

WAC 296-880-090 Quick reference guide.

Unified Fall Protection Quick Reference Guide

General fall protection for all industries	Threshold height	WAC
Above or adjacent to dangerous equipment	Regardless of height	296-880-10010(1)
Holes into which an employee can trip, step into, or step through	Regardless of height	296-880-10010(2)
Falling into or onto impalement hazards	Regardless of height	296-880-10010(3)
When on a walking/working surface	Four feet or more	296-880-20005
Ramps, runways, and inclined walkways	Four feet or more	296-880-20005(2)
Holes where work is being performed	Four feet or more	296-880-20005(3)
Skylights	Four feet or more	296-880-20005 (3)(b)
Hatchway and chute holes	Four feet or more	296-880-20005 (3)(c)
Ladderways	Four feet or more	296-880-20005 (3)(d)
Pits and trap door holes	Four feet or more	296-880-20005 (3)(e)
Repair pits and service pits	Four feet or more	296-880-20005 (3)(f)
Manholes	Four feet or more	296-880-20005 (3)(g)
Openings	Four feet or more	296-880-20005(4)
Formwork and reinforcing work	Four feet or more	296-880-20005(5)
Steep pitch roof - Regardless of task	Four feet or more	296-880-20005(6)
Low pitch roof - Other than roofing work or constructing a leading edge	Four feet or more	296-880-20005(7)
Hazardous slopes	Four feet or more	296-880-20005(9)
Vehicles and rolling stock - If suitable anchorages cannot be provided or creates a greater hazard	Four feet or more	296-880-20005(10)
Specific requirements not addressed in WAC 296-880-200 (above)		
Construction work <i>*See also chapter 296-155 WAC</i>		
Roofing work on a low pitch roof	(Ten) Six feet	296-880-30005(1)
Constructing a leading edge	(Ten) Six feet	296-880-30005(1)
Engaged in the erection or placement of structural members	Ten feet	296-880-30005(1)
Engaged in excavation and trenching operations	Ten feet	296-880-30005(1)
Order pickers (PITS) <i>*See also chapter 296-863 WAC</i>		
Operators of order pickers	Regardless of height	296-880-30010 (1) and (2)
Elevating work platforms <i>*See also chapter 296-869 WAC</i>		
Vehicle mounted aerial devices	Regardless of height	296-880-30015(1)
Manually propelled and self-propelled elevating work platforms	Regardless of height if required by manufacturer	296-880-30015(2)
Boom supported elevating work platforms	Regardless of height	296-880-30015(3)
Powered platforms <i>*See also chapter 296-870 WAC</i>		
Working on a roof or other elevated working area	Four feet or more	296-880-30020(5)
Window cleaning <i>*See also chapter 296-878 WAC</i>		
Working on a roof or other elevated working area	Four feet or more	296-880-30025(1)
Scaffolds <i>*See also chapter 296-874 WAC</i>		
Working on a scaffold	Ten feet or more	296-880-30030(1)

General fall protection for all industries	Threshold height	WAC
Cranes - Under the scope of chapter 296-155 WAC, Part L		
For nonassembly/disassembly work	Six feet or more	296-880-30035(2)
For assembly/disassembly work	Ten feet or more	296-880-30035(3)
Towercranes - Work other than erecting, climbing, and dismantling	Six feet or more	296-880-30035 (4)(a)
Towercranes - Erecting, climbing, and dismantling work	Ten feet or more	296-880-30035 (4)(b)
Telecommunications work *See also chapter 296-32 WAC	Four feet or more	296-880-200 and 296-880-30040
Qualified electrical workers *See also chapter 296-45 WAC	Four feet or more	296-880-200
Ship repairing, shipbuilding and shipbreaking *See also chapter 296-304 WAC		
Working aloft or elsewhere at elevation	Five feet or more	296-880-30045
Longshore, stevedore and waterfront related operations *See also chapter 296-56 WAC		
Maintenance work on cranes, spouts, or similar types of equipment	Eight feet or more	296-880-30050(1)
Floor or wall openings or waterside edges, including bridges or gangway-like structures	Four feet or more	296-880-30050 (2)(a)
Ski area facilities and operations *See also chapter 296-59 WAC		
Working at unprotected elevated locations	((More than ten feet)) Four feet or more	296-880-30055 (1)(a)

AMENDATORY SECTION (Amending WSR 20-12-091, filed 6/2/20, effective 10/1/20)

WAC 296-880-095 Definitions. For the purposes of this chapter the following definitions apply:

(1) **Aerial device.** A vehicle-mounted device, telescoping or articulating, or both, which is used to position personnel.

