

Oregon OSHA
Fall Protection
INSTRUCTOR WORKBOOK

Oregon OSHA Fall Protection

Presented by Oregon OSHA **Public Education — our mission:**

We provide knowledge and tools to advance self-sufficiency in workplace safety and health.



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Department of Consumer
and Business Services

Welcome

This workshop aims to introduce a proactive approach to identify fall hazards and protection methods through a planning and implementation process. Oregon OSHA's fall protection requirements for general industry and construction are addressed.

The more you contribute, the more you'll get out of this training. Participate and have fun!

Note

This is an introductory course in fall protection principles and rule requirements. People taking this course should not be considered trained in the use of fall protective equipment, nor considered a competent or qualified person for the purpose of installing a fall protection system without further training and experience in that field. Likewise, everyone must be further trained to use their specific fall protection equipment in strict adherence with the manufacturer's instructions and according to safe work practices.

This material, or other material used to inform employers of compliance requirements of Oregon OSHA standards through simplification of the regulations, should not be considered a substitute for any provisions of the Oregon Safe Employment Act or for any standards issued by Oregon OSHA. **This workbook is intended for classroom training use only.**



Fall protection

Fall hazards are present at nearly every workplace, and many workers are exposed to these hazards daily. Any walking-working surface can be a potential fall hazard, whether a worker can fall to a lower level, or simply fall to the same surface where they are walking.

The importance of fall protection on the job cannot be stressed enough. Nationally, falls are the leading cause of work-related deaths among construction workers. In 2024, 13 fatalities were directly due to falls, slips, or trips on the job, for all industries in Oregon.

From an Oregon OSHA enforcement perspective, the most frequently violated standards cited in construction in recent years addressed worker exposure to fall hazards or fall protection training deficiencies.

Requirements in general industry

There are two primary standards for fall protection in Oregon's general industry workplaces:

1. Oregon OSHA Division 2/Subdivision D [Walking-Working Surfaces] 29 1910.28(b)(1) (i) requires employees to be protected on a walking-working surface when exposed to a fall hazard of 4 feet or more to a lower level.

Walking-working surface means any horizontal or vertical surface on or through which an employee walks, works, or gains access to a work area or workplace location.

Methods of protection outlined in this rule include guardrail systems; safety net systems; or personal fall protection systems, such as personal fall arrest, travel restraint, or positioning system.

2. Oregon OSHA Division 2/Subdivision I, Personal Protective Equipment.



1. Oregon OSHA Division 2/ Subdivision D Walking-Working Surfaces contains:

- Scope and definitions (29 CFR 1910.21)
- General requirements (29 CFR 1910.22 and OAR 437-002-0022, OAR 437-002-0032, and OAR 437-002-0033)
 - Surface conditions
 - Housekeeping
 - Floor loading
 - Access and egress
 - Aisles and passageways
 - Ramps and runways for vehicles
 - Piers and wharves
- Ladders (29 CFR 1910.23 and OAR 437-002-0026)
 - General ladders requirements
 - Portable ladders
 - Fixed ladders
 - Mobile ladder stands and mobile ladder stand platforms
- Step bolts and manhole steps (29 CFR 1910.24)
- Stairways (29 CFR 1910.25)
 - General stairway requirements
 - Standard stairs
 - Spiral stairs
 - Ship stairs
 - Alternating tread-type stairs
- Dockboards (29 CFR 1910.26)
- Scaffolds, rope descent systems, and rope access systems (29 CFR 1910.27 and OAR 437-002-0027)
- Duty to have fall protection and falling object protection (29 CFR 1910.28)
 - When to provide protection from fall hazards
 - Exceptions to providing fall protection
 - Protection from fall hazards
 - Protection from falling objects
- Fall protection and falling object protection – criteria and practices (29 CFR 1910.29)
 - How to construct the fall protection allowed for in 1910.28
 - Guardrail systems designs
 - Safety net systems
 - Designated areas
 - Covers
 - Handrails and stair rail systems
 - Fixed ladder cages and wells
 - Ladder safety systems
 - Personal fall protection systems
 - Protection from falling objects
- Training requirements (29 CFR 1910.30)
 - Fall hazard training
 - Equipment hazard training
 - Retraining

2. Oregon OSHA Division 2/ Subdivision I, Personal Protective Equipment contains:

Oregon rules for fall protection
(OAR 437-002-0134)

- Fall protection while on motor vehicles and rolling stock
- Travel restraint system

Oregon OSHA's general industry "4-foot rule" applies to employees working on a walking-working surface, which is any horizontal or vertical surface on or through which an employee walks, works, or gains access to a work area or workplace location, unless specifically excluded.

Definitions:

Platform

A space for workers, elevated above the surrounding floor or ground, such as a balcony or platform for the operation of machinery and equipment.

