so that it does not become grounded;
  - Cover all hoists with insulated protective covers;
  - In addition to a work lead attachment required by the welding process, a grounding conductor has to be connected from the scaffold to the structure. The size of this conductor must be at least the size of the welding process work lead, and may not be in series with the welding process or the work piece;
  - If the scaffold grounding lead is disconnected at any time, the welding machine must be shut off
  - An active welding rod or un-insulated welding lead may not be in contact the scaffold or its suspension system.

## FALL PROTECTION

Each employee on a scaffold more than 10 feet (3.1 m) above a lower level must be protected from falling to that lower level. The paragraphs below provide details on the types of fall protection that OSHA requires for each type of scaffold. Paragraph (g)(2) of this section addresses fall protection for scaffold erectors and dismantlers.

Note: The fall protection requirements for employees installing suspension scaffold support systems on floors, roofs, and other elevated surfaces are set forth in subpart M of the OSHA standards.

- Types of fall protection to be provided to the employees for each type of scaffold
  - Boatswains' chair, catenary scaffold, float scaffold, needle beam scaffold, or ladder jack scaffold - personal fall arrest system
  - Single-point or two-point adjustable suspension scaffold – (1) personal fall arrest system and (2) guardrail system
  - Crawling board (chicken ladder) – (1) personal fall arrest system, (2) guardrail system (with minimum 200 pound top rail capacity), or (3) three-fourth inch (1.9 cm) diameter grab-line or equivalent handhold securely fastened beside each crawling board
  - Self-contained adjustable scaffold – (1) guardrail system (with minimum 200 pound top rail capacity) when the platform is supported by the frame structure, and (2) by both a personal fall arrest system and (3) a guardrail system (with minimum 200 pound top rail capacity) when the platform is supported by ropes

- Walkway located within a scaffold (1) guardrail system (with minimum 200 pound top rail capacity) installed within 9 1/2 inches (24.1 cm) of and (2) along at least one side of the walkway
- Overhand bricklaying operations from a supported scaffold - protection from falling from all open sides and ends of the scaffold (except at the side next to the wall being laid) by the use of a personal fall arrest system or guardrail system (with minimum 200 pound top rail capacity)
- For all scaffolds not otherwise specified above – (1) personal fall arrest systems or (2) guardrail systems meeting the requirements of the OSHA scaffold standards.
- A competent person must determine the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds. Employers are required to provide fall protection for employees erecting or dismantling supported scaffolds where the installation and use of such protection is feasible and does not create a greater hazard.
- Personal fall arrest systems used on scaffolds must be attached by lanyard to a vertical lifeline, horizontal lifeline, or scaffold structural member.
- Vertical Lifelines –
  - Vertical lifelines may not be used when overhead components, such as overhead protection or additional platform levels, are part of a single-point or two-point adjustable suspension scaffold.
  - When vertical lifelines are used, they should be fastened to a fixed safe point of anchorage, independent of the scaffold, and protected from sharp edges and abrasion. Safe points of anchorage include structural members of buildings, but do not include standpipes, vents, other piping systems, electrical conduit, outrigger beams, or counterweights.
- Horizontal Lifelines – When horizontal lifelines are used, they must be secured to two or more structural members of the scaffold, or they may be looped around both suspension and independent suspension lines (on scaffolds so equipped) above the hoist and brake attached to the end of the scaffold.
  - They may not be attached only to the suspension ropes.
- Independent Support Lines – When lanyards are connected to horizontal lifelines or structural members on a single-point or two-point adjustable suspension scaffold, the scaffold must be equipped with additional independent support lines and automatic locking devices capable of stopping the fall of the scaffold in the event one or both of the suspension ropes fail. The independent support lines shall be equal in number and strength to the suspension ropes.
- Vertical lifelines, independent support lines, and suspension ropes may not be attached to each other, nor attached to or use the same point of anchorage, nor attached to the same point on the scaffold or personal fall arrest system.
- Guardrail Systems - Guardrail systems built in accordance with Appendix A of the OSHA Scaffold Standard (see Attachment A of this program document) are deemed to meet the requirements of paragraphs (g)(4)(vii), (viii), and (ix) of the standards:
  - Guardrail systems are to be installed along all open sides and ends of platforms.