(2) **Affected area.** The distance away from the edge of an excavation equal to the depth of the excavation up to a maximum distance of ~~((fifteen))~~ 15 feet. For example, an excavation ~~((ten))~~ 10 feet deep has an affected area extending ~~((ten))~~ 10 feet from the edge of any side of the excavation.

(3) **Anchorage.** A secure point of attachment for lifelines, lanyards, or deceleration devices which is capable of withstanding the forces specified in this chapter.

(4) **Boom-supported elevating work platform.** A self-propelled, integral chassis, elevating work platform with a boom-supported platform that can be positioned completely beyond the base.

(5) **Catch platform.** A type of fall arrest system that consists of a platform installed within four vertical feet of the fall hazard, is at least ~~((forty-five))~~ 45 inches wide and is equipped with a standard guardrail system on all exposed sides.

(6) **Catenary line.** See "horizontal lifeline."

(7) **Competent person.** An individual knowledgeable of fall protection equipment, including the manufacturer's recommendations and instructions for the proper use, inspection, and maintenance; and who is capable of identifying existing and potential fall hazards; and who has the authority to take prompt corrective action to eliminate those

hazards; and who is knowledgeable of the requirements contained in this chapter regarding the installation, use, inspection, and maintenance of fall protection equipment and systems.

(8) Connector. A device which is used to connect parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabiner, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a harness, or a snap hook spliced or sewn to a lanyard or self-retracting lanyard).

(9) Construction work. All or any part of excavation, construction, erection, alteration, repair, demolition, and dismantling of buildings and other structures and all operations in connection therewith; the excavation, construction, alteration and repair of sewers, trenches, caissons, conduits, pipe lines, roads and all operations pertaining thereto; the moving of buildings and other structures, and to the construction, alteration, repair, or removal of wharfs, docks, bridges, culverts, trestles, piers, abutments or any other construction, alteration, repair or removal work related thereto.

(10) Deceleration device. Any mechanism, such as a rope grab, ripstitch lanyard, specifically woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

(11) Deceleration distance. The additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's full body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

(12) Dropline. A vertical lifeline secured to an upper anchorage for the purpose of attaching a lanyard or device.

(13) Elevating work platform. A device used to position personnel, along with their necessary tools and materials, at work locations. It includes a platform and an elevating assembly. It may be vehicle-mounted or have an integral chassis for mobility and as a means of support.

(14) Equivalent. Alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate and will provide an equal or greater degree of safety for employees than the methods, materials, or designs specified in this standard.

(15) Fall arrest system. A fall protection system that will arrest a fall from elevation. Fall arrest systems include personal fall arrest systems that are worn by the user, catch platforms, and safety nets.

(16) Fall distance. The actual distance from the worker's support to the level where a fall would stop.

(17) Fall protection work plan. A written planning document in which the employer identifies all areas on the job site where a fall hazard of (~~ten~~) 10 feet or more exists. The plan describes the method or methods of fall protection to be used to protect employees, and includes the procedures governing the installation, use, inspection, and removal of the fall protection method or methods which are selected by the employer. See WAC 296-880-10020.

(18) Fall restraint system. A system in which all necessary components function together to restrain/prevent an employee from falling to a lower level. Types of fall restraint systems include standard guardrail systems, personal fall restraint systems, warning line systems, or a warning line system and safety monitor.

(19) Feasible. It is possible to perform the work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically possible to use any one of these systems to provide fall protection.

(20) Free fall. The act of falling before a personal fall arrest system begins to apply force to arrest the fall.

(21) Free fall distance. The vertical displacement of the fall arrest attachment point on the employee's full body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

(22) Full body harness. A configuration of connected straps that meets the requirements specified in ANSI Z359.1, that may be adjustable to distribute a fall arresting force over at least the thighs, shoulders and pelvis, with provisions for attaching a lanyard, lifeline, or deceleration devices.

(23) Full body harness system. A full body harness and lanyard which is either attached to an anchorage meeting the requirements of this chapter; or it is attached to a horizontal or vertical lifeline which is properly secured to an anchorage(s) capable of withstanding the forces specified in this chapter.

(24) Handrail. A rail used to provide employees with a handhold for support.

(25) Hardware. Snap hooks, D-rings, bucklers, carabiners, adjusters, or O-rings, that are used to attach the components of a fall protection system together.

(26) Hazardous slope. A slope from which construction work is performed where normal footing cannot be maintained without the use of devices due to the pitch of the surface, weather conditions, or surface material.

