

SECTION 7 - FALL PROTECTION PLAN - ROOF-SPECIFIC

Regulatory Basis: Oregon Division 3/M: OAR 437-003-1501 (fall protection), 437-003-0502 (restraint), 437-003-1502 (warning lines), 437-003-2502 (monitoring), and 437-003-0503 (training). Retained criteria are adopted by Oregon as OAR 437-003-0001(13); Oregon replacements govern.

Purpose & Scope

OAR 437-003-1501(1): Except where another standard permits, employees exposed to falls 6 feet or more to a lower level must have fall protection provided, installed, and implemented. Under (2), verify the walking/working surface can safely support employees before allowing work. Under (3), protect against stepping or tripping into holes, including skylights, regardless of height. Under (6), use guardrails or equipment guards to protect employees working less than 6 feet above dangerous equipment.

Protect each employee working on, at, above or near wall openings (including those with chutes attached) from falling with guardrail systems, safety net systems, personal fall arrest systems or personal fall restraint systems where the inside bottom edge is less than 39 inches above the walking/working surface and the outside bottom edge is 6 feet or more above lower levels - OAR 437-003-1501(4).

Use guardrail systems, fences or barricades to protect employees who might approach the edge of an excavation 6 feet or more in depth that is not readily seen because of plant growth or another visual barrier, and guardrail systems, fences, barricades or covers where employees might approach the edge of a well, pit, shaft or similar excavation 6 feet or more in depth - OAR 437-003-1501(5)(a)-(b).

Company policy: This plan applies to all Demo Company LLC employees performing work on or near rooftops, including:

- All roof surfaces (low-slope and steep-slope)
- Roof edges, eaves, and perimeters
- Skylights and roof openings (see Section 10)
- Roof access points (ladders, hatches)
- Any elevated platform or scaffold adjacent to roof work; assess its specific protection requirements

Oregon Penalty Reminder: Bulletin 1-2026 applies to inspections opened January 1-December 31, 2026. Maximum penalties are \$17,004 for serious physical harm or death-rated violations, \$170,046 for willful violations, and \$272,058 for repeat or willful violations that caused or contributed to a work-related fatality. Company policy: Verify the annual bulletin before using these category maxima.

Oregon-Specific Fall Protection Methods

Warning lines and safety monitoring are limited to roofing work on slopes of 2:12 or less under OAR 437-003-1502 and 437-003-2502. "Roofing work means the hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal, and vapor barrier work, but not including the construction of the roof deck and leading edge work." - OAR 437-003-1500(5). Company policy: Safety nets require a separate reviewed procedure.

Company policy: Scope: positioning-device systems are not used under this procedure - Oregon-adopted 1926.502(e); safety monitoring alone is not selected or used under this procedure - OAR 437-003-2502(2).

Definitions

- Low-slope roof: Company policy: slope $\leq 4:12$; warning-line/monitor limit remains 2:12
- Steep-slope roof: Company policy: label for slope $> 4:12$
- Leading edge: "Leading edge means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction." - Oregon-adopted 1926.500(b)
- Personal Fall Arrest System (PFAS): "Personal fall arrest system means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. As of January 1, 1998, the use of a body belt for fall arrest is prohibited." - Oregon-adopted 1926.500(b)
- Personal Fall Restraint System: "Personal fall restraint system means a fall protection system that prevents the user from falling any distance. The system is comprised of either a body belt or body harness, along with an anchorage, connectors and other necessary equipment. The other components typically include a lanyard, and may also include a lifeline and other devices." - OAR 437-003-1500(3)
- Safety monitor: Competent person designated to recognize fall hazards and warn employees (OAR 437-003-2502(3))
- Warning line system: "Warning line system means a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in the area." - Oregon-adopted 1926.500(b)

Trigger Heights

Work Type	Fall Protection Required
All roof work - low-slope and steep-slope	General trigger: 6 feet; holes and dangerous equipment have additional requirements above
Scaffold platforms adjacent to roof	Company policy: Demo Company LLC requires protection at 6 feet; assess scaffold-specific controls
Skylight and roof openings - all heights	Covers or equivalent against stepping/tripping into holes regardless of height

Fall Protection Methods - Low-Slope Roofs ($\leq 4:12$)

Company policy: Record the method in the daily briefing; apply residential restrictions below.