- Guardrail systems shall be installed before the scaffold is released for use by employees other than erection/dismantling crews.
- The top edge height of top-rails or equivalent member on supported scaffolds must be installed between 38 inches (0.97 m) and 45 inches (1.2 m) above the platform surface.
- The top edge height on older (pre-2001) supported scaffolds and on all suspended scaffolds where both a guardrail and a personal fall arrest system are required shall be between 36 inches (0.9 m) and 45 inches (1.2 m). When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria of paragraph (g)(4).
- When mid-rails, screens, mesh, intermediate vertical members, solid panels, or equivalent structural members are used, they shall be installed between the top edge of the guardrail system and the scaffold platform.
- When mid-rails are used, they shall be installed at a height approximately midway between the top edge of the guardrail system and the platform surface.
- When screens and mesh are used, they shall extend from the top edge of the guardrail system to the scaffold platform, and along the entire opening between the supports.
- When intermediate members (such as balusters or additional rails) are used, they shall not be more than 19 inches (48 cm) apart.
- Each top rail or equivalent member of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along its top edge of at least 100 pounds (445 n) for guardrail systems installed on single-point adjustable suspension scaffolds or two-point adjustable suspension scaffolds, and at least 200 pounds (890 n) for guardrail systems installed on all other scaffolds.
- When the loads specified in paragraph (g)(4)(vii) of this section are applied in a downward direction, the top edge shall not drop below the height above the platform surface that is prescribed in paragraph (g)(4)(ii) of this section.
- Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along the midrail or other member of at least 75 pounds (333 n) for guardrail systems with a minimum 100 pound top rail capacity, and at least 150 pounds (666 n) for guardrail systems with a minimum 200 pound top rail capacity.
- Suspension scaffold hoists and non-walk-through stirrups may be used as end guardrails, if the space between the hoist or stirrup and the side guardrail or structure does not allow passage of an employee to the end of the scaffold.
- Guardrails shall be surfaced to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
- The ends of all rails shall not overhang the terminal posts except when such overhang does not constitute a projection hazard to employees.
- Steel or plastic banding shall not be used as a top rail or midrail.

- Manila or plastic (or other synthetic) rope being used for top rails or midrails shall be inspected by a competent person as frequently as necessary to ensure that it continues to meet the strength requirements of paragraph (g) of this section.
- Crossbracing is acceptable in place of a midrail when the crossing point of two braces is between 20 inches (0.5 m) and 30 inches (0.8 m) above the work platform or as a top rail when the crossing point of two braces is between 38 inches (0.97 m) and 48 inches (1.3 m) above the work platform. The end points at each upright shall be no more than 48 inches (1.3 m) apart.

#### FALLING OBJECT PROTECTION

- In addition to wearing hardhats, each employee on a scaffold must be provided with additional protection from falling hand tools, debris, and other small objects through the installation of toeboards, screens, or guardrail systems, or through the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects.
- When the falling objects are too large, heavy or massive to be contained or deflected by any of the above-listed measures, such potential falling objects must be placed away from the edge of the surface from which they could fall. Those materials must be secured as necessary to prevent their falling.
- Where there is a danger of tools, materials, or equipment falling from a scaffold and striking employees below, the following provisions apply:
  - The area below the scaffold to which objects can fall must be barricaded, and employees may not be permitted to enter the hazard area; or
  - A toeboard is to be erected along the edge of platforms more than 10 feet (3.1 m) above lower levels for a distance sufficient to protect employees below (Exception: float (ship) scaffolds where an edging of 3/4 x 1 1/2 inch (2 x 4 cm) wood or equivalent may be used in lieu of toeboards)
  - Where tools, materials, or equipment are piled to a height higher than the top edge of the toeboard: (1) paneling or screening extending from the toeboard or platform to the top of the guardrail should be erected for a distance sufficient to protect employees below; or (2) a guardrail system must be installed with openings small enough to prevent passage of potential falling objects; or (3) a canopy structure, debris net, or catch platform strong enough to withstand the impact forces of the potential falling objects shall be erected over the employees below.
- Canopies, when used for falling object protection, must meet the following criteria:
  - When canopies are used on suspension scaffolds for falling object protection, the scaffold is to be equipped with additional independent support lines equal in number to the number of points supported, and equivalent in strength to the strength of the suspension ropes.
  - Independent support lines and suspension ropes may not be attached to the same points of anchorage.
  - Canopies must be installed between the falling object hazard and the employees.