Runway

A passageway for workers, elevated above the surrounding floor or ground level, such as a foot walk along shafting or a walkway between buildings.

Wall opening

An opening at least 30 inches high and 18 inches wide; any wall or partition through which persons may fall, such as a yard-arm doorway or chute opening.

Floor opening

All floor openings and holes must be guarded or covered, regardless of fall distance. This applies to a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least 2 inches in its least dimension.

Note: Every skylight floor opening and hole must be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.

Every employee must be protected from falls into or onto dangerous equipment — regardless of height!

Standard stairs having 4 or more risers:

- That are less than 44 inches wide, must have at least one handrail (preferably right-side descending), and stair railing on any open side.
- That are more than 44 inches wide, but less than 88 inches wide, must have one handrail on each side and stair railing on any open side.
- That are more than 88 inches wide must have one handrail on each side; one stair railing on each open side; one intermediate handrail located approximately midway of the width; and stair railing on any open side.

A stair railing is a vertical barrier erected along exposed sides of a stairway with construction similar to a standard railing. A stair railing must have a vertical height no more than 34 inches, nor less than 30 inches, from the upper surface of the top rail to the surface of the tread.

The top rail of a stair rail system may serve as a handrail only when its height is not less than 36 inches and not more than 38 inches as measured at the leading edge of the stair tread to the top surface of the top rail. The top rail of the stair rail system must meet the other handrail requirements.

Other general industry standards that include specific provisions for fall protection and/or personal fall arrest systems, and falling object protection include:

Oregon OSHA Division 2/Subdivision F

Powered platforms for building maintenance: 29 CFR 1910.66

Vehicle-mounted elevating and rotating work platforms: 29 CFR 1910.67

Manlifts (A manlift is a device consisting of a power-driven endless belt moving in one direction only, and provided with steps or platforms and handholds attached to it for the transportation of personnel from floor to floor): 29 CFR 1910.68

Oregon OSHA Division 2/Subdivision N

Handling materials: 29 CFR 1910.176 and OAR 437-002-0221

Oregon Rules for Vehicles: OAR 437-002-2224 and 2225

Personnel platforms on industrial trucks (forklifts): OAR 437-002-0227(4)

Oregon OSHA Division 2/Subdivision R

Tree and Shrub Services: OAR 437-002-0301 to 0311

Pulp, Paper, and Paperboard Mills: OAR 437-002-0312

Sawmills: 29 CFR 1910.265

Veneer and Plywood Machinery: OAR 437-002-0314

Shake and Shingle Machinery: OAR 437-002-0315

Telecommunications: 29 CFR 1910.268

Grain Handling Facilities: 29 CFR 1910.272

Requirements in construction

Oregon OSHA Division 3/Subdivision M Fall Protection contains:

- Scope, application, and definitions (29 CFR 1926.500)
- Fall Protection (OAR 437-003-1501)

There is one primary standard for fall protection in Oregon's construction industry:

Oregon OSHA Division 3/Subdivision M [Fall Protection] OAR 437-003-1501 requires employers to ensure that fall protection systems are provided, installed, and implemented when employees are exposed to a hazard of falling 6 feet or more to a lower level.

Fall protection must be provided when employees are exposed to the hazard of falling 6 feet or more through holes (including skylights) or wall openings, and from established floors, mezzanines, balconies, and walkways.

Note: All holes regardless of height must be protected.

Fall protection systems must meet the criteria in Oregon OSHA Division 3/Subdivision M 29 CFR 1926.502 Fall Protection Systems Criteria and Practices, which includes:

- Guardrails
- Safety nets
- Personal fall arrest system
- Positioning device system
- Covers
- Falling object protection (including OAR 437-003-2501)
- Personal fall restraint system (OAR 437-003-0502)
- Warning line systems for roofing work (OAR 437-003-1502)
- Safety monitoring systems (OAR 437-003-2502)
- Training requirements (OAR 437-003-0503)
- Nonmandatory guidelines (appendices):
 - Determining roof widths
 - Complying with guardrail systems
 - Complying with personal fall arrest systems
 - Complying with positioning device systems

Did you know?

Falls from elevation account for 1/3 of all deaths in construction.

Oregon OSHA rules apply to the following four: holes, wall openings, established floors, and excavations.

Definitions:

Holes. A hole is defined as a gap or void 2 inches or more in its least dimension, in a floor, roof, or other walking-working surface.

Regardless of height, all employees on a walking-working surface must be protected by covers (or the equivalent) from tripping in or stepping into or through holes (including skylights). Likewise, employees must be protected by covers from objects falling through holes, including skylights.

Note: A smoke dome or skylight fixture is not considered a cover unless it's capable of supporting — without failure — at least twice the weight of employees, equipment, and materials that may be imposed on it at any one time.

