

Introduction

This document outlines the minimum requirements that all cast and crew must follow when working at height during any prep, photography, and wrap activities. Always follow requirements by your local AHJ (Authority Having Jurisdiction).

Responsibilities

Production Management (UPM, Department Heads, Supervisors, etc.)

- Support this safety policy by being knowledgeable about elevated fall hazards and the ways to eliminate or control them.
- Ensure unsafe acts are corrected immediately upon observation or discovery.
- Assess workplace conditions to identify potential fall hazards to which cast/crew may be exposed.
- Select the appropriate fall protection method that best matches the work situation and the workplace.
- Ensure cast/crew are properly trained and capable of working at heights.
- Determine the appropriate fall rescue needs and complete the fall rescue procedures.
- Ensure all cast/crew working at heights are properly equipped and appropriately wearing personal protective equipment.
- Consult with Production Safety and/or a qualified third party to determine fall protection methods, anchor locations, etc. in order to select the appropriate method for fall prevention.

Cast & Crew

- Understand and adhere to these *Fall Protection Production Safety Guidelines*.
- Use fall protection equipment in accordance with the manufacturer's specifications, instructions, and training provided.
- Use appropriate measures to eliminate fall hazards, (guardrails, scaffolding, ladders, etc.).
- Immediately report unsafe conditions to Supervisors.
- Ensure all fall protection training is kept up to date.

Production Safety Department

- Establish Fall Protection guidelines with affected departments.
- Advise fall protection concerns with affected departments.

Contractors / Vendors / 3rd Party Productions:

- Comply with their fall protection program(s) when working on Production property.
- Provide fall protection equipment (harnesses, lanyards, rescue etc.). Production does not loan or rent equipment.
- Verify the specifications for fall protection at the location they are working.
- Comply with all OSHA Regulations.
- 3rd Party Productions must provide copies of their Injury & Illness Prevention Plan (IIPP) or equivalent to Production Safety.

Fall Protection Requirements

General

Fall protection is required when:

- Working more than 4 feet (30" in California) above the floor, ground or other working area.
- Flat or Low Slope Rooftops
 - Working on flat or low slope rooftops not steeper than a 4:12 pitch, within 6 feet from the leading edge.
- Sloped Rooftops
 - Working on any part that is steeper than a 4:12 pitch.
- Production-specific unique fall hazards may require a fall hazard assessment to determine the appropriate fall protection means (e.g., stunt falls, wire work, cliffs, use of minors, vehicles).

Hierarchy of Fall Protection Controls

Fall protection controls should be implemented in the following order:

1. Eliminate the Fall Risk
 - a. Lowering the work, changing the process, or otherwise reconfiguring the work.
2. Passive Fall Protection
3. Active Fall Protection

Certification Levels

There are three levels of certification for fall protection training. Each level requires training and is defined below:

Qualified Person (e.g., engineer, 3rd party fall protection vendor)

- 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.

Competent Person

- Person who is capable of identifying existing and predictable hazards in any personal fall protection system or any component of it, as well as in their application and uses with related equipment, and who has authorization to take prompt, corrective action to eliminate the identified hazards.
- Must complete Fall Protection Competent Person training or equivalent.

Authorized Person (Fall Protection user)

- Person approved or assigned by the employer to perform a specific type or duty or duties or to be at a specific location or locations at a jobsite.
- Training is required prior to conducting work at heights.

Passive Fall Protection

If it is not possible to eliminate the fall hazard, the next best option is to install a Passive Fall Protection System. Passive systems are physical barriers such as guardrails around unprotected edges, covers over holes, etc. They eliminate the need for cast and crew to implement additional fall protection systems.

- Guardrails:
 - Top rail (or height of parapet/screen) must be at least 42" +/- 3" tall.
 - If railing, a mid-rail at the halfway point (e.g., 21") is required.
 - Must withstand 200 lbs. when applied vertically or horizontally.
 - Toeboards shall be 4" in height and should be provided on all elevated surfaces with guardrails, to protect against tools or materials from falling below.
- Floor openings and skylights must be protected by adequate protective covers, screens, barriers or guardrails. Covers and screens must withstand 400 lbs. with grillwork 4" x 4" max or 2" continuous slats.
- Additional fall protection must be used if the employee is working at an elevated height (ladder or stepstool) next to a guardrail and extending above the passive protection.
- Cast/crew should not climb onto or over guardrails or other passive fall protection.
- Cast/crew should report any damaged guardrails, screens, or other passive protection to their Department Head or supervisor immediately.