- Where used, toeboards shall be:
  - Capable of withstanding, without failure, a force of at least 50 pounds (222 n) applied in any downward or horizontal direction at any point along the toeboard (toeboards built in accordance with Appendix A of the OSHA scaffold standards will be deemed to meet this requirement); and
  - At least three and one-half inches (9 cm) high from the top edge of the toeboard to the level of the walking/working surface. Toeboards shall be securely fastened in place at the outermost edge of the platform and have not more than 1/4 inch (0.7 cm) clearance above the walking/working surface. Toeboards shall be solid or with openings not over one inch (2.5 cm) in the greatest dimension.
- When scaffold platforms are more than 2 feet (0.6 m) above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stair towers (scaffold stairways/towers), stairway-type ladders (such as ladder stands), ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist, or similar surface have to be used.

#### REQUIREMENTS FOR SPECIFIC SCAFFOLDS

In addition to the specifications detailed above, OSHA has specific requirements for certain specific types of scaffolds. Refer to Section 1926.452 of the OSHA Scaffold Standard (in Attachment A of this document) for these requirements. Listed below are the scaffold types with specific requirements under the OSHA scaffold standard.

- |   |   |
|---|---|
| - Pole Scaffolds  | - Suspension Scaffolds  |
| - Plasterers', Decorators', and Large Area Scaffolds  | - Catenary Scaffolds  |
| - Roof Bracket Scaffolds  | - Stilts  |
| - Ladder Jack Scaffolds   | - Multi-Level Suspended Scaffolds                                 |
| - Step, Platform, & Trestle Ladder Scaffolds  | - Needle Beam Scaffolds   |
| - Multi-Point Adjustable Suspension Scaffolds, Stonesetters' Multi-Point Adjustable Suspension Scaffolds, & Masons' Multi-Point Adjustable Suspension Scaffolds | - Repair Bracket Scaffolds  |
| - Mobile Scaffolds (including manlifts & scissor lifts)   | - Fabricated Frame Scaffolds (tubular welded frame scaffolds)     |
| - Tube & Coupler Scaffolds  | - Horse Scaffolds, Form Scaffolds & Carpenters' Bracket Scaffolds |
| - Bricklayers' Square Scaffolds (squares)   | - Pump Jack Scaffolds   |
| - Outrigger Scaffolds   | - Crawling Boards (Chicken Ladders)                               |
| - Window Jack Scaffolds   | - Two-Point Adjustable Suspension Scaffolds (Swing Stages)        |
| - Single-Point Adjustable   | - Float (Ship) Scaffolds  |
|   | - Interior Hung Scaffolds   |

## 1.11 PROTECTION FROM FALLING OBJECTS

When an employee is exposed to falling objects, Penn Fencing will ensure that each employee wears head protection that meets the requirements of 29 CFR 1910, Subpart I. In addition, employees will be protected from falling objects by one or more of the following:

- Erect toe boards, screens, or guardrail systems to prevent objects from falling from higher levels.
- Toeboards used for falling object protection must:
  - Be erected along the exposed edge of the overhead walking-working surface for a length that is sufficient to protect employees below.
  - Have a minimum vertical height of 3.5 inches (9 cm) as measured from the top edge of the toeboard to the level of the walking-working surface.
  - Not have more than a 0.25-inch (0.5-cm) clearance or opening above the walking-working surface.
  - Be solid or do not have any opening that exceeds 1 inch (3 cm) at its greatest dimension.
  - Have a minimum height of 2.5 inches (6 cm) when used around vehicle repair, service, or assembly pits. Toeboards may be omitted around vehicle repair, service, or assembly pits when the employer can demonstrate that a toeboard would prevent access to a vehicle that is over the pit.
  - Be capable of withstanding, without failure, a force of at least 50 pounds (222 N) applied in any downward or outward direction at any point along the toeboard.
- Erect a canopy structure and keep potential fall objects far enough from edge of the higher level so that those objects would not go over the edge if they were accidentally displaced.
- Barricade the area where objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.
- Where tools, equipment, or materials are piled higher than the top of the toeboard, paneling or screening is installed from the toeboard to the midrail of the guardrail system and for a length that is sufficient to protect employees below. If the items are piled higher than the midrail, the employer also must install paneling or screening to the top rail and for a length that is sufficient to protect employees below; and
- All openings in guardrail systems must be small enough to prevent objects from falling through the opening.
- Canopies used for falling object protection must be strong enough to prevent collapse and to prevent penetration by falling objects.

### SLIPS, TRIPS, AND FALLS

- Keep floors clean and dry. In addition to being a slip hazard, continually wet surfaces promote the growth of mold, fungi, and bacteria that can cause infections.
- Provide warning signs for wet floor areas.

- Where wet processes are used, maintain drainage and provide false floors, platforms, mats, or other dry standing places where practicable, or provide appropriate waterproof footwear.
- Keep all places of employment clean and orderly and in a sanitary condition.
- Keep aisles and passageways clear and in good repair, with no obstruction across or in aisles that could create a hazard. Provide floor plugs for equipment, so power cords need not run across pathways.
- Keep exits free from obstruction. Access to exits must remain clear of obstructions at all times.
- Ensure spills are reported and cleaned up immediately.
- Use no-skid waxes and surfaces coated with grit to create non-slip surfaces in slippery areas such as toilet and shower areas.
- Use waterproof footwear to decrease slip/fall hazards.
- Use only properly maintained ladders to reach items. Do not use stools, chairs, or boxes as substitutes for ladders.
- Re-lay or stretch carpets that bulge or have become bunched to prevent tripping hazards.
- Aisles and passageways should be sufficiently wide for easy movement and should be kept clear at all times. Temporary electrical cords that cross aisles should be taped or anchored to the floor.
- Eliminate cluttered or obstructed work areas.
- Use prudent housekeeping procedures such as cleaning only one side of a passageway at a time, and provide good lighting for all halls and stairwells, to help reduce accidents.
- Provide adequate lighting especially during night hours. You can use flashlights or low-level lighting when entering patient rooms.
- Instruct workers to use the handrail on stairs, to avoid undue speed, and to maintain an unobstructed view of the stairs ahead of them even if that means requesting help to manage a bulky load.
- Eliminate uneven floor surfaces.
- Promote safe work in cramped working spaces. Avoid awkward positions, and use equipment that makes lifts less awkward.

## **1.12 TRAINING**

Each employee who may be exposed to fall hazards will be trained, including each employee who uses personal fall protection systems or who is required to be trained as outlined in 29 CFR 1910 Subpart D. This plan enables each employee to recognize fall hazards. Employees will be trained in the procedures to be followed in order to minimize these hazards.

### TRAINING CURRICULUM

Each employee is trained, as necessary, by the Program Administrator or their qualified designate, covering the following topics, at minimum:



- Fall Hazards:
  - The nature of fall hazards in the work area and how to recognize them
  - The procedures to be followed to minimize those hazards
  - The correct procedures for installing, inspecting, operating, maintaining, and disassembling the personal fall protection systems that are used
  - The correct use of personal fall protection systems and equipment, including, but not limited to, proper hook-up, anchoring, and tie-off techniques, and methods of equipment inspection and storage, as specified by the manufacturer.
  - Prevention and avoidance of slip/trip/fall hazards
  - General ladder requirements including inspection, erecting, and securement.
- Equipment Hazards:
  - proper care, inspection, storage, and use of equipment covered by this subpart before an employee uses the equipment
  - Each employee who uses a dockboard must be trained to properly place and secure it to prevent unintentional movement.
  - Each employee who uses a rope descent system must be trained in proper rigging and use of the equipment in accordance with § 1910.27.
  - Each employee who uses a designated area must be trained in the proper set-up and use of the area.