Wall openings. These are defined as an opening in a wall or other partition where the outside bottom edge of the wall opening is 6 feet or more above lower levels, and the inside bottom edge of the wall opening is less than 39 inches above the walking-working surface.

All employees working on, at, above, or near wall openings (including those with chutes attached) must be protected from falling.

Established floors. These include mezzanines, balconies, and walkways.

All construction employees working on established floors with an unprotected side or edge 6 feet or more above a lower level must be protected from falling, while nonconstruction employees must be protected at 4 feet or more.

Excavations. These are cavities formed by cutting, digging, or scooping.

All employees at the edge of a well, pit, shaft, or excavation (not apparent due to plant growth or other visual barrier) 6 feet deep or more must be protected from falling.

And ... every employee must be protected from falls into or onto dangerous equipment regardless of height, including:

- Uncapped rebar
- Debris
- Machinery
- Tanks



A stairway or ladder must be provided at all personnel points of access where there is a break in elevation of 19 inches or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.

Stairways having four or more risers or rising more than 30 inches (whichever is less) must be equipped with at least one handrail and one stair railing system along each unprotected side or edge. Winding and spiral stairways must be equipped with a handrail offset sufficiently to prevent walking on those portions of the stairways where the tread width is less than 6 inches.

Stair railings must be not less than 36 inches from the upper surface of the stair railing system to the surface of the tread, in line with the face of the riser at the forward edge of the tread. Stair railings have construction similar to a standard railing (guardrail).

Fall Protection for the following areas is **not** covered in Oregon OSHA Division 3/ Subdivision M because they're covered in other requirements:

- Working on scaffolds — Division 3/ Subdivision L
- Certain cranes and derricks — Division 3/ Subdivision N
- Steel erection activities — Division 3/ Subdivision R
- Certain equipment in tunneling operations — Division 3/Subdivision S
- Working on stairways, ladders — Division 3/ Subdivision X

When there is a hazard of falling objects, each employee must wear a hardhat, plus one of the following measures must be implemented:

- Toeboards, screens, or guardrail systems erected to prevent objects from falling from higher levels

- Canopy structure erected in addition to keeping potential falling objects far enough from the edge
- Barricade the area and prohibit employees from entering the area in addition to keeping potential falling objects far enough from the edge

Planning to prevent falls

One of the most important aspects of fall hazard prevention is planning. An assessment of all existing and predictable fall hazards must be done before appropriate corrective measures are considered. A fall hazard assessment can also determine training needs and fall rescue methods.

Generally, if proper planning isn't done at the onset, time and materials can be wasted and, consequently, unexpected costs will rise. More importantly, fatalities and severe injuries have resulted from not making the time and effort to effectively identify and plan for fall hazards.

A planning process can include these elements:

- Evaluate the worksite
- Identify existing and predictable fall hazards
- Determine who is exposed to fall hazards
- Evaluate the process and needs to complete the task
- Identify what method of fall protection will be used for each hazard identified
- Educate and train all employees

With the above planning elements in mind, use the following step-by-step approach to strive for fall prevention.

Fall protection: An eight-step approach

Step 1: Determine walking-working surfaces are structurally safe

- Can the surfaces safely support all employees and their equipment? What about older buildings? Buildings with wooden roofs?
- During demolition, and before starting work, employees are not allowed access until the employer determines the surfaces are structurally safe.

Step 2: Conduct a fall hazard assessment

Any walking-working surface can create a fall, slip, or trip hazard. In addition, workers at various levels of elevation increase the severity of injury.

Knowing what can immediately contribute to a fall can help in assessing the risk. Common examples include: working near unguarded edges; roofing on a steep pitch; lacking safe access; and walking on a slippery surface. A fall hazard assessment helps identify and evaluate these physical fall hazards. Follow the steps below.

- Determine which specific jobs, activities or areas expose employees to fall hazards
- Determine the type of work performed
- Determine if employees will be exposed to any of the following:
 - Unprotected sides and edges
 - Leading edges
 - Floor holes
 - Wall openings and hoisting areas
 - Slippery surfaces
 - Formwork or reinforcing steel

- Ramps, runways, and other walkways
- Portable ladders and stairways
- Excavations
- Working above dangerous equipment
- Obstructions (materials)
- Overhand bricklaying and related work
- Roofing work (low slope and steep)
- Precast concrete erection
- Aerial lifts
- Scaffolds
- Mechanical equipment
- Points of access
- Falling objects (toeboards)
- Overhead hazards
- Fall protection rescue plan





Answer these questions when assessing:

What is the frequency of work being performed?

Do workers require horizontal and/or vertical movement?

What's the number of workers exposed to a fall hazard (in other trades)?