Warning line systems must not be used as fall protection on roof slopes greater than 2:12 - OAR 437-003-1502(1).

Option A: Personal Fall Arrest System (PFAS) - Preferred Method

Oregon-adopted 1926.502(d) governs PFAS:

- Full-body harness with compatible connecting equipment; no body belts for arrest
- For fall arrest, attach the harness at the center of the back near shoulder level or above the head - (d)(17); restraint may use back, front or side D-rings - OAR 437-003-0502(3)
- Anchorage independent of platform-support/suspension anchors: 5,000 lbs per attached employee, or designed, installed and used as part of a complete PFAS maintaining a safety factor of at least two under a qualified person's supervision - (d)(15)
- Maximum free fall: 6 feet, with no lower-level contact; maximum arresting force 1,800 lbs with a harness and maximum deceleration distance 3.5 feet; strength to withstand twice the potential impact energy of a 6-foot free fall or the permitted free fall, whichever is less - (d)(16)

- Company policy: Verify anchor capacity, installation and compatibility; no HVAC, pipe-vent or chimney anchors
- Company policy: Select lanyards/SRLs for actual clearance, edge exposure and manufacturer limits

Total fall distance calculation required:

Company policy: Calculate clearance for the actual anchor/equipment using manufacturer instructions. Include free fall, deceleration, stretch, harness movement, body below the attachment point and margin. Check swing-fall obstructions; stop if clearance is insufficient.

Option B: Personal Fall Restraint System - Oregon Requirements

Apply OAR 437-003-0502:

A fall restraint system:

- Prevents any fall distance; rig it to prevent reaching an unprotected edge or opening
- Uses fall-arrest components meeting Oregon-adopted system criteria, except as allowed by the restraint rule; a body belt is permitted - (2)
- May attach at back, front or side D-rings - (3)
- Uses an anchor independent of platform-support/suspension anchors, supporting 3,000 lbs per attached employee, or designed, installed and used as part of a complete restraint system with a safety factor of at least two under a qualified person's supervision - (4)
- Company policy: Adjust and check line length against every reachable edge/opening and slope
- Company policy: Document the method and use a full-body harness for company restraint work

When to use fall restraint vs. PFAS:

OAR 437-003-0502(1) requires a personal fall restraint system to be rigged to prevent the user from falling any distance; where restraint cannot prevent every possible fall, that condition is not met and another system must be selected. Company policy: Use a full-body harness for company restraint work and document the method and verification as described above.

Option C: Warning Line System + Safety Monitor

Under OAR 437-003-1502 and 437-003-2502, this option is limited to roofing work on slopes $\leq 2:12$.

Company policy: Use only when PFAS/restraint are not practicable; exclude residential, deck construction and leading-edge work.

Warning Line Requirements (OAR 437-003-1502 and Oregon-adopted 1926.502(f)):

Apply Oregon's limits and Division 3/M's retained setup criteria:

- Enclose all sides of the roof work area; without mechanical equipment, set lines at least 6 feet from roof edges
- With mechanical equipment, setbacks are 6 feet from edges parallel to equipment travel and 10 feet from perpendicular edges; equipment is prohibited in monitored areas
- Rope, wire or chain: minimum 500-lb tensile strength and ability to withstand the stanchion test loads; high-visibility flags at intervals no greater than 6 feet
- Lowest point, including sag: at least 34 inches; highest point: no more than 39 inches above the surface
- Installed stanchions, with line attached, resist at least 16 lbs horizontally, 30 inches above the surface, perpendicular to the line toward the edge, without tipping
- Attach lines so pulling one span cannot take up slack in adjacent spans before the stanchion tips
- Provide two-line access paths to access, handling, storage and hoisting areas; barricade unused access paths at the work-area line with equivalent strength/height, or offset the path to prevent direct entry
- Only employees performing roofing work in the area between the warning line and roof edge may enter that area. OAR 437-003-1502(2) requires PFAS, restraint, guardrails, nets or monitoring there; apply the stricter edge-work policy below
- Use/store mechanical equipment only where warning lines, guardrails or PFAS protect employees