#### CERTIFICATION OF TRAINING

Management verifies compliance with the training requirements via the Training Log in Attachment F. Management shall maintain a record of the latest training certification for each employee, and that record shall contain:

- The name, and identification number of person being trained
- Signature of person being trained
- The date(s) of the training
- Identification of person conducting training (i.e., Program Administrator)

#### RETRAINING

Documented refresher training will be annually and more frequently when Penn Fencing has reason to believe the employee does not have the understanding and skill outlined above. In addition, training will be provided and documented under the following circumstances:

- When changes to the workplace render previous training obsolete;
- When changes in the types of fall protection systems or equipment to be used render previous training obsolete or inadequate; or
- When inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee no longer has the requisite understanding or skill necessary to use equipment or perform the job safely.

- Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill

### **1.13 ENFORCEMENT**

Constant awareness of and respect for fall hazards and compliance with this plan (and all company safety rules) are considered conditions of employment. Management reserves the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this plan.

### **1.14 ACCIDENT INVESTIGATION REPORTING AND ANALYSIS**

All fall-related incidents shall be documented using the Accident Investigation Report (Attachment C). Each incident will be subsequently investigated using this form. Management shall review each form and provide feedback regarding necessary corrective action. All incidents falling under the parameters of this plan are analyzed at least annually to determine trends and recurring problems and the need for further control measures.

### **1.15 FALL PROTECTION PLAN AUDIT**

An annual management audit of Penn Fencing's fall protection plan is conducted in order to evaluate the plan's effectiveness and the need for revision and upgrade.

The Fall Protection Plan Audit form (Attachment E) may be used to evaluate the input of the Program Administrator and other representatives of supervision, along with feedback from the employees. This information will be used to gauge the effectiveness of the plan and incorporate the necessary improvements.

---

**ATTACHMENT A: OSHA STANDARDS COVERING  
WALKING-WORKING SURFACES**

- 29 CFR 1910 Subpart D
- 29 CFR 1926 Subpart L (Scaffolding)

---

# ATTACHMENT B: INSPECTION CHECKLISTS

- Walking/Working Surfaces
- Fall Arrest Harness

## Walking-Working Surfaces Inspection Checklist

General Work Environment	Comments
Is a documented, functioning housekeeping program in place?	
Are all worksites clean, sanitary, and orderly?	
Are working surfaces kept dry, or is appropriate means taken to assure the surfaces are slip-resistant?	
Are all spilled hazardous materials or liquids, including blood and other potentially infectious materials, cleaned up immediately and according to proper procedures?	
Is combustible scrap, debris and waste stored safely and removed from the worksite properly?	
Is all regulated waste, as defined in the OSHA bloodborne pathogens standard (1910.1030), discarded according to federal, state, and local regulations?	
Are accumulations of combustible dust routinely removed from elevated surfaces including the overhead structure of buildings, etc.?	
Is combustible dust cleaned up with a vacuum system to prevent the dust from going into suspension?	
Is metallic or conductive dust prevented from entering or accumulating on or around electrical enclosures or equipment?	
Are covered metal waste cans used for oily and paint-soaked waste?	

Walkways	Comments
Are aisles and passageways kept clear?	
Are aisles and walkways marked as appropriate?	
Are wet surfaces covered with non-slip materials?	
Are holes in the floor, sidewalk or other walking surface repaired properly, covered or otherwise made safe?	
Is there safe clearance for walking in aisles where motorized or mechanical handling equipment is operating?	
Are materials or equipment stored in such a way that sharp projecting objects will not interfere with the walkway?	
Are spilled materials cleaned up immediately?	
Are changes of direction or elevation readily identifiable?	
Are aisles or walkways that pass near moving or operating machinery, welding operations or similar operations arranged so employees will not be subjected to potential hazards?	
Is adequate headroom provided for the entire length of any aisle or walkway?	
Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground?	
Are bridges provided over conveyors and similar hazards?	