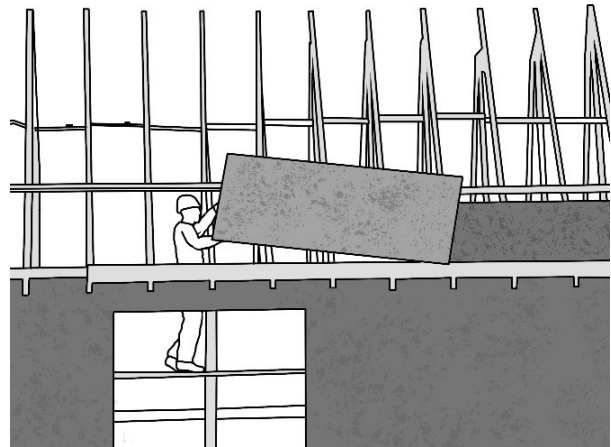
What type of walking-working surface(s) is there?

What is the distance to lower levels?

Is the edge of the building or the working surface protected by a guardrail system or parapet wall? If yes, is it adequate?

Can employees be exposed to other types of health and/or safety hazards?

If yes, how could this affect selection or use of fall protection systems?



What could the hazard be in the above illustration?

Working Surface



What could the hazard be in the above illustration?

Working Surface

The person conducting the assessment should have education and/or relevant experience in recognizing and evaluating all fall hazards. This person should also have practical knowledge and understanding of the fall protection standard (Oregon OSHA Division 3/Subdivision M) and other related fall protection requirements.

A “competent person” is someone capable of identifying existing and predictable hazards in surroundings or working conditions that are hazardous or dangerous to employees, and has authorization to eliminate such conditions through prompt corrective measures.

What qualifications would you consider when determining a competent person?

Brainstorm with class; possible answers include:

- *Knowledge and training relevant to the work or hazard*
- *Experience recognizing and evaluating hazards*
- *Ability to identify existing and predictable dangers*
- *Authority from their employer to correct hazards promptly*

Various sources of information can be included when conducting this hazard assessment, including:

- Employees exposed to the fall hazards
- Affected supervisors and managers
- Previous OSHA 300 and 801 records
- Injury and incident reports
- Safety committee minutes

Involving employees in the assessment is essential for gathering valuable information about where and when fall protection is necessary, and for ideas to prevent fall hazards.

Obtaining employee and supervisors’ input in the hazard assessment will encourage them to take ownership.

Step 3: Eliminate the need for fall protection, if possible

If the hazard assessment indicates the need for fall protection, the next step is to determine if the fall hazard(s) can be eliminated through engineering controls and/or alternative work methods, such as:

- Redesign the process or job task
- Work at lower heights
- Use equipment that prevents fall hazards; platforms that provide built-in fall protection
- Use tool extensions and work from ground level
- Lower equipment and tools to ground level
- Use appropriate aerial lifts
- Design buildings and other walking-working surfaces to eliminate/reduce exposure
- Use equipped contractors

Planning comes first

Eliminate

- Work from ground
- Walls/enclosures
- Covers

Prevent

- Standard guardrails
- Aerial lifts
- Fences/barricades
- Appropriate parapets

Arrest/restraint

- Personal fall arrest systems
- Personal fall restraint systems
- Nets
- Positioning devices

Control

- Safety monitors
- Warning lines
- Controlled decking zones
- Designated areas

Could the exposures in the photos below be prevented? Why or why not?



Yes – by working from the ground, or using positioning devices.

Step 4: Select the appropriate type of fall protection system

Prevention versus protection

Prevention methods are not always available, and in many situations, fall protection is the only feasible option.

If the fall hazards cannot be eliminated, the next approach is to select the appropriate fall protection system.

As the type of system may vary from job to job, each job and activity must be assessed to determine the proper type of fall protection. No single fall protection system provides adequate fall protection for all job activities.

Consider the following factors when selecting fall protection systems:

- The distance to lower levels
- The type of activities requiring fall protection and the specific requirements of each activity
- The specific types of equipment and components needed with each fall protection system
- How much vertical and horizontal movement employees will need to perform each activity
- Environmental conditions (i.e. wind, rain, extreme heat/cold) in which fall protection equipment will be used
- The potential difficulty of using fall protection systems to perform normal and/or non-routine job activities
- The need for anchorage points of suitable design and strength
- The presence of chemical, electrical, and welding hazards
- How employees will recover or be rescued from fallen positions

- The presence of sharp or rough surfaces and edges

Note: The following information reviews common fall protection methods found in both construction and general industries. Warning lines and safety monitoring systems, allowed in construction, are included in the Reference section.

