



## FALL PREVENTION ALLIANCE TOOLBOX TALK ON

# WARNING LINE AND SAFETY MONITORING SYSTEMS

Company: \_\_\_\_\_ Job Site Location: \_\_\_\_\_

Date: \_\_\_\_\_ Start Time: \_\_\_\_\_ Finish Time: \_\_\_\_\_ Foreman/Supervisor: \_\_\_\_\_

A journeyman roofer died from severe head injuries sustained after falling 16 feet 3 inches from the pitched roof of a private residence. The victim was working alone on a 4:12 pitch roof. He had realigned all but two shingles, when he fell from the edge of the roof to a concrete patio below. The victim was not using any type of fall protection devices or systems. The warning line system can be used to provide fall protection on roofs with slopes of 4:12 or less.

**Warning line systems:** Warning line systems and their use must comply with the following provisions:

- The warning line must be erected around all sides of the roof work area. When mechanical equipment is not being used, the warning line must be erected not less than 6 feet from the roof edge.
- When mechanical equipment is being used, the warning line must be erected not less than 6 feet from the roof edge that's parallel to the direction of mechanical equipment operation, and not less than 10 feet from the roof edge that's perpendicular to the direction of mechanical equipment operation.
- Points of access, materials handling, storage, and hoisting areas must be connected to the work area by an access path formed by two warning lines.
- When the path to a point of access is not in use, a barricade, equivalent in strength and height to the warning line, must be placed across the path at the point where it intersects the warning line around the work area, or the path must be offset so that a person cannot walk directly into the work area.

**Warning lines of ropes, wires, or chains and supporting stanchions (upright pole, post, or support) are erected as follows:**

- The rope, wire, or chain must be flagged at not more than 6-foot intervals with high-visibility material.
- The rope, wire, or chain must be rigged and supported so that its lowest point (including sag) is no less than 34 inches or more than 39 inches (highest point) from the walking/working surface.
- After being erected, with the rope, wire, or chain attached, stanchions must be able to resist a force of at least 16 pounds applied horizontally against the stanchion, perpendicular to the warning line at a height of 30 inches above the walking/working surface and in the direction of the floor, roof, or platform edge, without tipping over.
- The rope, wire, or chain must have a minimum tensile strength of 500 pounds, and after being attached to the stanchions, must be capable of supporting, without breaking, the loads applied to the stanchions.
- 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. No employee must be allowed in the area between a roof edge and a warning line unless they are performing roofing work in that area. Mechanical equipment on roofs must be used or stored only in areas where employees are protected by a warning line system, guardrail system, or personal fall arrest system.

**Safety monitoring systems:** Safety monitoring systems and their use must comply with the following provisions:

The employer must designate a competent person to monitor the safety of other employees and the employer must ensure that the safety monitor complies with the following requirements:

- The safety monitor must be competent to recognize fall hazards.
- The safety monitor must warn an employee when it appears that they are unaware of a fall hazard or are acting in an unsafe manner. The safety monitor must be on the same walking/working surface and within viewing distance of the employee being monitored. The monitor must be close enough to communicate orally with the employee, and must not have any other responsibilities which could take their attention away from the monitoring function.

Mechanical equipment must not be used or stored in areas where safety monitoring systems are being used to monitor employees working on low-slope roofs. No employee, other than the one engaged in roofing work, or an employee covered by a fall protection plan, is allowed in the safety monitoring system area. Each employee working in a controlled access zone must be directed to comply promptly with fall hazard warnings from safety monitors.

Through the OSHA and Houston Fall Prevention Alliance, this Toolbox Talk was developed for informational purposes only. It does not necessarily reflect the official views of OSHA or the U.S. Department of Labor. July 2016.

The Houston Fall Prevention Alliance was formed by the below organizations to provide their members, and others, with information, guidance and access to training resources that will help them protect the health and safety of workers, particularly by reducing and preventing exposure to fall hazards in the construction industries and addressing fall related issues and understand the rights of workers and the responsibilities of employers under the Occupational Safety and Health Act (OSH Act). In developing this alliance, these organizations recognize that OSHA's State Plan and On-site Consultation Project partners are an integral part of the OSHA national effort.





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**Conclusion:** Communicate with your fellow workers. Let them know where you are working. Stay alert when working at height. Follow these guidelines to ensure everyone's safety.

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