<b>Floor and Wall Openings</b>	<b>Comments</b>
Are floor openings guarded by a cover, a guardrail, or equivalent on all sides (except at entrance to stairways or ladders)?	
Are toeboards installed around the edges of permanent floor openings (where persons may pass below the opening)?	
Are skylight screens of such construction and mounting that they will withstand a load of at least 200 pounds?	
Is the glass in the windows, doors, glass walls, etc., which are subject to human impact, of sufficient thickness and type for the condition of use?	
Are grates or similar type covers over floor openings such as floor drains of such design that foot traffic or rolling equipment will not be affected by the grate spacing?	
Are unused portions of service pits and pits not actually in use either covered or protected by guardrails or equivalent?	
Are manhole covers, trench covers and similar covers, plus their supports designed to carry a truck rear axle load of at least 20,000 pounds when located in roadways and subject to vehicle traffic?	
Are floor or wall openings in fire resistive construction provided with doors or covers compatible with the fire rating of the structure and provided with a self-closing feature when appropriate?	

<b>Stairs and Stairways</b>	<b>Comments</b>
Are standard stair rails or handrails on all stairways having four or more risers?	
Are all stairways at least 22 inches wide?	
Do stairs have landing platforms not less than 30 inches in the direction of travel and extend 22 inches in width at every 12 feet or less of vertical rise?	
Do stairs angle no more than 50 and no less than 30 degrees?	
Are step risers on stairs uniform from top to bottom?	
Are steps on stairs and stairways designed or provided with a surface that renders them slip resistant?	
Are stairway handrails located between 30 and 34 inches above the leading edge of stair treads?	
Do stairway handrails have at least 3 inches of clearance between the handrails and the wall or surface they are mounted on?	
Where doors or gates open directly on a stairway, is there a platform provided so the swing of the door does not reduce the width of the platform to less than 21 inches?	
Where stairs or stairways exit directly into any area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?	
Do stairway landings have a dimension measured in the direction of travel, at least equal to the width of the stairway?	

Elevated Surfaces	Comments
Are signs posted, when appropriate, showing the elevated surface load capacity?	
Are surfaces elevated more than 30 inches above the floor or ground provided with standard guardrails?	
Are all elevated surfaces (beneath which people or machinery could be exposed to falling objects) provided with standard 4-inch toeboards?	
Is a permanent means of access and egress provided to elevated storage and work surfaces?	
Is required headroom provided where necessary?	
Is material on elevated surfaces piled, stacked or racked in a manner to prevent it from tipping, falling, collapsing, rolling or spreading?	
Are dock boards or bridge plates used when transferring materials between docks and trucks or rail cars?	

# Fall Arrest Harness Inspection Report

Department/Location: \_\_\_\_\_

Equipment: \_\_\_\_\_ ID No.: \_\_\_\_\_

<u>Item</u>	<u>Satisfactory</u>	<u>Needs Action</u>	<u>Follow Up</u>
1. Harness Inspection (Belts and Rings)			
2. Harness Inspection (Buckles and 3. D-Ring)			
4. Harness Inspection (Tongue Buckle)			
5. Harness Inspection (Friction Buckle)			
6. Lanyard Inspection (Snaps)			
7. Lanyard Inspection (Thimbles)			
8. Steel Lanyard			
9. Web Lanyard			
10. Rope Lanyard			
11. Shock Absorbing Packs			

Please provide additional comments/recommendations below for all items noted in the "Needs Action" column. Document completion of recommendations and/or "Needs Action" items in "Follow Up" column.

