

**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 15 feet. For example, an excavation 10 feet deep has an affected area extending 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 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 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 ~~((τ))~~ or personal fall restraint systems ~~((τ 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 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 30 inches (76 cm) or more high and 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.

(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~~) protection system ((in)) allowed for use when roofing on a low pitched roof which consists of a warning line and 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 in which a competent person 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 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 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 12 or less), to warn employees that they are approaching an unprotected fall hazard(s).

**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 WAC 296-880-400 Fall protection system specifications when employees are exposed to fall hazards of 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.

**Exceptions:** 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.  
A safety monitoring system may be used when engaged in roofing work on a low pitched roof.

(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.

(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 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.

(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.

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

**WAC 296-880-40040 Warning line system requirements.** Warning line systems and their use must conform to the following provisions:

Warning line system specifications used on roofs with a pitch of four in (~~(twelve)~~) 12 or less for roofing work, leading edge work and on low pitched open sided surfaces for work activities other than roofing work or leading edge work. The employer must ensure the following:

(1) Warning lines must be erected around all unprotected sides and edges of the work area.

(a) Warning lines used during roofing work:

(i) When roofing work is taking place or when mechanical equipment is not being used, the warning line must be erected not less than six feet (1.8 m) from the edge of the roof;

(ii) When mechanical equipment is being used, the warning line must be erected not less than six feet (1.8 m) from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than (~~(ten)~~) 10 feet (3.1 m) from the roof edge which is perpendicular to the direction of mechanical equipment operation.

(b) Warning lines erected for leading edge work. Warning lines must be erected to separate employees who are engaged in leading edge work (between the forward edge of the warning line and the leading edge), from other work areas on the low pitched surface. The employer must ensure:

(i) The warning line is erected not less than six feet nor more than (~~(twenty-five)~~) 25 feet from the leading edge; and

(ii) (~~(When)~~) Fall arrest systems as described in WAC 296-880-40020 (~~(7)~~) or fall restraint systems as described in WAC 296-880-40025 (~~(are not used, the employer must implement a safety monitor system as described in WAC 296-880-40045)~~) must be used to protect employees engaged in constructing the leading edge (~~(who are working between the forward edge of the warning line and the leading edge)~~).

(c) Warning lines erected on low pitched open sided surfaces for work activities other than roofing work, or leading edge work must be erected not less than (~~(fifteen)~~) 15 feet from the unprotected sides or edges of the open sided surface.

(2) The warning line must consist of a rope, wire, or chain and supporting stanchions erected as follows:

(a) The rope, wire, or chain must be flagged at not more than six foot (1.8 m) intervals with high visibility material. Highly visible

caution or danger tape as described in (d) of this subsection, does not need to be flagged.

(b) The rope, wire, or chain must be rigged and supported in such a way that its lowest point (including sag) is no less than (~~(thirty-six)~~) 36 inches from the surface and its highest point is no more than (~~(forty-five)~~) 45 inches from the surface.

(c) After being erected, with the rope, wire or chain attached, stanchions must be capable of resisting, without tipping over, a force of at least (~~(sixteen)~~) 16 pounds (71 N) applied horizontally against the stanchion, (~~(thirty)~~) 30 inches (0.76 m) above the surface, perpendicular to the warning line, and in the direction of the unprotected sides or edges of the surface.

(d) The rope, wire, or chain must have a minimum tensile strength of (~~(five-hundred)~~) 500 pounds (2.22 kN), and after being attached to the stanchions, must be capable of supporting, without breaking, the loads applied to the stanchions. Highly visible caution or danger tape may be used in lieu of rope, wire, or chain as long as it is at least three inches wide and three mils thick, and has a tensile strength of at least (~~(two-hundred)~~) 200 pounds.

(e) The line must be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.

(3) The employer must erect access paths as follows:

(a) Points of access, materials handling areas, and storage areas must be connected to the work area by a clear access path formed by two warning lines.

(b) When the path to a point of access is not in use, the employer must place a rope, wire, or chain, equal in strength and height to the warning line, across the path at the point where the path intersects the warning line erected around the work area.

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

**WAC 296-880-40045 Safety monitor system requirements.** Safety monitor systems and their use must conform to the following provisions:

(1) A safety monitor system may be used in conjunction with a warning line system as a method of fall protection during roofing work on low pitched roofs (~~(or leading edge work on low pitched surfaces)~~).

**Note:** The warning line is not required when performing roofing work on low pitched roofs less than (~~(fifty)~~) 50 feet wide. For information on determining roof widths, see WAC 296-880-500, Appendix A, Determining roof widths.

(2) When selected, the employer must ensure that the safety monitor system is addressed in the fall protection work plan, including the name of the safety monitor(s) and the extent of their training in both the safety monitor and warning line systems. The employer must ensure that the following requirements are met:

(a) The safety monitor system must not be used when adverse weather conditions create additional hazards.

(b) Employees working outside of the warning line system, (between the forward edge of the warning line and the unprotected sides or edges of a low pitched surface), must be readily distinguishable from other members of the crew that are working inside the warning



line system by wearing highly visible, distinctive, and uniform apparel.

(c) Employees must promptly comply with fall hazard warnings from the safety monitor.

(d) The employer must train a person acting in the capacity of safety monitor(s) in the function of both the safety monitor and warning line systems, and they must:

(i) Be a competent person as defined in WAC 296-880-095;

(ii) Have control authority over the work as it relates to fall protection;

(iii) Be instantly distinguishable over members of the work crew;

(iv) Perform no other duties while acting as safety monitor;

(v) Be positioned in relation to the workers under their protection, so as to have a clear, unobstructed view and be able to maintain normal voice communication;

(vi) Not supervise more than eight exposed workers at one time; and

(vii) Warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner.