Fall Protection – Part 2

Reset Form

Guardrails, Handrails, and Covers for Construction

Self-Inspection Checklist

Optional Information

Name of School:
Date of Inspection:
Career-Technical program/course/room:
Signature of inspector:

Guidelines:

This checklist covers fall protection systems criteria and regulations for guardrail systems, personal fall arrest systems, and warning line systems. These regulations were issued by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) under the construction standard 29 CFR 1926.502. This checklist applies to temporary worksites associated with construction, alteration, demolition, and repair work including painting and decorating. In general, fall protection is required where employees work on walking or working surfaces that are 6 feet or more above lower levels. This checklist should be used with the Fall Protection-Part 1 and Fall Protection-Part 3 checklists. The regulations cited apply only to private employers and their employees, unless adopted by a State agency and applied to other groups such as public employees. A yes answer to a question indicates that this portion of the inspection complies with the OSHA or U.S. Environmental Protection Agency (EPA) standard, or with a nonregulatory recommendation. Definitions of terms in bold type are provided at the end of the checklist. Safety net systems and positioning device systems have not been addressed as part of these fall protection checklists. In these situations, please consult the OSHA regulations.

Guardrail Systems		
	1	Is the top edge height of top rails (or equivalent guardrail system members) 42 inches, plus or minus 3 inches above the walking or working level? [29 CFR 1926.502(b)(1)] *Note: When necessary, the height of the top edge may exceed the 45_inch height, if the guardrail system meets all other criteria. When employees are using stilts, the top edge height of the top rail (or equivalent member) shall be increased an amount equal to the height of the stilts.*

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National Institute for Occupational Safety and Health

Safety Checklist Program for Schools
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Guardrail Systems		
	2	When no wall or parapet wall is at least 21 inches high, are the midrails, screens, mesh, or intermediate vertical members (or equivalent intermediate structural members) installed between the top edge of the guardrail system and the walking or working surface? [29 CFR 1926.502(b)(2)]
	3	Are midrails installed at a height midway between the top edge of the guardrail system and the walking or working level? [29 CFR 1926.502(b)(2)(i)]
	4	Do screens and mesh extend from the top rail to the walking or working level and along the entire opening between top rail supports? [29 CFR 1926.502(b)(2)(ii)]
	5	When used between posts, are intermediate members (such as balusters) 19 inches apart or less? [29 CFR 1926.502(b)(2)(iii)]
	6	Are other structural members (such as additional midrails and architectural panels) installed so that openings in the guardrail system are 19 inches wide or less? [29 CFR 1926.502(b)(2)(iv)]
	7	Can guardrail systems withstand (without failure) a force of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge? [29 CFR 1926.502(b)(3)]
	8	When a 200 pound test load is applied in a downward direction to the top rail, does the top edge of the guardrail deflect to a height of 39 inches or more above the walking or working level? [29 CFR 1926.502(b)(4)] *Note: For specifications on selection and construction of guardrail systems, please refer to the OSHA guidelines in Appendix B of subpart M–guardrail systems.*
	9	Can midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members withstand (without failure) a force of at least 150 pounds applied in any downward or outward direction at any point along the midrail or other member? [29 CFR 1926.502(b)(5)]
	10	Are guardrail systems surfaced to prevent snagging of clothing and injury from punctures or lacerations? [29 CFR 1926.502(b)(6)]
	11	Is it prohibited for the ends of all top rails and midrails to overhang the terminal posts (unless overhang does not cause a hazard)? [29 CFR 1926.502(b)(7)]
	12	Is it prohibited to construct top rails or midrails of steel banding and plastic banding? [29 CFR 1926.502(b)(8)]
	13	Are top rails and midrails at least one-quarter inch nominal diameter or thickness? [29 CFR 1926.502(b)(9)] *Note: This is to prevent cuts and lacerations.*
	14	If wire rope is used for top rails, is it flagged at 6-foot intervals (or less) with high-visibility material? [29 CFR 1926.502(b)(9)]
	15	When guardrail systems are used to protect hoisting areas, is a chain, gate, or removable guardrail section placed across the access opening between guardrail sections when hoisting operations are not taking place? [29 CFR 1926.502(b)(10)]
	16	When guardrail systems are used at holes, are they erected on all unprotected sides or edges of the hole? [29 CFR 1926.502(b)(11)]
	17	When guardrail systems are placed around holes, do only two (or fewer) sides have removable guardrail sections to allow the passage of materials? [29 CFR 1926.502(b)(12)]
	18	When a hole is not in use, is it closed over with a cover, or is a guardrail system provided along all unprotected sides or edges? [29 CFR 1926.502(b)(12)]
	19	Are guardrail systems equipped with a gate (or offset so that a person cannot walk directly into the hole) when they are placed around holes that are used as points of access (such as ladderways)? [29 CFR 1926.502(b)(13)]
	20	Are guardrail systems used on ramps and runways erected along each unprotected side or edge? [29 CFR 1926.502(b)(14)]
	21	Is manila, plastic, or synthetic rope that is used for top rails or midrails inspected frequently to ensure that it continues to meet the strength requirements indicated in Questions 7, 8, and 9? [29 CFR 1926.502(b)(15)]