There are two major systems of fall protection:

Passive: Systems designed to provide fall protection without any action by employees:

- Guardrails
 - Toprail at 42 inches (+/- 3 inches) from working surface
 - midrail halfway between toprail and surface
 - Toprail must withstand 200 pounds (midrail 150 pounds)
 - Surfaced to prevent cuts and must not project over posts
 - Chains (top/mid), gate, or removable section across openings at hoisting areas
 - Erected around all sides of a hole
 - More specifics: Division 2/Subdivision D and Division 3/Subdivision M
- Covers
 - Capable of supporting at least two times the weight of employees, equipment, and materials that may be imposed on the cover at any one time (don't forget skylights)
 - Must be secured to prevent accidental displacement by the wind, equipment, or employees
 - Must be color-coded or marked "HOLE" or "COVER"

- Capable of supporting at least two times the maximum axle load of the largest vehicle expected to cross over

- Safety Nets: Division 3/Subdivision M, 29 CFR 1926.502(c)

Active systems: These are divided into three categories:

1. Positioning device system
 - Must prevent a free fall of no more than 2 feet
 - Must be secured to an anchorage capable of supporting at least twice the potential impact load of a fall or 3,000 pounds (whichever is greater)
 - Connectors and connecting components must be according to Division 3/Subdivision M, 29 CFR 1926.502(e)
2. Personal fall restraint system
 - Must be rigged to prevent the user from falling any distance
 - Comprised of a full body harness, anchorage, and connectors (e.g., lanyard, snaphooks), according to Division 3/Subdivision M, 29 CFR 1926.502(d)
 - Anchorages used for attachment must be capable of supporting 3,000 pounds per employee attached, or
 - Be designed, installed, and used as part of a complete personal fall restraint system which maintains a safety factor of at least 2
 - Under the supervision of a qualified person

3. Personal fall arrest system (PFAS)

- Reduces injury sustained in a fall by reducing the distance of the fall and absorbing the arresting forces
- Must limit the maximum arresting force on an employee to 1,800 pounds
- Must be rigged so an employee
 - Does not contact a lower level
 - Limits deceleration distance to 3.5 feet
- Anchorages used for attachment must be:
 - Capable of supporting 5,000 pounds per employee attached, or
 - Be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least 2
 - Under the supervision of a qualified person
- A rescue system must be in place that provides for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.

The ABCs of personal fall arrest systems

Anchorage – Secure point of attachment for lifelines, lanyards, deceleration devices, or self-retracting lanyards.

The anchorage point can be a single attachment to a substantial structure above the surface from which the employee is working, or it can be one to two attachments used to anchor a vertical or horizontal lifeline. For fall arrest systems, the anchorage point must support 5,000 pounds for each worker — or used as part of a complete PFAS with a safety factor of 2 or more **and** with supervision of a qualified person.

Body harness – A full body harness absorbs the impact of a fall on the trunk of the body, which distributes the maximum arresting force (MAF) to a larger area than the safety belt, reducing the potential for bodily damage.

Oregon OSHA Division 3/Subdivision M allows a MAF of 1,800 pounds when using a full body harness. Safety belts are prohibited.

MAF can be reduced through the use of deceleration devices, and by minimizing the free fall distance under the guidance of a qualified person.

A qualified person is someone who has successfully demonstrated an ability to solve or resolve problems relating to the subject matter, work, or project.

This can be through a recognized degree, certificate, professional standing, or by extensive knowledge, training, and experience.

Connectors – These are devices used to connect parts of the PFAS and positioning devices together. These include: lanyards, deceleration devices, lifelines, locking snaphooks, locking carabiners, and D-rings. They are between your harness and anchor.

Lanyards must be made from synthetic material with a minimum breaking strength of 5,000 pounds. They're used to connect the worker's two front D-rings to the anchorage point for fall arrest positioning. It's prohibited to directly connect these to webbing or rope; another snaphook; another carabiner; a horizontal lifeline; or any object that may disengage.

Deceleration devices include rip stitch/tearing lanyards and self-retractable lanyards.

Lifelines are flexible and used to connect to an anchorage point at one end to hang vertically, or at both ends to stretch horizontally. Vertical lifelines must only be used by one person and with a rope grab. Horizontal lifelines can only be used as part of a complete PFAS with a safety factor of at least 2; and when designed, installed, and used under the supervision of a qualified person.

Personal fall arrest systems: The fall

The free fall velocity at impact when falling 12 feet is nearly 20 mph, which is disabling or deadly.

Fill in the blanks:

A **free fall** is defined as the act of falling before a personal fall arrest system (PFAS) begins to apply force to arrest the fall.

While using a PFAS, the fall is referred to as a free fall up until the system **begins** to stop the fall.