Active Fall Protection

A personal restraint or personal arrest system must be worn when guardrails, or other equivalent protection, is not available. This includes rooftops, platforms, mezzanines, the topside of sets, tops of vehicles, and other elevated areas above 4 feet (30" in California) with unprotected edges.

- **Personal Fall Restraint System** - Preferred system that prevents (restrains) the employee from approaching the fall exposure area. Cast/crew should be aware of the limitations of equipment.
- **Personal Fall Arrest System (PFAS)** - System intended to control (arrest) the employee in the event of a fall. Subject cast/crew should be aware of equipment limitations and rescue response. Factors such as allowable fall distance, shock load, shifting equipment and angle of equipment relative to the fall (i.e., swing distance) should all be considered.

Personal Fall Protection Equipment

Basic Requirements

- Equipment shall meet the Z359.1 ANSI (American National Standards Institute) standard, and must be identified with a part number, year of manufacturer and manufacturer name. The following components comprise a basic fall protection system:
 - Anchor Point (engineered, eye bolt, cross arm strap, etc.)
 - Lanyard, retractable lifeline, rope grab, etc.
 - Full Body harness
 - Rescue and ortho trauma straps should be planned at each location.

- Designated anchor points and/or other fixed fall protection shall be inspected and used per manufacturer's requirements.

Anchorage Point

- The structural anchor that supports and suppresses a fall's severity. The attachment point may be:
 - An engineered and manufactured anchor point (e.g., shock absorbing post)
 - A manufacturer designated eyelet in an aerial work platform
 - An approved permanent eye bolt
 - A cross-arm strap manufactured and identified for the purpose of providing a tie-off point. A cross-arm strap is a device used to provide an attachment point when an attachment to a beam or other identified structural support does not have a permanently attached eye bolt or other means for attaching a lanyard or retractable lifeline unit.
- An anchorage point for attachment of PFAS must be capable of supporting a minimum dead weight of 5,000 lbs. per person attached. Note: Dead weight is defined as unassisted/unrelieved weight.
- All anchor points must have up to date engineering reviews based on the productions intended use.

Lanyards, Self-Retractable Lifelines (SRL) and Other Equipment

- **A lanyard** provides the connection between the harness and the anchor point.
 - Lanyards can be made from nylon, steel or polyester materials. Some models come with shock-absorbing features (for fall arrest). Lanyards can have multiple legs to ensure the employee is always attached if transferring from one fall protection system to another. Lanyards cannot be greater than 6 feet in length.
- **A retractable lifeline** (aka, self-retracting lifeline (SRL)), is an automatic tensioning system that extends and retracts a lifeline at a certain speed and locks and brakes when the speed is exceeded.
 - Once the SRL is attached to an anchor point, and the lifeline is attached to the body harness, the worker is free to move about as line is let out or taken in under the tension imposed by the SRL. This keeps the line taught and reduces free fall distance. An approved SRL must limit the free distance to below 2 feet. If a fall were to occur, the SRL would stop the fall and absorb much of the free fall energy. A swing fall is a concern with SRLs as is the rubbing of the rope/web over a sharp edge during a fall arrest. Pre-planning based on the manufacturer's instructions can limit these exposures.
- **Rope grab systems** rely on cast/crew to control the restraint of their fall protection.
 - The employee attaches to the rope grab and actively monitors and adjusts the tension of the rope, relative to the anchor point as they navigate on the elevated work area.
- **Snap hooks** located on lanyards, SRLs and carbineers allow workers to attach their harnesses to a tie-off point.
 - Double-locking snap hooks must be used to prevent roll-out, or the inadvertent release of the safety hook from its attachment point.
 - Prior to each use, inspect the system and its components for wear, damage, and deterioration. Remove any component that is found damaged or has been subject to impact loading.