Safety Monitor Requirements (OAR 437-003-2502):

- Designate a competent person able to recognize fall hazards
- Warn any employee who appears unaware of a fall hazard or acts unsafely
- Remain on the same surface, within visual sighting distance and close enough to communicate orally
- Have no responsibilities that could divert attention from monitoring
- No mechanical equipment may be used or stored in a monitored area; only employees engaged in roofing work may enter
- Company policy: Monitoring is the person's only duty; one work gang per monitor; also warn before workers come within 6 feet of the warning line

Documentation required when using Option C: Company policy: Supervisor records:

- Date, location, measured slope and monitored area
- Name of designated safety monitor
- Why PFAS / fall restraint was not practicable and how edge-work protection is provided

> WARNING: Residential Restriction: Company policy: Option C is not permitted on residential construction. Apply the residential requirements below.

Option D: Guardrail System

Oregon-adopted 1926.502(b) governs guardrails:

- Top rail: 42 inches +/-3 inches; permitted higher rails must meet all other criteria; increase height by stilt height when stilts are used - (b)(1)
- Midrail midway between top rail and surface when no wall/parapet at least 21 inches high exists; equivalent infill must meet the rule's spacing/coverage criteria - (b)(2)
- Top rail withstands 200 lbs within 2 inches of its top edge, outward or downward at any point; under downward test load it must remain at least 39 inches high - (b)(3)-(4)
- Midrails/infill withstand 150 lbs outward or downward; surfaces prevent punctures, lacerations and snagging - (b)(5)-(6)
- Screens/mesh must extend from the top rail to the walking surface along the entire opening between supports; intermediate members no more than 19 inches apart; no other infill opening wider than 19 inches - (b)(2)(ii)-(iv)
- Rail ends must not overhang terminal posts where that creates a projection hazard; no steel or plastic banding as top rails or midrails; rails at least ¼-inch nominal diameter or thickness; flag wire-rope top rails at intervals no greater than 6 feet with high-visibility material - (b)(7)-(9)
- Guardrail systems used on ramps and runways must be erected along each unprotected side or edge - (b)(14)
- Inspect manila, plastic or synthetic rope rails as frequently as necessary to maintain the required strength - (b)(15)
- Company policy: Verify all applicable assembly criteria before use

Fall Protection Methods - Steep-Slope Roofs (>4:12)

Company policy: Use Option A unless the supervisor approves B or C under OAR 437-003-1501.

Option A: Personal Fall Arrest System (PFAS) - Required

- Company policy: PFAS is required unless Option B or C is approved for the task
- Apply all PFAS criteria above, including anchorage, arrest force, clearance and prompt rescue
- Company policy: Verify ridge anchors and swing-fall clearance; positioning equipment does not replace fall protection

Oregon Note for Residential Steep-Slope: Company policy: Confirm the method with Emily Turner; residential policy below excludes restraint and monitoring.

Option B: Personal Fall Restraint System

- Use only when rigged to prevent any fall under OAR 437-003-0502
- Company policy: Verify the complete travel envelope on the slope; unavailable under this plan's residential policy

Option C: Guardrail System

- Apply Option D's Oregon-adopted guardrail criteria
- Company policy: Verify protection for the task and access route

Warning line systems and safety monitors are NOT acceptable as sole fall protection on steep-slope roofs. Both have a 2:12 limit.

Roof Edge Work - Special Requirements

Company policy: Employees working at or within 6 feet of any unprotected roof edge must use PFAS, restraint or guardrails at all times. Warning line + monitor alone is not permitted there by company policy. Oregon's broader edge-zone choices are in OAR 437-003-1502(2).

During roofing work, do not store materials or equipment within 6 feet of a roof edge unless guardrails are erected at the edge; keep piles, groups and stacks near an edge stable and self-supporting - Oregon-adopted 1926.502(j)(7).