Comments/Recommendations: \_\_\_\_\_

\_\_\_\_\_

Inspected By: \_\_\_\_\_

Date: \_\_\_\_\_

Reviewed By: \_\_\_\_\_

Date: \_\_\_\_\_



---

**ATTACHMENT C:      FALL PROTECTION ACCIDENT  
INVESTIGATION REPORT**

## Fall Protection Accident Investigation Report

Location: \_\_\_\_\_

Injured: \_\_\_\_\_ Age: \_\_\_\_\_

Department: \_\_\_\_\_

Date of Accident: \_\_\_\_\_ Time: \_\_\_\_\_ AM/PM

Nature of Injury/Illness/Property Damage: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Medical treatment By: \_\_\_\_\_

Location of Treatment: \_\_\_\_\_

Description of Accident: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contributing Factors: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Loss Severity Potential: High/Major: \_\_\_\_\_ Med./Serious \_\_\_\_\_ Low/Minor: \_\_\_\_\_

Probable Reoccurrence Rate: Frequent: \_\_\_\_\_ Occasional \_\_\_\_\_ Rare: \_\_\_\_\_

Actions Taken to Prevent Reoccurrence: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Foreman (Print): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Investigated By: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

---

**ATTACHMENT D:      FALL PROTECTION SAFETY  
MEETING REPORT**



---

ATTACHMENT E: FALL PROTECTION SAFETY AUDIT  
CHECKLIST

## Fall Protection Plan Safety Audit Checklist

Location: \_\_\_\_\_

Instructions: Support each "unsatisfactory" component with appropriate plan for corrective action in "Comments" section. Insert "N/A" for any aspect which does not apply.

<b>PROGRAM COMPONENTS</b>	Satisfactory	Unsatisfactory
Statement of Company Policy	_____	_____
<b>Fall Protection Systems</b>		
Management Responsibility	_____	_____
Walking/Working Surfaces	_____	_____
Protection from Falling Objects	_____	_____
Criteria and Practices	_____	_____
Guardrail System	_____	_____
Safety Net Systems	_____	_____
Personal Fall Arrest Systems	_____	_____
Positioning Device Systems	_____	_____
Warning Line Systems	_____	_____
Controlled Access Zones	_____	_____
Safety Monitoring Systems	_____	_____
Covers	_____	_____
Training Requirements	_____	_____
Training Curriculum	_____	_____
Certification of Training	_____	_____
Retraining	_____	_____
Interim Training	_____	_____
Program Enforcement	_____	_____
Accident Investigation, Reporting and Analysis	_____	_____
Fall Protection Plan Audit	_____	_____

COMMENTS/CORRECTIVE ACTION:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

AUDITED BY: (PRINT) \_\_\_\_\_ TITLE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

---

ATTACHMENT F: TRAINING DOCUMENTATION

## OSHA's Employee Responsibilities

- Read the OSHA Poster at the workplace.
- Comply with all applicable OSHA standards.
- Follow all lawful employer safety and health rules and regulations and wear or use prescribed protective equipment while working.
- Report hazardous conditions to the supervisor.
- Report any work-related injury or illness to the employer, and seek treatment promptly.
- Exercise rights under the Act in a responsible manner.



---

ATTACHMENT G: NEW HIRE TRAINING  
DOCUMENTATION

## OSHA's Employee Responsibilities

- Read the OSHA Poster at the workplace.
- Comply with all applicable OSHA standards.
- Follow all lawful employer safety and health rules and regulations and wear or use prescribed protective equipment while working.
- Report hazardous conditions to the supervisor.
- Report any work-related injury or illness to the employer, and seek treatment promptly.
- Exercise rights under the Act in a responsible manner.

## New Hire Training Summary:

*The following items must be reviewed with employees upon hire.*

- Discuss employee roles in this fall protection plan
- Convey company-specific fall safety rules
- The nature of fall hazards in the work area
  - Slips, Trips, & Falls
  - Elevated work surfaces in the workplace (Discuss: Platforms, Wall and Floor Openings, Roofs, Scaffold, Ladders, Man lifts, Other)
- Address appropriate & safe use of ladders
- The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones and other protection to be used
  - Fall protection and/or prevention is required when working 4-feet (if General Industry) or 6-feet (if Construction) above a lower surface.
- The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection
  - Toeboards, when used as falling object protection, must be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below.
  - Guardrail systems, when used as falling object protection, must have all openings small enough to prevent passage of potential falling objects.
  - While performing roof work, materials and equipment must not be stored within 6 feet of a roof edge unless guardrails are erected at the edge.

*Upon completing the review of the above information, have new employees sign the new hire training log on the following page.*