Body Harness

- A properly worn harness distributes the impact of a fall over the body and buttocks, providing additional body support during suspension. A harness must have a rear “D” ring attachment is the point where the lanyard is attached and located between the user's shoulder blades per manufacturer’s instructions. Harnesses are adjustable and come in a variety of sizes. A harness may also have “D” ring attachments located on the front and sides. Front “D” rings are common for fixed ladder safety systems, 24’ (20’ California) or more in height. Side “D” rings are commonly used for positioning systems.
- Prior to each use, inspect the system and its components for wear, damage, and deterioration. Remove any damaged component or has been subject to impact loading. Follow your manufacturer guidelines. The following reference is provided to assist in conducting a proper inspection: [Harness Inspection Guidelines \(osha.gov\)](https://www.osha.gov)
- Body belts are prohibited as part of a personal fall arrest system.

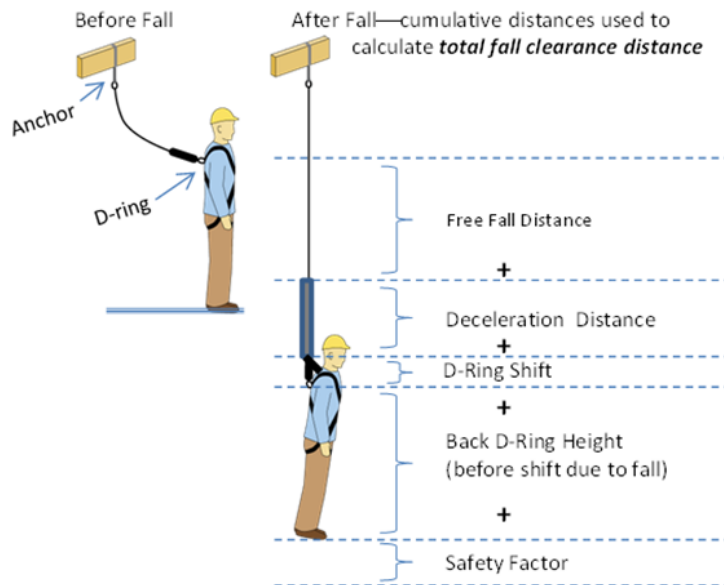
Basic Fall Protection System Requirements

- All work areas and tasks over 4 feet (30” in California) must be evaluated for an appropriate fall protection system. Priority should be placed on removing or minimizing fall exposure. Consult your Production Safety representative for assistance with fall hazard assessments.
- Regardless of the system, cast/crew should inspect their fall protection equipment prior to use. If damage is found remove it from service immediately or contact supervisor. Examples may include, including but not exclusive to:
 - Damage to harnesses or lanyards
 - SRLs are not extending or retracting properly
 - Snaphook or carabineer double locking actions are stuck or broken
 - Travelers or other components of the system are not operating properly
 - Damage or excessively sagging Horizontal Lifelines
 - Excessive wear or damage to anchor points or any component of the fall protection system
- Any concerns should be reported to their supervisor or manager. DO NOT use the equipment or system until the concern is resolved.
- In the event of a fall, follow your emergency/rescue procedures and notify your production management and your Production Safety Representative immediately.
- If the fall protection system is involved in a fall, it must be immediately removed from service (i.e., red tagged). System components will need to be repaired and recertified by the manufacturer.

Personal Fall Arrest Preplanning

Before utilizing a personal fall arrest system, the proper preplanning must be conducted by a competent person using the [Fall Protection Hazard Assessment Checklist](#). This includes calculating the Total Fall Clearance Distance, which is the minimum vertical distance between the worker and the lower level that is necessary to ensure the individual does not contact a lower level during a fall. If the available distance is not greater than the total fall clearance distance, it is inappropriate to use personal fall arrest and a fall restraint system might be used instead.

Total fall clearance is calculated using the following variables: Free fall distance, Deceleration distance, D-ring shift, Back D-ring height and a safety factor. It is also important to evaluate swing fall hazards. Only a competent person who is adequately trained is to conduct this calculation and evaluation. Please refer to the [OSHA Technical Manual Section V Chapter 4](#).