When employees are exposed to falling objects, except as provided for holes in OAR 437-003-2501(2), OAR 437-003-2501(1) requires each exposed employee to wear a hard hat and Demo Company LLC to implement one of the following measures in accordance with the criteria in 1926.502(j): (a) erect toeboards, screens or guardrail systems to prevent objects from falling from higher levels; or (b) erect a canopy structure and keep potential fall objects far enough from the edge that they would not go over it if accidentally displaced; or (c) barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough from the edge that they would not go over it if accidentally displaced. Criteria for the selected measure, Oregon-adopted 1926.502(j)(1)-(5) and (8): toeboards must be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below, withstand without failure a force of at least 50 pounds applied in any downward or outward direction at any point, be at least 3.5 inches high from top edge to the walking/working surface, have not more than 0.25 inch clearance above that surface, and be solid or have openings not over 1 inch in greatest dimension; where tools, equipment or materials are piled higher than the top edge of a toeboard, paneling or screening must be erected from the walking/working surface or toeboard to the top of the guardrail system's top rail or midrail for a distance sufficient to protect employees below; guardrail systems used as falling-object protection must have all openings small enough to prevent passage of potential falling objects; canopies must be strong enough to prevent collapse and penetration by any objects that may fall onto them. Company policy: Record the selected falling-object measure and the protected area in the task record.

Equipment Requirements

Full-Body Harnesses:

- Inspect PFAS before each use for wear, damage and deterioration; remove defective components - Oregon-adopted 1926.502(d)(21)
- Company policy: Fit straps and inspect D-rings, buckles and webbing according to manufacturer instructions
- Company policy: Keep equipment identification and manufacturer labels legible
- Impact-loaded PFAS must be removed immediately; the rule permits reuse only after competent-person inspection finds it undamaged and suitable - (d)(19)
- Company policy: Permanently retire fall-arrested harnesses; tag "FALLEN - DO NOT USE"

Lanyards and SRLs:

- Company policy: Match user/tool weight and clearance; follow manufacturer instructions
- Use locking, compatible snaphooks and only connections designed to prevent disengagement - Oregon-adopted 1926.502(d)(5)-(6)

- Unless the snaphook is a locking type and designed for the following connections, do not engage snaphooks - (d)(6):
 - directly to webbing, rope or wire rope - (d)(6)(i)
 - to each other - (d)(6)(ii)
 - to a dee-ring to which another snaphook or other connector is attached - (d)(6)(iii)
 - to a horizontal lifeline - (d)(6)(iv)
 - to any object which is incompatibly shaped or dimensioned in relation to the snaphook such that unintentional disengagement could occur by the connected object being able to depress the snaphook keeper and release itself - (d)(6)(v)
- Connectors must be drop-forged, pressed or formed steel or equivalent, with a corrosion-resistant finish and smooth surfaces/edges; D-rings and snaphooks need a minimum tensile strength of 5,000 lbs and proof-testing to 3,600 lbs without cracking, breaking or permanent deformation - (d)(1)-(4)
- Lanyards and vertical lifelines: minimum 5,000-lb breaking strength; each employee uses a separate vertical lifeline for roof work; protect lifelines from cutting/abrasion - (d)(9)-(11)
- With the line fully extended, SRLs that limit free fall to 2 feet or less must sustain 3,000 lbs; other SRLs and ripstitch, tearing or deforming lanyards must sustain 5,000 lbs - (d)(12)-(13). Ropes and webbing in lanyards, lifelines and harness strength components must be synthetic fiber - (d)(14)
- Company policy: Check SRL components and rope-grab operation; remove defects

Anchorage:

- On suspended scaffolds or similar work platforms with horizontal lifelines which may become vertical lifelines, devices used to connect to a horizontal lifeline must be capable of locking in both directions on the lifeline - Oregon-adopted 1926.502(d)(7)
- Apply the PFAS or restraint anchorage criteria above to permanent and temporary anchors
- Horizontal lifelines must be designed, installed and used under a qualified person's supervision as part of a complete PFAS maintaining a safety factor of at least two - Oregon-adopted 1926.502(d)(8)
- Do not attach PFAS to guardrails; hoist attachment is prohibited except where another subpart specifically permits it - (d)(23)
- At hoist areas: place a chain, gate or removable guardrail section across the access opening when hoisting is not taking place - (b)(10); rig PFAS so the employee can move only as far as the edge of the surface - (d)(24); use body belts, harnesses and components only for employee protection, as part of a personal fall arrest or positioning device system - (d)(18), or a fall restraint system under OAR 437-003-0502 - and never to hoist materials or for any other non-protective purpose such as a tie-down - (d)(18)
- Company policy: Follow manufacturer installation instructions; competent person checks anchors before use

Fall Restraint Rigging:

Company policy:

- Document restraint anchor location and rigging length for each task
- Confirm restraint is rigged to prevent any fall before work begins (the no-fall condition is OAR 437-003-0502(1); the pre-work check itself is company procedure)
- Re-check rigging when the task location changes

Pre-Work Fall Protection Planning

Company policy: Before roof work, supervisor records:

- Task, roof location, slope and surface strength verification
- Fall hazards: edges, skylights, roof openings, penetrations and dangerous equipment
- Selected method and its eligibility for the work, slope and location
- PFAS anchor capacity, compatibility and clearance calculations
- Restraint anchor capacity and rigging travel limits

- Equipment inspections and assignments
- Rescue arrangements: provide prompt rescue or assure self-rescue under Oregon-adopted 1926.502(d)(20); verify resources before work (see Section 15)

Pre-Work Fall Protection Plan - on site and signed by Emily Turner. Company policy: This record cannot waive required protection.

Fall Protection Training

OAR 437-003-0503(1) requires training for every employee who might be exposed to fall hazards, delivered as necessary by a competent person qualified in the relevant subjects. Oregon-adopted 1926.502(a)(2) requires all fall protection systems required by Subdivision M to be provided and installed, and all other pertinent Subdivision M requirements met, before the employee begins the work that necessitates fall protection; necessary training therefore precedes exposed work as an Oregon requirement, not only as company policy. Cover, as applicable:

- Nature of work-area fall hazards
- Erection, maintenance, disassembly and inspection of systems
- Use/operation of guardrails, PFAS, nets, warning lines, monitors, restraint, positioning devices and other protection used
- Each employee's role in monitoring and the fall-protection work plan
- Mechanical-equipment limits during roofing work
- Equipment/material handling and storage, overhead protection and applicable Division 3/M standards
- Company policy: Include harness fitting, clearance checks, rescue activation and skylight/opening procedures

Written certification: Under OAR 437-003-0503(2), record employee identity, training date(s), and trainer or employer signature; retain the latest certification. For accepted prior training, record the date its adequacy was determined. Under (3), retrain when workplace/equipment changes make training obsolete or knowledge/use shows insufficient understanding or skill. Company policy: Also review and retrain after a fall event.

Residential Construction Fall Protection (OAR 437-003-1501)

OAR 437-003-1501 governs residential work. Company policy: For Demo Company LLC residential work, including 1-4 family dwellings:

- At exposures of 6 feet or more, select guardrails or PFAS; safety nets require a separate reviewed procedure before use
- Do not select warning lines, safety monitoring or restraint as the residential protection method
- Apply hole and dangerous-equipment protection regardless of the general 6-foot trigger; no residential exception is authorized by this plan

Alternative Fall Protection Plans (OAR 437-003-1501):

Oregon repealed federal 1926.502(k), so the federal infeasibility/greater-hazard fall protection plan option is not available under Oregon rules; OAR 437-003-1501 applies instead and its protection duties remain mandatory. Company policy: If protection cannot be installed:

- Stop the affected work and have a qualified person evaluate a protected method
- Document site-specific hazards and the proposed system
- Verify that the system meets applicable Oregon requirements before work resumes
- Keep the reviewed procedure at the job site; a written plan alone does not replace required protection

> Enforcement context: Training before exposed work is an Oregon requirement (OAR 437-003-0503(1) read with Oregon-adopted 1926.502(a)(2)); supervisor approval cannot waive Oregon duties. Company policy: Residential crews also receive the company-specific training content listed above.