Oregon OSHA rules allow no more than a 6-foot free fall distance

When the fall comes to a complete stop, the action is referred to as the fall arrest. Tremendous force is imposed on the body from the fall arrest, known as the arrest force. Forces imposed in a fall greatly depend on the type of system being used, the worker, and the free fall distance.

Example: A 220-pound worker free falls the following distances:

2 feet using a wire rope lanyard (without a deceleration device) = about 3,917 pounds

4 feet using a nylon rope lanyard (without a deceleration device) = about 2,140 pounds

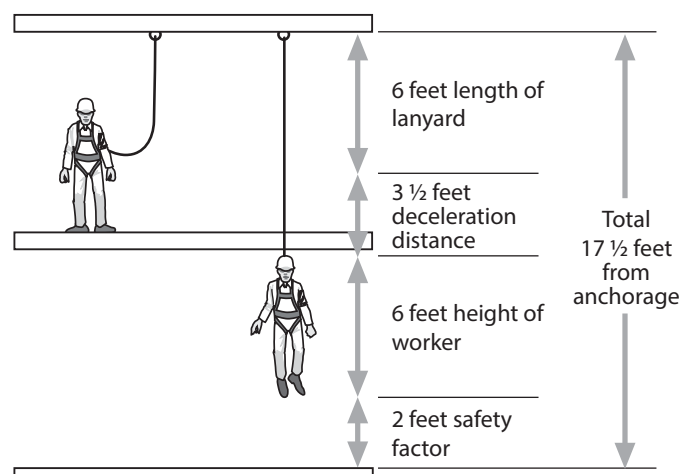
6 feet using a synthetic web lanyard (with a deceleration device) = < 900 pounds

Estimating clearance

When using a PFAS, it must be erected so that the person cannot contact the lower level surface in the event of a fall. To estimate clearance, subtract the total length of the system (after a fall), including a 2-foot safety factor, from the height measured from the lower level surface to the anchor point above.

Any additional hazards such as swing falls or contact with surrounding structures must be avoided when feasible.

Example: Calculate the fall system's distance using 6-foot shock-absorbing lanyard with the anchorage above shoulder (D-ring) height.



Step 5: Develop rescue/retrieval measures

Rescue relies on planning and preparing, including training your rescuers in rescue techniques and practicing attempts.

Be sure to:

- Ensure equipment is readily available
- Arrange and communicate with workers on-site and outside services (if available)
- Designate a person to summon them upon arrival
- Plan a route
- Establish lines of communication

When using a personal fall arrest system, employers must provide for prompt rescue in case of a fall, or ensure that employees are able to rescue themselves.

Answer the following questions:

What does “prompt” rescue mean?

Talk with the class about how long you can hang in a harness. “Prompt” means less than 9 minutes to avoid permanent damage.

What can be used to rescue a person?

Brainstorm with the class about things that can be used to rescue people. Answers may include ladders, lifts, etc.

How can you ensure self-rescue?

By training and planning.

Should rescue be considered when using other fall protection methods (such as nets)?

Absolutely

Step 6: Develop an equipment inspection, maintenance, and storage program

First and foremost, when it comes to equipment inspection and maintenance, follow the manufacturer’s recommendations.

All fall protection equipment — including harnesses, lanyards, and other connectors — must be visually inspected before each use.

Look for:

- Cuts, tears, rips, snags, punctures, abrasions, mold, or stretching
- Alterations or additions that could affect the system’s efficiency
- Damage caused by acids, corrosives
- Distorted hooks or faulty hook springs
- Cracked, broken, or deformed D-ring, carabiners, grommets, or snaphooks
- Loose, damaged, or non-functioning mountings and parts
- Rope deterioration or wear
- Color fading (possible UV exposure)
- Tripped visual impact indicator

Periodic inspections by a competent person for wear, damage, and corrosion should be a part of your safety inspection program.

NOTE: For larger projects, it is recommended to contact the local emergency responders to review the job site before work starts.

Defective equipment must be immediately taken out of service and tagged/marked as unusable, or destroyed. Do not allow use until a qualified person determines no damage was done.

Best practice: Destroy equipment subjected to any significant damage or loading.

Basic care of the equipment will prolong its durable life, and contribute toward the performance of its vital safety function. Proper storage and maintenance after use are as important as the pre-use inspections.

Clean equipment to remove dirt, corrosives, and other contaminants. Storage areas should be clean, dry, and without exposure to fumes or corrosive elements. Synthetic materials should always be away from strong sunlight and extreme temperatures, which could degrade the materials.

Should equipment inspections be documented in a workplace?

Yes, and dated.