(27) Hole. A gap or void two inches or more in its least dimension, in a floor, roof, or other surface.

(28) Horizontal lifeline. A rail, rope, wire, or synthetic cable that is installed in a horizontal plane between two anchorages and used for attachment of a worker's lanyard or lifeline device while moving horizontally; used to control dangerous pendulum like swing falls.

(29) Infrequent. The task or job is performed only on occasion, when needed (e.g., equipment breakdown), on an occasional basis, or at sporadic or irregular intervals.

(30) Lanyard. A flexible line of webbing, rope, or cable used to secure a positioning harness or full body harness to a lifeline or an anchorage point usually two, four, or six feet long.

(31) Leading edge. The advancing edge of a floor, roof, or formwork which changes location as additional floor, roof, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side or edge" during periods when it is not actively and continuously under construction.

(32) Lifeline. A vertical line from a fixed anchorage or between two horizontal anchorages, independent of walking or working surfaces,

to which a lanyard or device is secured. Lifeline as referred to in this text is one which is part of a fall protection system used as back-up safety for an elevated worker or as a restraint for workers on a flat or sloped surface.

(33) **Locking snap hook.** A connecting snap hook that requires two separate forces to open the gate; one to deactivate the gatekeeper and a second to depress and open the gate which automatically closes when released; used to minimize roll out or accidental disengagement.

(34) **Low pitched roof.** A roof having a slope equal to or less than four in ~~((twelve))~~ 12.

(35) **Maintenance.** The work of keeping a building, machine, roadway, etc., in a state of good repair.

(36) **Manually propelled elevating work platform.** A manually propelled, integral chassis, elevating work platform with a platform that cannot be positioned completely beyond the base.

(37) **Mechanical equipment.** All motor or human propelled wheeled equipment except for wheelbarrows, mopcarts, robotic thermoplastic welders, and robotic crimpers.

(38) **Opening.** A gap or void ~~((thirty))~~ 30 inches (76 cm) or more high and ~~((eighteen))~~ 18 inches (48 cm) or more wide, in a wall or partition, through which employees can fall to a lower level.

(39) **Personal fall arrest system.** A fall arrest system that is worn by the employee to arrest the employee in a fall from elevation. It consists of an anchor point, connectors, a full body harness, and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

(40) **Personal fall restraint system.** A fall restraint system that is worn by the employee to keep the employee from reaching a fall point, such as the edge of a roof or elevated work surface. It consists of an anchor point, hardware assemblies, a full body harness and may include a lanyard, restraint lines, or suitable combinations of these.

(41) **Platform.** A work surface elevated above the surrounding floor or ground.

(42) **Positioning device system.** A full body harness or positioning harness that is worn by an employee, and is rigged to allow an employee to be supported on an elevated vertical or inclined surface, such as a wall, pole or column and work with both hands free from the body support.

(43) **Positioning harness.** A body support that meets the requirements specified in ANSI Z359.1 that encircles and closes around the waist and legs with attachment elements appropriate for positioning work.

~~((Predictable and regular basis. Employee tasks which are performed either:~~

~~(a) At least once every two weeks; or~~

~~(b) Four employee hours or more during any sequential four-week period. (To calculate employee hours multiply the number of employees by the number of hours during a four-week period).))~~

(44) **Qualified person.** One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

(45) **Repair.** To restore a building, machine, roadway, etc., to an original state after damage or decay.

(46) **Restraint line.** A line from a fixed anchorage or between two anchorages to which an employee is secured in such a way as to prevent the worker from falling to a lower level.

(47) **Roof.** The exterior surface on the top of a building. This does not include floors or formwork which, because a building has not been completed, temporarily become the top surface of a building.

(48) **Roofing work.** 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.

(49) **Rope grab.** A fall arrester that is designed to move up or down a lifeline suspended from a fixed overhead or horizontal anchorage point, or lifeline, to which the full body harness is attached. In the event of a fall, the rope grab locks onto the lifeline rope through compression to arrest the fall. The use of a rope grab device is restricted for all restraint applications. See WAC 296-880-40025.

(50) **Runway.** A passageway for persons, elevated above the surrounding floor or ground level, such as a footwalk along shafting or a walkway between buildings.

(51) **Safety line.** See "lifeline."

(52) **Safety monitoring system.** A type of fall restraint system in which a competent person whose only job responsibility is to recognize and warn employees of their proximity to fall hazards when working between the warning line and the unprotected sides and edges, including the leading edge of a low pitch roof or other walking/working surface.