Personal Fall Arrest Systems		
	22	Is the use of body belts as part of a personal fall arrest system prohibited? [29 CFR 1926.502(d)]
	23	Are connectors on personal fall arrest systems made of drop-forged, pressed, or formed steel; or of equivalent materials? [29 CFR 1926.502(d)(1)]
	24	Are connectors on personal fall arrest systems covered with a corrosion-resistant finish? Are all surfaces and edges smooth to prevent damage to interfacing parts of the system? [29 CFR 1926.502(d)(2)]
	25	Do dee-rings and snap hooks on personal fall arrest systems have a minimum tensile strength of 5,000 pounds? [29 CFR 1926.502(d)(3)]
	26	Have dee-rings and snap hooks on personal fall arrest systems been proof tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or becoming deformed? [29 CFR 1926.502(d)(4)]
	27	Do locking snap hooks prevent disengagement of the snap hook if the connected member contacts the snap hook keeper? [29 CFR 1926.502(d)(5)]
	28	Are locking snap hooks prohibited for the following types of connections (unless designed for that purpose)? [29 CFR 1926.502(d)(6)] 1. directly to webbing, rope, or wire rope 2. to each other 3. to a dee-ring to which another snaphook or other connector is attached 4. to a horizontal lifeline 5. to any object that is incompatible with the snaphook such that unintentional disengagement could occur
	29	Are horizontal lifelines designed, installed, and used (under the supervision of a qualified person) as part of a complete personal fall arrest system that maintains a safety factor of at least two? [29 CFR 1926.502(d)(8)]
	30	Do lanyards and vertical lifelines have a minimum breaking strength of 5,000 pounds? [29 CFR 1926.502(d)(9)]
	31	When vertical lifelines are used, is each person attached to a separate lifeline? [29 CFR 1926.502(d)(i)]
	32	Are lifelines protected against being cut or abraded [29 CFR 1926.502(d)(11)]
	33	Can self retracting lifelines and lanyards that automatically limit free-fall distance to 2 feet or less sustain a tensile load of at least 3,000 pounds (applied to the device with the lifeline or lanyard fully extended)? [29 CFR 1926.502(d)(12)]
	34	Can the following equipment sustain a tensile load of at least 5,000 pounds applied to the device with the lifeline or lanyard fully extended? [29 CFR 1926.502(d)(13)] 1. self-retracting lifelines and lanyards that do not limit free-fall distance to 2 feet or less 2. ripstitch lanyards 3. tearing and deforming lanyards
	35	Are only ropes and straps (webbing) made of synthetic fibers used in lanyards, lifelines, and strength components of body belts and body harnesses? [29 CFR 1926.502(d)(14)]
	36	Are anchorages used to attach personal fall arrest equipment separate from any anchorage used to support or suspend platforms? Can they support at least 5,000 pounds per person attached? [29 CFR 1926.502(d)(15)] *Note: As an alternative, anchorages may be designed, installed, and used as part of a complete personal fall arrest system that maintains a safety factor of at least two and is under the supervision of a qualified person.*
	37	When stopping a fall, do personal fall arrest systems limit the maximum arresting force on a person to 1,800 pounds when used with a body harness? [29 CFR 1926.502(d)(16)(ii)]
	38	When stopping a fall, are personal fall arrest systems rigged such that a person can neither free fall more than 6 feet, nor contact any lower level? [29 CFR 1926.502(d)(16)(iii)]
	39	When stopping a fall, do personal fall arrest systems bring a person to a complete stop and limit maximum deceleration distance to 3.5 feet? [29 CFR 1926.502(d)(16)(iv)]

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Personal Fall Arrest Systems		
	40	When stopping a fall, can personal fall arrest systems withstand twice the potential impact energy of a person free falling a distance of 6 feet, or the free fall distance permitted by the system (whichever is less)? [29 CFR 1926.502(d)(16)(v)] *Note: The system is considered to be in compliance with the requirements outlined in Questions 37-40 if (a) the personal fall arrest system meets the criteria and protocols in Appendix C to subpart M, and (b) the system is used by an employee with a combined person and tool weight of less than 310 pounds (140 kg). If the system is used by an employee having a combined tool and body weight of 310 pounds (140 kg) or more, then the employer must modify the criteria and protocols of the Appendix to provide proper protection for such heavier weights, or the system will not comply with the OSHA requirements.*
	41	Is the attachment point of the body harness located in the center of the wearer's back near shoulder level, or above the wearer's head? [29 CFR 1926.502(d)(17)]
	42	Are body harnesses and components used only for personal protection (as part of a personal fall arrest systems) and not to hoist materials? [29 CFR 1926.502(d)(18)]
	43	Are personal fall arrest systems and components that are subjected to impact loading immediately removed from service and not used again for protection until inspected by a competent person and determined to be undamaged and suitable for reuse? [29 CFR 1926.502(d)(19)]
	44	Are provisions made for prompt rescue in the event of a fall, or are employees able to rescue themselves? [29 CFR 1926.502(d)(20)]
	45	Are personal fall arrest systems inspected before each use for wear and damage? Are defective components removed from service? [29 CFR 1926.502(d)(21)]
	46	Is attaching personal fall arrest systems to guardrail systems or hoists prohibited? [29 CFR 1926.502(d)(23)] *Note: OSHA regulations permit some exemptions.*
	47	When a personal fall arrest system is used at hoist areas, is it rigged to allow the movement of the person only as far as the edge of the walking or working surface? [29 CFR 1926.502(d)(24)]