Step 7: Provide fall protection training

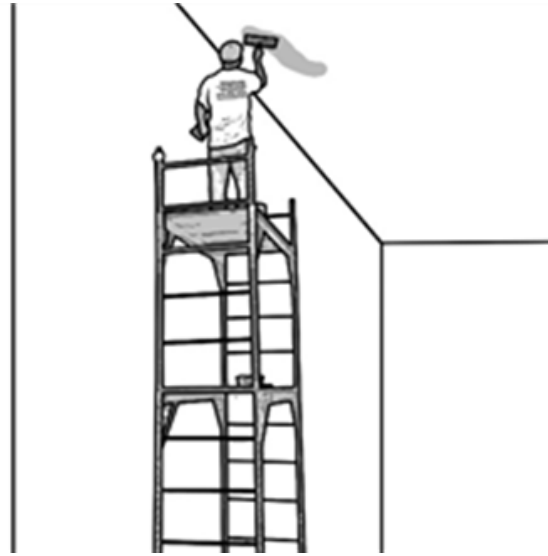
All employees who may be exposed to fall hazards must be trained how to recognize fall hazards and the procedures to follow to minimize these hazards.

What are some fall hazards?

Brainstorm with the class to list fall hazards, such as: unstable footing, floor holes, falls from elevated platforms, uneven surfaces, poor lighting, unprotected roof edges.

What are the hazards in each of the illustrations below?

1.



Not wearing fall protection equipment when working at height.

2.



Improper ladder use (leaning)

3.



Lack of fall protection when working on a sloped roof.

The construction standard requires the person providing the training be a “competent person” qualified in the following:

- Nature of fall hazards in work area
- Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems
- Use and operation of guardrail systems, personal fall arrest systems, safety nets, warning lines, safety monitoring systems, personal fall restraint systems, positioning devices, etc.
- Correct procedures for the handling and storage of equipment and materials
- Erection of overhead protection

A competent person is someone capable of identifying existing and predictable hazards in the surroundings or working conditions that are hazardous/dangerous to employees, and has authorization to take quick corrective measures to eliminate such hazards.

In general, the trainer must be knowledgeable of fall protection systems and have the ability to train employees on how to recognize fall hazards, and how to properly use, inspect, and maintain fall protection equipment.

Training must be provided whenever:

- Employees are assigned to work where fall hazards exist
- Responsibilities change or new methods are used
- There is a new fall hazard
- The fall protection program is inadequate
- Additional training is necessary
- Employees have not acquired or retained adequate understanding

The standard does not specify the required length or format of the training program. Consider both classroom instruction and hands-on training on the proper use of the fall protection equipment.

Fill in the blanks below:

Documentation must contain the following:

- Employee name(s)
- Date(s)
- Signature of the trainer
- **What they were trained on**
- **Did they understand**

SAMPLE training certification

Fall protection training

Date _____ Location _____

Trainee certification. I have received training on the subjects listed below:

This training has provided me adequate opportunity to ask questions and practice procedures to determine and correct skill deficiencies. I understand that performing these procedures/practices safely is a condition of employment. I fully intend to comply with all safety and operational requirements discussed. I understand that failure to comply with these requirements may result in progressive discipline (or corrective actions) up to and including termination.

Employee name _____

Signature _____

Date _____

The following instruction was conducted:

- _____ Overview of the company's fall protection requirements and purpose of the fall protection program
- _____ Anticipated fall hazards expected in my task/work area
- _____ Calculating fall distances using a personal fall arrest system
- _____ Rescue methods when using personal fall arrest

The following procedures were practiced:

- _____ Donning and doffing a full body harness
- _____ Inspecting full body harness, lanyards, lifelines, anchor points
- _____ Selecting, inspecting, and maintenance of personal fall arrest and position devices
- _____ Use and operation of guardrail systems, personal fall arrest, safety nets, warning lines, safety monitoring system, personal fall restraint, positioning devices, etc.
- _____ Correct procedures for the handling and storage of equipment and materials and the erection of overhead protection

Trainer certification. I have conducted instruction/on-the-job training to the employee listed above. I have explained related procedures, practices and policies. The employee was given the opportunity to ask questions and practice procedures taught under my supervision. Based on their performance, I have determined that the employee has adequate knowledge and skill to safely perform these procedures/practices.

Trainer name _____

Signature _____

Date _____

Training validation. On _____ (date), I have observed the above employee successfully applying the knowledge and skills learned during the training.

Supervisor name _____

Signature _____

Date _____

Step 8: Monitor the fall protection program

Continuously monitor the effectiveness of the program to ensure that the required elements are being followed by supervisors and employees at the jobsite.

Ways to monitor

The following are suggested ways to monitor a fall protection program:

- Conduct periodic inspections to ensure that employees are properly using fall protection
- Take immediate corrective action, including the use of disciplinary action
- Conduct a formal audit of the entire fall protection program at least annually; share results, compare with previous
- Conduct periodic inspections of equipment storage areas
- Require employees to notify their supervisor if they have any problems with the use and/or maintenance of their equipment
- Require employees to notify their supervisor if they are involved in any fall incident/accident; thoroughly investigate and document
- Hold managers/supervisors accountable for their crew

Reward your efforts

Managers, supervisors, and other staff personnel need to actively promote the proper use of fall protection equipment and encourage employee involvement and support of the program.