(53) **Safety net system.** A type of fall arrest system, as described in WAC 296-880-40055.

(54) **Safety watch system.** A type of fall protection system ((as described in WAC 296-880-40050,)) in which a competent person (~~monitors one worker who is engaged in repair work or servicing equipment on low pitch roofs only~~) is responsible for recognizing and warning one employee of a fall hazard.

(55) **Scaffold.** A temporary elevated platform, including its supporting structure and anchorage points, used for supporting employees or materials.

(56) **Self-propelled elevating work platform.** A self-propelled, integral chassis, elevating work platform with a platform that cannot be positioned completely beyond the base.

(57) **Self-rescue device.** A piece of equipment designed to allow a person, who is suspended in a personal fall arrest system, to independently rescue themselves after the fall by moving the device up or down until they reach a surface and are no longer suspended.

(58) **Self-retracting lifeline.** A deceleration device which contains a wound line which may be slowly extracted from, or retracted onto, the device under slight tension during normal employee movement, and which after onset of a fall, automatically locks the drum and arrests the fall.

(59) **Service.** To repair or provide maintenance for.

(60) **Shock absorbing lanyard.** A flexible line of webbing, cable, or rope used to secure a full body harness to a lifeline or anchorage point that has an integral shock absorber.

(61) **Snap hook.** See "locking snap hook."

(62) **Standard guardrail system.** A type of fall restraint system that is a vertical barrier consisting of a top rail and midrail, and toeboard when used as falling object protection for persons who may work or pass below, that is erected along all open sides or edges of a walking/working surface, ramps, platforms, or runways.

(63) **Standard strength and construction.** Any construction of guardrails, handrails, covers, or other guards that meets the requirements of this chapter.

(64) **Static line.** See "horizontal lifeline."

(65) **Steep pitched roof.** A roof having a slope greater than four in (~~twelve~~) 12.

(66) **Structural member.** A support that is a constituent part of any building or structure. Structural members include columns, girders, beams, trusses, joists, and similar supporting members of a building or structure.

(67) **Suitable.** That which fits, or has the qualities or qualifications to meet a given purpose, occasion, condition, function, or circumstance.

(68) **Temporary.** The duration of the task the worker performs is brief or short.

(69) **Toeboard.** A vertical barrier at floor level erected along all open sides or edges of a floor opening, platform, runway, ramp, or other walking/working surface to prevent materials, tools, or debris from falling onto persons passing through or working in the area below.

(70) **Unprotected sides and edges.** Any open side or edge of a floor, roof, balcony/deck, platform, ramp, runway, or walking/working surface where there is no standard guardrail system, or parapet wall of solid strength and construction that is at least (~~thirty-nine~~) 39 inches in vertical height.

(71) **Walking/working surface.** Any surface, whether horizontal or vertical on which an employee walks, works, or gains access to a work area or workplace location. Walking/working surfaces include, but are not limited to, floors, the ground, roofs, ramps, bridges, runways, stairs, dockboards, formwork, and reinforcing steel but not including ladders.

(72) **Warning line system.** A barrier erected on a walking and working surface or a low pitch roof (four in (~~twelve~~) 12 or less), to warn employees that they are approaching an unprotected fall hazard(s).

AMENDATORY SECTION (Amending WSR 20-12-091, filed 6/2/20, effective 10/1/20)

WAC 296-880-20005 Fall protection required at four feet or more.

The employer must ensure that fall arrest systems, fall restraint systems, or positioning device systems are provided, installed, and implemented in accordance with WAC 296-880-400 Fall protection system specifications when employees are exposed to fall hazards of four feet or more to the ground or lower level.

(1) Walking/working surfaces with unprotected sides or edges. Except as required in subsections (2) through (10) of this section, the employer must ensure that each employee on a walking/working surface with an unprotected side or edge four feet or more above the ground or lower level is protected by one of the following fall protection systems:

(a) A standard guardrail system, or the equivalent, as specified in WAC 296-880-40005, on all open sides, except where there is entrance to a ramp, stairway, or ladder. The guardrail must be provided

with a standard toeboard wherever: Beneath the open sides, persons can pass, there is moving machinery, or there is equipment with which falling materials could create a hazard.

(i) When employees are using stilts, the height of the top rail or equivalent member of the guardrail system must be increased (or additional rails may be added) an amount equal to the height of the stilts while maintaining the strength specifications of the guardrail system.

(ii) Where employees are working on or from platforms or ladders above the protection of the guardrail system, the employer must either increase the height of the guardrail system (or additional rails may be added) or select and implement another fall protection system as specified in (b), (c), (d), (e), or (f) of this subsection.

(iii) When guardrails must be temporarily removed to perform a specific task, the area must be constantly attended by an employee until the guardrail is replaced. The only duty the employee must perform is to warn persons entering the area of the fall hazard. The employee must be protected from the fall hazard by a personal fall arrest system or personal fall restraint system.

(b) A personal fall restraint system;

(c) A personal fall arrest system;

(d) A safety net system;

(e) A catch platform; or

(f) A warning line system.

(2) Guarding of ramps, runways, and inclined walkways.

(a) Ramps, runways, and inclined walkways that are four feet or more above the ground or lower level must be equipped with a standard guardrail system or the equivalent, as specified in WAC 296-880-40005, along each open side. Wherever tools, machine parts, or materials are likely to be used on the runway, a toeboard must also be installed on each open side to protect persons working or passing below.

(b) Runways used exclusively for special purposes may have the guardrail on one side omitted where operating conditions necessitate such omission, provided the falling hazard is minimized by using a runway not less than (~~eighteen~~) 18 inches wide.

Note: See WAC 296-880-40010 for other specific criteria for ramps, runways, and inclined walkways.

(3) Holes.

(a) The employer must protect employees from falling into or through holes four feet or more to the ground or lower level by one of the following fall protection systems:

(i) A standard guardrail system, or the equivalent, as specified in WAC 296-880-40005, on all open sides, except where there is entrance to a ramp, stairway, or ladder. The guardrail must be provided with a standard toeboard wherever, beneath the open sides, persons can pass, or there is moving machinery, or there is equipment with which falling materials could create a hazard;

(ii) A cover, as specified in WAC 296-880-40015;

(iii) A warning line system erected at least (~~fifteen~~) 15 feet from all unprotected sides or edges of the hole and meets the requirements of WAC 296-880-40040;

(iv) When the cover, guardrail system, or warning line system must be temporarily removed to perform a specific task, an employee must remain at the hole until the cover, guardrail system, or warning line system is replaced. The only duty the employee must perform is to warn persons entering the area of the fall hazard. The employee must

be protected from the fall hazard by a personal fall arrest system or personal fall restraint system; or

(v) Personal fall arrest systems or personal fall restraint systems.

(b) The employer must guard skylight holes and skylights.

(i) Unprotected skylight holes must be guarded by covers of standard strength and construction, standard guardrail systems on all exposed sides, or employees must be protected by personal fall restraint systems, or personal fall arrest systems.

(ii) If the skylight has been installed and is not capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the skylight at any one time, the skylight must be guarded by a cover of standard strength and construction, a standard guardrail system on all sides, or employees must be protected by personal fall restraint systems, or personal fall arrest systems.

(c) The employer must guard hatchways and chute holes by one of the following:

(i) Hinged covers of standard strength and construction and a standard guardrail system with only one exposed side. When the hole is not in use, the cover must be closed or the exposed side must be guarded at both top and intermediate positions by removable standard guardrail systems; or

(ii) A removable standard guardrail system with toeboard on not more than two sides of the hole and fixed standard guardrail system with toeboards on all other exposed sides. The removable guardrail must be kept in a place when the hole is not in use and must be hinged or otherwise mounted so as to be conveniently replaceable.

(d) The employer must guard ladderways or platforms by a standard guardrail system with standard toeboards on all exposed sides, except at the entrance to a hole, with the passage through the guardrail either provided with a swinging gate or so offset that a person cannot walk directly into the hole.

(e) The employer must guard pits and trap door holes by covers of standard strength and construction. While the cover is not in place, the pit or trap door holes must be protected on all exposed sides by a standard guardrail system.

(f) The employer must guard repair pits, service pits, and assembly pits by a cover, a guardrail system, a fall restraint system or fall arrest system.

(g) The employer must guard manholes by standard covers which need not be hinged in place. While the cover is not in place, the hole must be constantly attended or must be protected by a removable standard guardrail system.

(4) Guarding of openings. The employer must ensure that each employee working on, at, above, or near openings (including those with chutes attached) where the outside bottom edge of the opening is four feet or more above a lower level and the inside bottom edge of the opening is less than (~~thirty-nine~~) 39 inches above the working surface, are protected from falling by the use of a guardrail system, a safety net system, a personal fall arrest system, or personal fall restraint system.

(5) Fall protection during form and reinforcing work. The employer must ensure that employees exposed to fall hazards of four feet or more while placing or tying reinforcing steel or working on the face of formwork or reinforcing steel are protected by personal fall arrest systems, positioning device systems, or safety net systems.