Warning Line Systems		
	48	Is a warning line erected around all sides of the roof work area? [29 CFR 1926.502(f)(1)]
	49	When mechanical equipment is not used, is the warning line erected 6 feet or more from the roof edge? [29 CFR 1926.502(f)(1)(i)]
	50	When mechanical equipment is used, is the warning line erected 6 feet or more from the roof edge that is parallel to the direction of mechanical equipment operation, and 10 feet or more from the roof edge that is perpendicular to the direction of mechanical equipment operation? [29 CFR 1926.502(f)(1)(ii)]
	51	Are points of access, materials handling areas, storage areas, and hoisting areas connected to the work area by an access path formed by two warning lines? [29 CFR 1926.502(f)(1)(iii)]
	52	When the path to a point of access is not in use, is a rope, wire, chain, or other barricade (equivalent in strength and height to the warning line) placed across the path, or is the path offset such that a person cannot walk directly into the work area? [29 CFR 1926.502(f)(1)(iv)] *Note: Place the barricade at the point where the path intersects the warning line erected around the work area.*
	53	Do warning lines consist of supporting stanchions and ropes, wires, or chains? [29 CFR 1926.502(f)(2)]
	54	Is the rope, wire, or chain flagged at 6-foot intervals (or less) with high-visibility material? [29 CFR 1926.502(f)(2)(i)]
	55	Is the rope, wire, or chain rigged and supported so that its lowest point (including sag) is 34 inches or more from the walking or working surface, and its highest point is 39 inches or less from the walking or working surface? [29 CFR 1926.502(f)(2)(ii)]

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Warning Line Systems		
	56	After being erected (with the rope, wire, or chain attached), can stanchions resist (without tipping over) a force that is 1. at least 16 pounds applied horizontally against the stanchion, 2. 30 inches above the walking or working surface, 3. perpendicular to the warning line, and 4. in the direction of the floor, roof, or platform edge? [29 CFR 1926.502(f)(2)(iii)]
	57	Does the rope, wire, or chain have a minimum tensile strength of 500 pounds? After being attached to the stanchions, can it support (without breaking) the loads applied to the stanchions (as described in Question 56)? [29 CFR 1926.502(f)(2)(iv)]
	58	Is the line attached at each stanchion so 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? [29 CFR 1926.502(f)(2)(v)]
	59	Are employees and students prohibited from entering the area between a roof edge and a warning line unless he or she is performing roofing work in that area? [29 CFR 1926.502(f)(3)]
	60	Is mechanical equipment on roofs used or stored only in areas where employees and students are protected by a warning line system, guardrail system, or personal fall arrest system? [29 CFR 1926.502(f)(4)]

Definitions

Competent person: one qualified in the following areas: (a) The nature of fall hazards in the work area; (b) The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems; (c) The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled-access zones, and other protection; (d) The role of each person in the safety monitoring system; (e) the limitations on the use of mechanical equipment during work on low-sloped roofs; (f) The correct procedures for handling and storing equipment and materials and erecting overhead protection; (g)The role of each person in fall protection plans; and (h) the OSHA fall protection standard.

Controlled-access zone: an area in which certain work (e.g., overhand bricklaying) may take place without guardrail systems, personal fall arrest systems, or safety net systems. Access to the zone is controlled. (See the Fall Protection-Part 3 checklist for requirements.)

Personal fall arrest system: a system used to stop an employee's fall. It consists of an anchorage, connectors, a body belt, or body harness and may include a lanyard, deceleration device, lifeline, or combinations of these. (See this checklist for the requirements.)

Safety-monitoring system: a safety system in which a competent person is responsible for recognizing and warning persons of fall hazards. (See the Fall Protection-Part 3 checklist for requirements.)

Warning line system: a barrier erected on a roof that (a) warns employees and students that they are approaching an unprotected roof side or edge, and (b) designates an area in which roofing work may take place without a guardrail, body belt, or safety net system to protect persons in the area. (See this checklist for the requirements.)