Suggested ways to promote a fall protection program:

- Provide positive feedback to employees who use fall protection equipment properly
- Display posters and distribute information sheets to employees, reinforcing the importance of fall protection

- Conduct safety meetings with employees about fall protection
- Respond in a timely manner to suggestions for improving the program and/or equipment
- Encourage union representatives and safety committee members to actively support the program
- Collect and distribute “success stories” about injuries prevented by the use of fall protection
- Formally recognize employees, supervisors, and all involved in the program

Reference materials

- [Fall protection for construction activities booklet](#)
- [Fall protection trigger heights for construction activities fact sheet](#)
- [Warning lines: Construction industry best practices fact sheet](#)
- [Walking-working surfaces fact sheet](#)
- [Federal OSHA bulletin: Compatibility of Personal Fall Protection System Components](#)
- [Federal OSHA bulletin: Suspension Trauma/Orthostatic Intolerance](#)
- [Construction failures; from “Why Buildings Fail” by Ken Carper, WSU](#)
- [Fall protection in construction: requirements for competent persons fact sheet](#)
- [Fall protection trigger heights for general industry fact sheet](#)
- [Guardrail systems, stair rail systems, and handrails in general industry workplaces fact sheet](#)
- [Safety monitoring for roofing work fact sheet](#)

Notes

Oregon OSHA services

Oregon OSHA offers a wide variety of safety and health services to employers and employees:

Appeals

► **503-378-3272**

- Discusses Oregon OSHA's requirements and clarifies workplace safety or health violations.
- Discusses abatement dates and negotiates settlement agreements to resolve disputed citations.

Conferences

► **503-378-3272; oregon.conferences@dcbs.oregon.gov**

- Hosts, co-hosts, and coordinates conferences throughout Oregon that enable employees and employers to learn and share ideas with local and nationally recognized safety and health professionals.

Consultations and Evaluations

► **503-378-3272; 800-922-2689; consult.web@dcbs.oregon.gov**

- Offers no-cost, on-site safety and health assistance to help Oregon employers recognize and correct workplace safety and health problems.
- Provides consultations in the areas of safety, industrial hygiene, ergonomics, occupational safety and health programs, assistance to new businesses, the Safety and Health Achievement Recognition Program (SHARP), and the Voluntary Protection Program (VPP).

Enforcement Information

► **503-378-3272; 800-922-2689; enforce.web@dcbs.oregon.gov**

- Offers pre-job conferences for mobile employers in industries such as logging and construction.
- Inspects places of employment for occupational safety and health hazards and investigates workplace complaints and accidents.
- Provides abatement assistance to employers.

Public Education and Training

► **503-947-7443; 888-292-5247, Option 2; ed.web@dcbs.oregon.gov**

- Provides online courses, workshops and materials covering management of basic safety and health programs, safety committees, accident investigation, technical topics, and job safety analysis.

Standards and Technical Resources

► 503-378-3272; 800-922-2689; tech.web@dcbs.oregon.gov

- Develops, interprets, and gives technical advice on Oregon OSHA's safety and health rules.
- Publishes safe-practices guides, pamphlets, and other materials for employers and employees.
- Manages the Oregon OSHA Resource Center, which offers safety videos, books, periodicals, and research assistance for employers and employees.

Need more information? Call your nearest Oregon OSHA office

Salem Central Office

350 Winter St. NE
Salem, OR 97301-3882

Phone: 503-378-3272

Toll-free: 800-922-2689

Fax: 503-947-7461

en Español: 800-843-8086

Website: osha.oregon.gov

Medford

1840 Barnett Road, Suite D
Medford, OR 97504-8293
541-776-6030

Consultation: 541-776-6016

Pendleton

750 SE Emigrant Ave., Suite 131
Pendleton, OR 97801
541-276-9175

Consultation: 541-276-2353

Bend

Red Oaks Square
1230 NE Third St., Suite A-115
Bend, OR 97701-4374
541-388-6066

Consultation: 541-388-6068

Portland

Durham Plaza
16760 SW Upper Boones
Ferry Road, Suite 200
Tigard, OR 97224-7696
503-229-5910

Consultation: 503-229-6193

Eugene

1500 Valley River Drive, Suite 150
Eugene, OR 97401-4643
541-686-7562

Consultation: 541-686-7913

Salem

1340 Tandem Ave. NE, Suite 160
Salem, OR 97301-8080
503-378-3274

Consultation: 503-373-7819

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