Fall Protection – Trigger Heights

Working at heights poses a risk of fall incidents. Falls from heights can result in serious debilitating injuries or death.

Working at heights occurs in many performing arts activities and may include working on or from permanent structures (catwalks, tension grid systems), temporary structures (elevated scenic platform) or portable devices (ladders, mobile scaffolds, aerial work platforms). This code of safe practice discusses the trigger heights for fall protection requirements and general safety guidelines for working at heights.

Please keep in mind there is not one single trigger height that can be applied to all settings and all work activities. A review of regulatory requirements confirms that trigger heights vary depending on the code citation (Fed-OSHA or Cal-OSHA), workplace setting being evaluated (building or other elevated work location), and work activity being performed (construction or general industry work). Based on these differences, the heights can range significantly from 30 inches, 4 feet, 6 feet to 7.5 feet. Beyond these requirements, there may also be different trigger heights designated for certain special circumstances such as low slope roofs, aerial work platforms, fixed ladders, and erecting scaffolding.

Ensure you review the other Performing Arts Codes of Safe Practices that address specific areas of working at heights: controlled access, fixed ladders, portable ladders, working outside the catwalk, paint frames, rooftop restraints, and tension grids. All personnel must successfully complete fall protection and fall rescue training prior to working at heights. Keep in mind OSHA regulatory requirements represent the legal minimum standards. There may be situations where fall protection should be used at heights less than those mandated by the regulatory standards. As noted, fall protection and trigger heights can be a complex topic and consulting your EH&S staff for assistance is advised.

Guardrails Are Required

Guardrails must be provided on all open sides of unenclosed elevated work locations, such as roof openings, open and glazed sides of landings, platforms, runways, ramps, or working levels more than 30 inches above the floor, ground, or other working areas of a building.

EXCEPTIONS: There are some exceptions for loading docks, stages, and seating areas, and machine servicing areas, such as:

1. On the auditorium side of the stage, raised platforms and other raised floor areas such as runways, ramps and side stages used for entertainment or presentation
2. Performing Arts galleries, balconies, or other such elevated seating locations where a 42-inch railing would obstruct the sight lines may be protected by a guardrail or other barrier of not less than 34 inches in height

provided that a horizontal concave safety ledge not less than 6 inches in depth and not less than 36 inches in effective width is installed beyond the railing at the balcony floor level. The safety ledge shall be designed to carry a live load of 100 pounds per square foot.

3. Elevated locations used infrequently by employees if the employees using them are protected by a fall restraint/fall arrest system used in accordance with the requirements in Article 24 of the Construction Safety Orders.

Contact the EH&S Department if you have questions regarding the use of fall protection systems

Fall Protection System is Required When:

The work exposes personnel to a fall of 7.5 feet or more. Types of fall protection systems include:

1. **Personal Fall Arrest Systems:** These systems consist of a horizontal life line or retractable lanyard secured to the back and above the person's waist to a harness. The life line (also known as a lanyard) must be anchored to a point capable of supporting at least 5,000 pounds per person. The life line itself must have a breaking strength of 5,000 pounds. The system is designed to limit the fall to 6 feet.
2. **Positioning Devices:** These devices consist of ropes and body harnesses that limit the fall to no more than 2 feet. The anchoring point must be capable of supporting twice the intended load or 3,000 pounds, whichever is greater.
3. **Personal Fall Restraint Systems:** These systems consist of body belts and harnesses attached to a life line that does not permit the user to move beyond the edge of the working area. The anchoring point must be capable of supporting 4 times the intended load.
4. **Approved Safety Nets:** These systems are used for working heights of 25 feet or more, only when personal fall protection or other conventional types of protection are not practical.

Talk to your supervisor if you have any questions about this information.