

# "About" & Key Terms Pages 16-31

# 30 Hour Construction Industry Outreach

## Course Description

The OSHA 30 Hour Construction Industry Outreach training course is a comprehensive safety program designed for anyone involved in the construction industry, especially safety directors, foremen, and field supervisors. OSHA recommends Outreach Training Programs as an orientation to occupational safety and health for workers, covered by OSHA 29 CFR 1926. Construction workers must receive additional training, when required by OSHA standards, on specific hazards of the job.

## Learning Objectives

At the conclusion of this course, the student will be able to:

- Explain the importance of OSHA in providing a safe and healthful workplace to workers
- Locate OSHA Standards references applicable to specific hazardous conditions and practices (Introduction to OSHA Standards)
- Recognize the aspects of 1926 Subpart C (General Safety and Health Provisions)
- Implement preventative measures for accidents in their workplace (Subpart D - Occupational health and Environmental Controls)
- Describe types of personal protective equipment (PPE), and the requirements for its use in OSHA standards (Subpart E - Personal Protective Equipment)
- Understand the requirements for fire protection in the workplace (Subpart F - Fire Protection and Prevention)
- Identify the various types of rigging equipment used to protect employees (Subpart H - Rigging; Subpart N - Cranes and Rigging)
- Identify the critical health and safety hazards of welding and cutting in the construction industry (Subpart J - Welding and Cutting)
- Identify common electrical hazards and related OSHA standards (Subpart K - Electrical Standards)
- Understand the importance of scaffolding for workers in elevated workplaces (Subpart L - Scaffolding)
- Implement measures for protecting workers and equipment from dangerous falls (Subpart M - Fall Protection)
- Recognize the hazards associated with working in or around excavation sites (Subpart P - Excavations)
- Understand the safety requirements necessary to protect workers around concrete and masonry jobs (Subpart Q - Concrete and Masonry)
- Protect workers who perform jobs on or around stairways or ladders at worksites (Subpart X - Stairways and Ladders)
- List and describe the hazards and prevention required for confined spaces



## Key Terms

**Atmospheric Tank:** A storage tank which has been designed to operate between atmospheric pressure and 0.5 PSIG (pounds per square inch gauge).

**Attendant:** An individual, stationed outside one or more permit spaces, who monitors the authorized entrants and performs all attendant's duties as assigned in the employer's permit space program.

**Audible Backup Alarms:** These devices must be installed on heavy construction vehicles and maintained in proper working order. They sound an alarm to alert nearby workers that a potentially dangerous vehicle is backing up.

**Authorized Entrant:** An employee who is authorized by the employer to enter a permit space.

**Authorized Person:** A person assigned by the employer to perform a duty or to be at a particular job site.

**American Wire Gauge (AWG):** A measurement standard used to size wire in which increasing gauge numbers indicate decreasing wire diameters.

**Barricade:** An obstruction to deter the passage of persons or vehicles.

**Bearer (Putlog):** A horizontal transverse scaffold member (which may be supported by ledgers or runners) upon which the scaffold platform rests, and which joins scaffold uprights, posts, poles, and similar members.

**Beryllium:** A steel-gray, light, strong, brittle, toxic, bivalent metallic element used chiefly as a hardening agent in alloys.

**Blast Area:** The area where explosives are loaded and blasting operations are carried out.

**Blasting Agent:** Any material or mixture used for blasting that consists of a fuel and an oxidizer used for blasting. It is not considered an explosive and its ingredients are also not classified as explosives.

**Blasting Cap:** A metallic tube that is closed at one end and contains a charge of detonating compounds. It can be detonated by a safety fuse placed into the open end of the tube.

**Block:** A pulley that uses either sheaves or a grooved wheel through which a rope is threaded to change the direction of its force.

**Bloodborne Pathogens:** Infectious microorganisms found in human blood that can cause diseases. Common examples include the Hepatitis B and C viruses and the Human Immunodeficiency Virus (HIV).



**Bureau of Labor Statistics (BLS):** A division of the US Department of Labor that measures labor market activity, working conditions, price changes, and productivity in the US economy to support public and private decision making.

**Boatswains' Chair:** A single-point adjustable suspension scaffold consisting of a seat or sling designed to support one employee in a sitting position.

**Body Belt:** A strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

**Body Harness:** A series of straps that can be secured about an employee in a manner to distribute fall-arrest forces more evenly across the thighs, pelvis, waist, chest, and shoulders. It can be attached to other components of a personal fall arrest system.

**Boom:** An inclined spar, strut, or other long member supporting a hoisting tackle.

**Boom Angle Indicator:** A device that measures the angle of the boom and is usually mounted on the back of the boom so as to easily readable by the operator.

**Boom Stops:** A device used to limit the angle of the boom at its highest position.

**Brace:** A rigid connection that holds one scaffold member in a fixed position with respect to another member, or to a building or structure.

**Brake:** To slow or stop motion using power or friction.

**Cadmium:** A bluish-white malleable ductile toxic bivalent metallic element commonly used in protective plating and in bearing and soldering materials.

**Catastrophic Release:** A major uncontrolled emission, fire, or explosion, involving one or more highly hazardous chemicals, that presents serious danger to employees in the workplace.

**Chemical:** Any element, compound, or mixture of elements and/or compounds.

**Chimney Hoist:** A multi-point adjustable suspension scaffold used to provide access to work inside chimneys.

**Chock:** A wedge or block used to keep a vehicle parked on an incline from rolling.

**Chromium:** A blue-white metallic element found naturally only in combination and commonly used in alloys and electroplating. Chromium is also the main additive in stainless steel that adds to its anti-corrosive properties.

**Circuit:** Completion of the path of a current, including a voltage source, conductors, and the load (such as a lamp, tool, or heater).



**Closed Container:** A container sealed by means of a lid or other device so that neither liquid nor vapor will escape from it at ordinary temperatures.

**Combustible:** Refers to a material that can be easily ignited and burned.

**Combustible Liquids:** In construction, any liquid having a flash point at or above 140°F and below 200°F. In general industry, any liquid having a flash point at or above 100°F.

**Combustion:** Burning of a material, i.e., a chemical change accompanied by the production of heat and light.

**Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**Concrete:** A mixture of cement, sand, aggregate, and water in specific proportions that hardens to a strong, stony consistency over varying lengths of time.

**Conductors:** Materials that contain free electrons, allowing current to flow through them.

**Confined Space:** A space that, (1) is large enough and so configured that an employee can bodily enter it; (2) has limited or restricted means of entry and exit; and (3) is not designed for continuous employee occupancy.

**Connector:** A device that is used to couple (connect) parts of a personal fall arrest system or positioning device system together.

**Container:** Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical.

**Contaminant:** Any material that could cause a person physical harm if it were to come into contact with them either internally or externally.

**Controlled Access Zone:** A work area that has been designated and clearly marked in which certain types of work (such as overhand bricklaying) may take place without the use of conventional fall protection systems (like guardrails, personal arrests, or safety nets) to protect the employees working in the zone.

**Conveyor:** A mechanical means of moving articles or bulk material from place to place, such as a belt or a chain of receptacles.

**Counterweight:** Weights used to balance both the loads and the crane in order to provide stability.

**Coupler:** A device for locking together the scaffolding tubes.



**Crane:** A machine that uses a hoisting mechanism to lift and lower loads and to move them horizontally across a worksite.

**Crawling Board (Chicken Ladder):** A scaffold consisting of a plank with cleats spaced and secured evenly along its length to provide footing for use on sloped surfaces such as roofs.

**Current:** The flow of electrons through a conductor. It is measured in Amperes (Amps).

**dBa:** Adjusted decibels; an expression of the relative loudness of sounds in air as perceived by the human ear.

**Deceleration Device:** Any mechanism that dissipates a substantial amount of energy during a fall arrest, or otherwise limits how much of that energy affects the worker. Examples include rope grabs; rip stitch, tearing, deforming, or other specially woven lanyards; and automatic self-retracting lanyards.

**Deck:** The revolving superstructure or turntable bed of a crane.

**Department of Labor:** A cabinet-level U.S. federal agency, of which OSHA is a division. The mission of the Department of Labor is "to foster, promote, and develop the welfare of the wage earners, job seekers, and retirees of the United States; improve working conditions; advance opportunities for profitable employment; and assure work-related benefits and rights."

**Derrick:** A derrick is a lifting device that consists of one or more long rigid members called masts that are joined together at their tops by guy wires. A boom may also be used as part of a derrick.

**Detonating Cord:** A flexible cord that is filled with high explosives. When detonated, these explosives have enough strength to detonate other explosives they come into contact with.

**Detonator:** A device consisting of blasting caps (such as electric blasting caps, delay electric blasting caps, and non-electric delay blasting caps) that is used for detonating a high explosive.

**Double-Cleat Ladder:** A ladder with a center rail to allow simultaneous two-way traffic for employees ascending or descending.

**Drum:** The spool or cylindrical member around which cables are wound for raising and lowering loads.

**Electric Blasting Cap:** A blasting cap detonated by an electric current.

**Electric Shock:** The physical effects of nerve stimulation and muscle contraction caused by the flow of electric current through the body.



**Electrocution:** Death caused by electrical shock.

**Emergency:** For a permit space, any occurrence (including any failure of hazard control or monitoring equipment), either within or outside of the permit space, that could endanger entrants.

**Employer:** A person engaged in commerce who has employees. In construction, most often a contractor or subcontractor.

**Entry Permit:** A written or printed document that is provided by the employer to allow and control entry into a permit space. It must include the following information:

- The space to be entered
- The purpose of the entry
- The date and duration for which entry is authorized
- Names or other identifying information of the authorized entrants
- Means of detecting an increase in hazard levels
- Each person serving as an attendant
- Name of the entry supervisor
- Known hazards in the space
- Measured used to isolate the space
- Acceptable entry conditions
- Results of tests and other monitoring systems
- Rescue and emergency services available
- Proper communication procedures
- Equipment (such as PPE) to be provided
- Any additional permits that have been issued for work in the space
- Any other necessary information

**Excavation:** A man-made cut, cavity, trench, or depression formed by removing earth.

**Excavation Work:** Work involving the removal of earth from a site to form an open face, hole, or cavity that uses tools, machinery or explosives. Excavation work is a major cause of caught-in-between hazards. An unstable trench or excavation can collapse, killing or injuring workers by suffocation or crushing when a worker is buried by falling soil.

**Explosive:** A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to shock, pressure, or high temperatures.

**Facility:** The buildings, containers, or equipment that contain a process.

**Failure:** Load refusal, breakage, or separation of components.

**Federal:** Being part of, or pertaining to, the United States government.



**Fixed Ladder:** A ladder that cannot be readily moved or carried because it is an integral part of a building or structure.

**Flammable:** A material that can easily ignite and burn intensely, or has a rapid rate of flame spread.

**Flammable Liquids:** For construction, any liquid having a flash point of not more than 140°F (60°C) and a vapor pressure of not more than 40 psi at 100°F. Flammable liquids are subdivided into categories:

- Category 1 liquids have flash points below 73.4°F (23°C) and boiling points at or below 95°F (35°C).
- Category 2 liquids have flashpoints below 73.4°F (23°C) and boiling points above 95°F (35°C).
- Category 3 liquids have flashpoints at or above 73.4°F (23°C) and at or below 140°F (60°C).
- Category 4 liquids have flash points above 140°F (60°C) and at or below 199.4°F (93°C).

**Flash Point:** The lowest temperature at which the vapors of a liquid can catch fire.

**Forklift:** A type of powered industrial truck that is used to transport material, clearly identified by the large forks that are capable of vertical motion and are installed at the front.

**Ground-Fault Circuit Interrupter (GFCI):** A fast-acting circuit breaker designed to shut off electric power in the event of a ground-fault within as little as 1/40<sup>th</sup> of a second. It works by comparing the amount of circuit going to and returning from equipment along the circuit conductors. When the amount going differs from the amount returning by approximately 5 milliamperes (.005 amps), the GFCI interrupts the current. In the event someone still experiences an electric shock, the GFCI will reduce the shock to a safe, often unnoticeable level.

**Grounding:** An intentional conductive connection to the earth that provides a safe path back to the source for any fault current that may occur in a circuit.

**Guardrail:** A protective railing enclosing an elevated platform. The top edge must be between 39 and 45 inches above the walking or working surface.

**Guardrail System:** A barrier erected along an unprotected or exposed side, edge, or other area of a walking/working surface to prevent employees from falling to lower levels. In addition to a guardrail, a guardrail system might use midrails, screens, mesh, and intermediate vertical members to provide additional protection.

**Handrail:** A rail used to provide employees with a handhold for support.



**Hazardous Atmosphere:** Atmospheric conditions that could expose workers to the risk of illness, injury, incapacitation, death, or the impairment of their ability to escape unaided from a permit space. Causes include:

- Flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL)
- Airborne combustible dust that meets or exceeds its LFL
- Oxygen concentration below 19.5% or above 23.5%
- Concentration of any substance that could result in exposure above its permissible exposure limit (PEL)
- Any other atmospheric condition that is immediately dangerous to life or health

**Hazardous Chemical:** Any chemical that poses a physical or health hazard.

**Hazards:** OSHA defines a hazard as the potential for physical or mental harm. It is often associated with a condition or activity that, if left uncontrolled, can result in injury, illness, or death.

**Hazard Communication Standard (HazCom):** An OSHA standard that requires the development and dissemination of information about the identities and hazards of the chemicals present in the workplace.

**HCP:** Health Care Professional.

**Highly Hazardous Chemical:** A substance possessing toxic, reactive, flammable, or explosive materials/chemicals.

**Hoist:** A device that lowers and lifts loads using a drum or wheel around which rope, chain, or cable is wrapped. The drum or wheel may be turned manually or by powered means.

**Hole:** A void or gap 2 inches (5.1 cm) or more in its smallest dimension, in a floor, roof, or other walking/working surface.

**Hot Work:** Work involving electric or gas welding, cutting, brazing, or similar flame or spark-producing operations.

**Hot Work Permit:** The employer's written authorization to perform hot work, such as riveting, welding, cutting, burning, and heating.

**Inerting:** The displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is also noncombustible.

**Inhalation:** Breathing in an airborne substance that may be in the form of gases, fumes, mists, vapors, dusts, or aerosols.

**Insulators:** Materials with few free electrons through which current does not easily flow, if at all.



**Jack:** A portable device that uses a mechanical or hydraulic lifting system to raise heavy objects, such as cars, a short distance.

**Jib:** An arm that extends horizontally from a crane to provide added boom length for lifting specified loads.

**Job-Made Ladder:** A ladder that is fabricated by employees, typically at the construction site, and not commercially manufactured.

**Lanyard:** A rope suitable for supporting one person. One end is fastened to a safety belt or harness and the other is secured to a safety line or suitable anchor point.

**Leading Edge:** 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.

**Lifeline:** A component consisting of a flexible line that connects to an anchorage at one end to hang vertically (vertical lifeline) or that connects to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

**Limited Access Zone:** The area adjacent to masonry wall construction that clearly limits access by all but essential employees.

**Liquefied Petroleum Gases (LPG):** A flammable mixture of hydrocarbon gases, such as propane, propylene, butane, and butylenes.

**Low-Slope Roof:** A roof having a slope less than or equal to 4 inches of vertical rise for every 12 inches of horizontal length.

**Magazine:** Any building or structure, other than an explosives manufacturing building, used for the storage of explosives.

**Masonry:** Stonework, such as the stone or brick parts of a building or other structure.

**Maximum Intended Load:** The total load of all persons, equipment, tools, materials, transmitted loads, and other loads that is reasonably expected to be applied to a scaffold or scaffold component at any one time.

**National Fire Protection Association (NFPA):** A nonprofit organization whose goal is to eliminate death, injury, and property and economic loss due to fire. The NFPA publishes consensus standards to help reduce the likelihood and mitigate the effects of fire.

**National Institute for Occupational Safety and Health (NIOSH):** An agency of the US federal government that conducts research and makes recommendations to help reduce and prevent workplace illnesses and injuries.



**NIOSH Fatality Assessment and Control Evaluation (FACE) Report:** Details investigations conducted by the National Institute for Occupational Safety and Health (NIOSH), allowing the identification and prevention of conditions that contribute to these fatal injuries.

**Non-Permit Confined Space:** A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

**Normally Unoccupied Remote Facility:** A facility which is operated, maintained, or serviced by employees who visit the facility only periodically to check its operation and to perform necessary operating or maintenance tasks.

**Opening:** A gap or void 30 inches (76 cm) or more high and 18 inches (46 cm) or more wide, in a wall or partition, through which employees can fall to a lower level.

**Occupational Safety and Health Administration (OSHA):** The regulatory agency of the US Department of Labor established under the Occupational Safety and Health (OSH) Act in 1970. Its mission is to assure safe and healthy working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education, and assistance.

**Outrigger (Cranes):** A structural member attached to a crane's carrier frame that helps level and stabilize the crane.

**Outrigger (Scaffolding):** A structural member of a supported scaffold that flairs out from the bottom supports to provide additional stability.

**Outrigger Beam (Thrustout):** A structural member of a suspension scaffold or outrigger scaffold that provides support for the scaffold by extending the point of attachment out and away from the structure or building.

**Oxygen Deficient Atmosphere:** An atmosphere containing less than 19.5 percent oxygen by volume.

**Oxygen Enriched Atmosphere:** An atmosphere containing more than 23.5 percent oxygen by volume.

**Power Crane and Shovel Association (PCSA):** A subgroup of the Association of Equipment Manufacturers (AEM) that explores business issues, technological questions, and legislative and regulatory concerns that affect manufacturers of cranes.

**Pendants:** Stationary wire ropes used to support the boom of a crane.

**Permissible Exposure Limit (PEL):** The maximum amount or concentration of a chemical a worker may be exposed to for a set amount of time under OSHA regulations. They are established by OSHA to protect workers from the adverse effects of exposure



to chemical substances. For example, the PEL for lead is 50 micrograms per cubic meter (ug/m<sup>3</sup>) over 8 hours.

**Permit-Required Confined Space Program (Permit Space Program):** The employer's overall program for controlling and protecting employees from permit space hazards, and for regulating employee entry into permit spaces.

**Personal Fall Arrest System:** A system including, but not limited to, an anchorage, connectors, and a body harness used to arrest, or stop, an employee during a fall from a working level. As of January 1, 1998, the use of a body belt for fall arrest is prohibited.

**Personal Protective Equipment (PPE):** All types of protective equipment worn and used by workers, such as hard hats, gloves, boots, eye protection, and respiratory aids.

**Physical Hazard:** A chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive), or water-reactive.

**Physician or other Licensed Health Care Professional (PLHCP):** An individual whose license, certification, or other legally permitted scope of practice allows him or her to provide the type of medical care required.

**Point of Access:** An area used by employees for work-related passage from one area or level to another.

**Portable Ladder:** A ladder that can be readily moved or carried.

**Portable Tank:** A closed container having a liquid capacity of more than 60 U.S. gallons and not intended for fixed installation.

**Positioning Device System:** A body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning backwards.

**Powered Industrial Trucks:** Trucks that are used for the transport of material. They may be modified to operate in hazardous conditions.

**Primary Blasting:** The blasting operation by which an original rock formation is dislodged from its natural location.

**Pounds per Square Inch (PSI/P.S.I.):** The common unit of measurement for pressure. (such as for compressed air). It refers to the amount of force applied by 1 pound of pressure applied to an area of one square inch.

**Qualified Person:** In addition to a competent person, some OSHA standards require the presence of a qualified person, who by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and



experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

**Radiant Energy:** A kind of energy that travels outward in all directions from its sources.

**Radius (Cranes):** The horizontal distance from the axis of the rotation of the crane's superstructure to the center of the suspended load.

**Reinforce:** To strengthen something by providing additional external support or internal stiffening for it.

**Resistance:** A measure of a material's opposition to a current of electrons.

**Retrieval System:** The equipment (including a retrieval line, chest or full-body harness, wristlets if appropriate, and a lifting device or anchor) used for non-entry rescue operations from permit spaces.

**Rope Grab:** A deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks to arrest a fall.

**Rollover Protection Structure (ROPS):** A structure or system that protects equipment operators from the injuries that result when equipment overturns.

**Safety Can:** Means an approved closed container of not more than 5 gallons capacity with a flash-arresting screen, a spring-closing lid, and a spout cover, and designed so that it will safely relieve internal pressure when subjected to fire exposure.

**Safety Fuse:** A flexible cord that contains combustible matter that is used to convey fire to blasting caps.

**Safety-Monitoring System:** A safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

**Scaffold:** A temporary framework of poles and planks that is used to support workers and materials during the erection, repair, or decoration of a building.

**Screw Conveyor:** A trough or tube containing either a spiral coiled around a shaft, driven at one end and held at the other, or a Shaftless Spiral, driven at one end and free at the other.

**SDS:** Safety Data Sheet, a document containing the chemical hazard and safe handling information pertaining to a specific chemical or compound, which is prepared in accordance with the OSHA Hazard Communication Standard.

**Self-Retracting Lifeline/Lanyard:** A deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under minimal tension during normal employee movement and which, after the onset of a fall, automatically locks the drum and arrests the fall.



**Shield:** A structure able to withstand a cave-in and protect employees.

**Shoring:** A structure that supports the sides of an excavation and is used to prevent cave-ins.

**Signals:** Moving signs, provided by workers such as flagmen or by devices such as flashing lights, to warn of possible or existing hazards.

**Signs:** Visual warnings of hazards, temporarily or permanently affixed to or placed at locations where hazards exist.

**Silicosis:** An occupational lung disease caused by the inhalation of respirable crystalline silica, which is often created when cutting, sawing, grinding, drilling, and crushing stone, rock, concrete, brick, block, and mortar.

**Sill (Building Bottom of Frame):** The horizontal bottom member of a wall or building. It may be anchored to the foundation, and vertical members, like studs, are attached to it.

**Sill (Window Ledge):** A ledge below a window, especially one on the inside of a building.

**Single-Cleat Ladder:** A ladder consisting of a pair of side rails connected by cleats, rungs, or steps.

**Slab:** A flat, rectangular base or foundation of concrete or stone.

**Sloping:** A technique that employs a specific angle of incline on the sides of an excavation.

**Snap-Hook:** A connector consisting of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object.

**Stair Rail System:** A barrier erected along the unprotected sides and edges of a stairway to prevent employees from falling to lower levels.

**Standards:** Conditions or practices required to provide a safe and healthy work environment.

**Steep Roof:** A roof having a slope greater than 4 to 12 (vertical to horizontal).

**Superstructure:** The rotating frame, gantry, and boom or other operating equipment.

**Tags:** Temporary signs, usually attached to pieces of equipment or structures, to warn of existing or immediate hazards.



**Tuberculosis (TB):** An infectious disease affecting the lungs, caused by bacteria that can spread through the air in tiny droplets released by coughing.

**Testing:** The process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

**Title 29 of the Code of Federal Regulations:** This is the section of the CFR that contains all OSHA standards and guidelines (29 CFR).

**Toeboard:** A type of guard installed along the lower edge of scaffold platforms and overhead walkways that is designed to keep tools and other objects from falling and injuring workers below. Installing toeboards is considered an engineering control.

**Toxic Substance:** A substance that can affect the proper functioning of an organism, resulting in a change in physiology through a chemical process.

**Trade Secret:** Any confidential formula, pattern, process, device, information, or compilation of information that is used in an employer's business, and gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

**Training:** A course of study in which employees are trained to identify and work safely.

**Tread Depth:** The horizontal distance from front to back of a tread, excluding nosing, if any.

**Trench:** A narrow excavation made below the surface of the ground in which the depth is greater than the width and the width does not exceed 15 feet.

**Ultraviolet Rays:** Situated beyond the visible spectrum at its violet end; used to describe radiation having a wavelength shorter than those of visible light and longer than those of x-rays.

**Unprotected Sides and Edges:** Any side or edge (except at entrances to points of access) of a walking/working surface (e.g., floor, roof, ramp, or runway) where there is no wall or guardrail system at least 39 inches (1 meter) high.

**Valve:** Device for controlling the flow of fluids (liquids and gases).

**Volts:** The electrical pressure (measure of electrical force).

**Walking/Working Surface:** Any surface, whether horizontal or vertical, on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork, and concrete reinforcing steel. Does not include ladders, vehicles, or trailers on which employees must be located to perform their work duties.



**Warning Line System:** 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.

**Watts:** Measurement work produced by the electrical circuit.

**Wire Gauge:** System used to measure the physical size of wire.

**Workplace:** An establishment, job site, or project at one geographical location containing one or more work areas.

## Module 1: Introduction to OSHA

### Module Description

The Occupational Safety and Health Administration (OSHA) was established to protect the health of American workers. In 1970, the Occupational Safety and Health (OSH) Act was passed to give structure to worker protection activities. OSHA holds employers responsible for providing a workplace that is free from recognized hazards. This module will provide an overview of OSHA, employers' responsibilities, and employees' rights in the workplace.

### Module Learning Objectives

At the conclusion of this module, you will be able to:

- Explain why OSHA is important to workers
- Explain workers' rights under OSHA
- Discuss employers' responsibilities under OSHA
- Discuss the use of OSHA standards
- Explain how OSHA inspections are conducted
- Utilize helpful worker safety and health resources

### Lesson 1: Introduction to OSHA

#### Lesson Focus

At the end of this lesson, students will be able to:

- Understand OSHA's mission
- Explain how state plans work
- Recognize OSHA standards
- Explain how standards are enforced



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