(6) Fall protection on steep pitched roofs. Regardless of the work activity, the employer must ensure that employees exposed to fall hazards of four feet or more while working on a roof with a pitch greater than four in ~~((twelve))~~ 12 use one of the following:

- (a) Fall restraint system. Safety monitor systems and warning line systems are prohibited on steep pitched roofs;
- (b) A personal fall arrest system; or
- (c) A positioning device system.

(7) Fall protection on low pitched roofs. The employer must ensure that employees exposed to fall hazards of four feet or more while engaged in work, other than roofing work or constructing a leading edge on low pitched roofs use one of the following:

- (a) A personal fall restraint system;
- (b) A personal fall arrest system;
- (c) A positioning device system; ~~((or))~~
- (d) A warning line system;
- (e) A standard guardrail system;
- (f) Safety watch system when work, other than construction work, is performed that is both infrequent and temporary, and not within six feet of the roof edge.

Exception: When work, other than construction work, is performed 15 feet or more from the roof edge, the employer is not required to provide any fall protection, provided the work is both infrequent and temporary and the employer implements and enforces a work rule prohibiting employees from going within 15 feet of the roof edge without using fall protection in accordance with (a) through (f) of this subsection.

~~(8) ((Safety watch system. When one employee is conducting repair work or servicing equipment on a low pitch roof four feet or more above a lower level, employers are allowed to use a safety watch system in accordance with WAC 296-880-40050.~~

~~(9))~~ Hazardous slopes. Employees exposed to falls of four feet or more while performing construction work on a hazardous slope must use personal fall restraint systems or positioning device systems.

~~((10))~~ (9) Vehicles and rolling stock. The employer must ensure that employees exposed to fall hazards of four feet or more to the ground or lower level from vehicles or rolling stock on which employees must be located in order to perform their job duties are protected by fall arrest systems, fall restraint systems, or positioning device systems.

Exception: Where suitable anchorages cannot be provided or when the use of fall protection creates a greater hazard, work may be performed on vehicles or rolling stock without a fall protection system.

AMENDATORY SECTION (Amending WSR 20-12-091, filed 6/2/20, effective 10/1/20)

WAC 296-880-30005 Construction work. This section applies to work activities under the scope of chapter 296-155 WAC, Safety standards for construction work, unless specifically addressed in WAC 296-880-200 of this chapter.

(1) The employer must ensure that a fall arrest system, fall restraint system, or positioning device system is provided, installed, and implemented in accordance with ~~((this chapter))~~ WAC 296-880-400 Fall protection system specifications when employees are exposed to fall hazards of ~~((ten))~~ six feet or more to the ground or lower level while:

- (a) Engaged in roofing work on a low pitched roof;
- (b) Constructing a leading edge ~~((or))~~.

Exception: Employees not directly involved with constructing the leading edge, or are not performing roofing work must comply with WAC 296-880-200 Fall protection required at four feet or more.

~~((e))~~ (2) The employer must ensure that a fall arrest system, fall restraint system, or positioning device system is provided, installed, and implemented in accordance with WAC 296-880-400 Fall protection system specifications when employees are exposed to fall hazards of 10 feet or more to the ground or lower level while:

(a) Engaged in the erection or placement of structural members.

Exception: When the erection or placement of structural members is performed on or from a floor, deck, roof, or similar surface you must comply with WAC 296-880-200 Fall protection required at four feet or more.

~~((d))~~ (b) Engaged in excavation and trenching operations.

(i) Exceptions. Fall protection is not required at excavations when employees are:

(A) Directly involved with the excavation process and on the ground at the top edge of the excavation; or

(B) Working at an excavation site where appropriate sloping of side walls has been implemented as the excavation protective system.

(ii) Fall protection is required for employees standing in or working in the affected area of a trench or excavation exposed to a fall hazard of ~~((ten))~~ 10 feet or more; and:

(A) The employees are not directly involved with the excavation process; or

(B) The employees are on the protective system or any other structure in the excavation.

Note: Persons considered directly involved in the excavation process include:

1. Foreman of the crew.
2. Signal person.
3. Employee hooking on pipe or other materials.
4. Grade person.
5. State, county, or city inspectors inspecting the excavation or trench.
6. An engineer or other professional conducting a quality-assurance inspection.

~~((2))~~ (3) Employees are exempt from WAC 296-880-30005 under the following conditions:

(a) During initial installation of the fall protection anchor prior to engaging in any work activity, or the disassembly of the fall protection anchor after all work activities have been completed;

(b) When employees are inspecting, investigating, or assessing roof level conditions or work to be performed only on low pitch roofs prior to the start of construction work or after all construction work has been completed;

This exemption does not apply on steep pitch roofs, where construction work is underway, or when fall protection systems or equipment meeting the requirements of this chapter have been installed and are available for workers to use for pre-work and post-work inspections, investigations, or assessments.

Note: Examples of activities the department recognizes as inspecting or estimating include:

- Measuring a roof to determine the amount of materials needed for a project;
- Inspecting the roof for damage without removing equipment or components; and
- Assessing the roof to determine what method of fall protection will be provided to employees.

Note: Examples the department does not recognize as inspecting or estimating under this exemption include:

- Delivering, staging, or storing materials on a roof; and
- Persons estimating or inspecting on roofs that would be considered a "hazardous slope" by definition.

(c) When employees must be located on vehicles, or rolling stock in order to perform their job duties.

WAC 296-880-30055 Ski area facilities and operations. This section applies to all persons, firms, corporations, or others engaged in the operation of organized ski areas and facilities under the scope of chapter 296-59 WAC, Safety standards for ski area facilities and operations.

(1) Personal protective equipment, general requirements.

(a) Personal fall arrest systems or personal fall restraint systems must be provided and used whenever employees are working in locations which expose them to a fall hazard of four feet or more (~~than ten feet~~).

(b) Employees will not be required to wear personal fall protection systems while riding on a standard lift chair while seated in the normal riding position.

(2) Ski lift facilities and structures. Personal fall arrest systems or personal fall restraint systems must be used when working at unprotected elevated locations. Exception to this requirement must only be permitted for emergency rescue or emergency inspection if a personal fall arrest system is not immediately available. Required personal protective equipment must be made available as quickly as possible.

(3) Guardrails on ski lift aerial work platforms.

(a) The platform must be equipped with standard height and strength guardrails where such guardrails will pass through the configuration of all lifts on which it is intended to be used.

(b) Where guardrails must be less than (~~thirty-nine~~) 39 inches high in order to clear carriages, guidage, etc., guardrails must be as high as will clear the obstructions but never less than (~~twelve~~) 12 inches high.

(c) If the work platform is equipped with an upper work level, the upper level platform must be equipped with a toeboard at least four inches high.

(d) Each platform must be equipped with a lanyard attachment ring for each permissible occupant to attach a personal fall arrest system or personal fall restraint system.

(e) Each lanyard attachment ring must be of such strength as to sustain (~~five thousand four hundred~~) 5,400 pounds of static loading for each occupant permitted to be attached to a specific ring.

(f) Attachment rings must be permanently located as close to the center balance point of the platform as is practical.

(g) The rings may be movable, for instance, up and down a central suspension rod, but must not be completely removable.

(4) Work platform use.

(a) Passengers must be provided with and must use the correct personal fall arrest system or personal fall restraint system for the intended work.

(b) Any time a passenger's position is not protected by a standard guardrail at least (~~thirty-nine~~) 39 inches high, the individual must be protected by a personal fall restraint system, which will not permit free-fall over the platform edge.

(c) When personnel are passengers on a work platform and their work position requires the use of a personal fall arrest or personal fall restraint system, the lanyard must be attached to the work platform, not to the haulrope or tower.

All specifications would be in accordance with WAC 296-880-400.

Additional requirements for ski area facilities and operations can be found in chapter 296-59 WAC, Safety standard for ski area facilities and operations.

AMENDATORY SECTION (Amending WSR 20-12-091, filed 6/2/20, effective 10/1/20)

WAC 296-880-40005 Guardrail systems. Guardrail systems and their use must conform to the following provisions:

(1) A standard guardrail system must consist of top rail, intermediate rail, and posts, and must have a vertical height of (~~(thirty-nine to forty-five)~~) 39 to 45 inches from upper surface of top rail to floor, platform, runway, or ramp level. When conditions warrant, the height of the top edge may exceed the (~~(forty-five)~~) 45 inch height, provided the guardrail system meets all other criteria of this subsection. The intermediate rail must be halfway between the top rail and the floor, platform, runway, or ramp. The ends of the rails must not overhang the terminal posts except where such overhang does not constitute a projection hazard.

(2) Minimum requirements for standard guardrail systems under various types of construction are specified in the following items:

(a) For wood guardrails, the posts must be of at least two-inch by four-inch stock spaced not to exceed eight feet. The top rail must be of at least two-inch by four-inch stock and each length of lumber must be smooth surfaced throughout the length of the guardrail. The intermediate rail must be of at least one-inch by six-inch stock. Other configurations may be used for the top rail when the configuration meets the requirements of (g) of this subsection.

(b) For pipe guardrails, posts and top and intermediate rails must be at least one and one-half inches nominal OD diameter with posts spaced not more than eight feet on centers. Other configurations may be used for the top rail when the configuration meets the requirements of (g) of this subsection.

(c) For structural steel guardrails, posts and top and intermediate rails must be of two-inch by two-inch by three-eighths inch angles or other metal shapes of equivalent bending strength, with posts spaced not more than eight feet on centers. Other configurations may be used for the top rail when the configuration meets the requirements of (g) of this subsection.

(d) For wire rope guardrails, the top and intermediate rails must meet the strength factor and deflection of (~~(g)~~) (h)(ii) of this subsection. The top rail must be flagged at not more than six foot intervals with high visibility material. Posts must be spaced not more than eight feet on centers. The rope must be stretched taut and must be between (~~(thirty-nine and forty-five)~~) 39 and 45 inches in height at all points. Other configurations may be used for the top rail when the configuration meets the requirements of (h) of this subsection.

(e) Guardrail systems must be of such construction that the completed structure is capable of withstanding a load of at least (~~(two hundred)~~) 200 pounds applied within two inches of the top edge, in any outward or downward direction, at any point along the top edge.

(f) When the (~~(two hundred)~~) 200 pound test load specified in (e) of this subsection is applied in a downward direction, the top edge of

the guardrail must not deflect to a height less than ~~((thirty-nine))~~ 39 inches above the walking/working surface.

(g) Guardrails receiving heavy stresses from employees trucking or handling materials must be provided additional strength by the use of heavier stock, closer spacing of posts, bracing, or by other means.

(h) Other types, sizes, and arrangements of guardrail construction are acceptable, provided they meet the following conditions:

(i) A smooth surfaced top rail at a height above floor, platform, runway, or ramp level between ~~((thirty-nine and forty-five))~~ 39 and 45 inches;

(ii) When the ~~((two-hundred))~~ 200 pound (890 N) load specified in (e) of this subsection is applied in a downward direction, the top edge of the guardrail must not deflect to a height less than ~~((thirty-nine))~~ 39 inches (1.0 m) above the walking/working surface. Guardrail system components selected and constructed in accordance with this chapter will be deemed to meet this requirement;

(iii) Protection between top rail and floor, platform, runway, ramp, or stair treads, equivalent at least to that afforded by a standard intermediate rail;

(iv) Elimination of overhang of rail ends unless such overhang does not constitute a hazard.

(3) Toeboard specifications.

(a) A standard toeboard must be a minimum of three and one-half inches in vertical height from the top edge to the level of the walking/working surface. Toeboards may be made of any substantial material, either solid, or with openings not over one inch in greatest dimension. Toeboards must be securely fastened in place with no more than one-quarter inch clearance above the walking/working surface.

(b) Where material is piled to such height that a standard toeboard does not provide protection, paneling, or screening from floor to intermediate rail or to top rail must be provided.

AMENDATORY SECTION (Amending WSR 20-12-091, filed 6/2/20, effective 10/1/20)

WAC 296-880-40050 Safety watch system requirements. Safety watch systems and their use must conform to the following provisions:

(1) When one employee is conducting ~~((any repair))~~ work ~~((or servicing equipment))~~, other than construction work, on a low pitch roof, not within six feet of the roof edge ~~((, and where exposure to falls is infrequent (not on a predictable and regular basis)))~~ and when the work is both infrequent and temporary, employers are allowed to use a safety watch system.

(2) The employer must ensure the safety watch system meets the following requirements:

(a) There can only be two people on the roof while the safety watch system is being used: One employee acting as the safety watch and one employee engaged in the ~~((repair work or servicing equipment))~~ work activity;

(b) The employee performing the ~~((repair))~~ work ~~((or service))~~ must comply promptly with fall hazard warnings from the safety watch;

(c) Mechanical equipment is not used; and

(d) The safety watch system is not used when weather conditions create additional hazards.

- (3) The employer must ensure the employee acting as the safety watch meets all of the following:
- (a) Is a competent person as defined in WAC 296-880-095;
 - (b) Is trained in the requirements of this section;
 - (c) Has full control over the work as it relates to fall protection;
 - (d) Has a clear, unobstructed view of the worker;
 - (e) Is able to maintain normal voice communication; and
 - (f) Performs no other duties while acting as the safety watch.