Common Fall Protection Systems in Production Safety

Studio Stages Fall Protection Systems

Horizontal Lifeline Systems

- A horizontal lifeline system for fall restraint and fall arrest systems are used in various applications such as stages, rooftops, bridges, rail runways, loading docks etc. **Refer to manufacturer, specific location or studio specific safety guidelines to determine specifications needed.**
- Only compatible equipment must be used when connecting to site specific horizontal lifelines. (E.g., DO not attach lanyards snap hooks directly to the lines).
- Productions utilizing existing horizontal lifeline systems must have an engineering review of the system and acquire their own compatible equipment. The Company does not lend out or rent equipment.

Rope Grab Fall Protection System

- Only cast/crew who have been approved and trained in the use of a rope grab system may use the equipment. Cast/crew should consult their supervisor or the Production Safety Department for more information.
- Visually inspect the equipment (including the length of the rope) before use. Check for frays, knots, etc.
- Consult your manufacturer guidelines for any rope grab deceleration devices and understand the inertial locking, cam/level locking systems.
- Ensure the rope grab ratchet system is operational and is not “upside down”.
- The operational end of the rope will need to be attached/looped through an approved, designated anchor point.
- When in use, Cast/crew will need to manually control the slack of the rope to ensure it is always taught for fall restraint.

Ladder Fall Protection System that requires additional Safety Devices

- Fixed ladders 24’ (20’ in California) or higher not equipped with a cage should have a personal fall protection system.
- Ladders used on elevated surfaces that extend above a guardrail require securing of the ladder and use of a personal fall protection system.
- A harness with a properly positioned “D” ring must be used.
- Contact your Production Safety manager for assistance.

Elevated Aerial Devices (e.g., condors, boom lifts, scissors lifts, etc.)

- Cast/crew who are working in boom-supported aerial work platforms (condors, articulating lifts) and vehicle mounted aerial devices must wear a full body harness equipped with a fall restraint or fall arrest lanyard of the appropriate length that is securely attached to the manufacturer-approved anchor point. It is never acceptable to attach a lanyard to a guardrail.
- Cast/crew who are working in scissors lifts only need to be protected from falling by a properly designed and maintained guardrail system. However, if the guardrail system is less than adequate (e.g., damaged, missing a section, loose, etc.), the worker leaves the safety of the work platform (e.g., transfers to another work surface), the manufacturer or local Authority Having Jurisdiction (AHJ) requires personal fall protection, then personal fall protection must be used and attached to an approved anchor point.
- It is never acceptable to lean over or stand on the guard rail. Only stand on the designated work platform and keep work within easy reach.
- Prior to transferring from an aerial work platform to another unprotected elevated surface (e.g., rooftop, tree etc.) a hazard assessment must be performed to determine the appropriate method for the situation. During transfer the cast/crew must be always tied off and the aerial lift must be rested on or adjacent to the elevated surface.
- Cast/crew should refer to the separate *Aerial Work Platform Checklist* and *Part D Aerial Work supplemental manuals* for more information.

Rooftops

- Productions planning to access or work on roof tops must have a proper hazard assessment before any work is conducted. Follow the [Production Safety Rooftop Checklist](#).

Scaffolds

- Common scaffolding on productions includes supported scaffolds, suspended scaffolds, rolling scaffolds, etc.
- Production should coordinate with Production Safety to ensure that design requirements are met. All scaffolds must be designed and built by qualified person(s).
 - Scaffolds must support four times the maximum intended load, and never exceed the intended load for which they are designed.
 - Scaffolds are properly anchored and secured from tipping and swaying (e.g., bolted to permanent structures).
 - Poles, legs, and uprights are securely braced. Unstable objects, such as boxes or bricks, can never be used to support the scaffold or planks.
 - Wire or fiber rope used for scaffold suspension must be capable of supporting at least six times the intended load.
 - Scaffold planks extend over the end supports between 6 to 18 inches.
 - Appropriate fall protection system must be installed depending on scaffolding type and use (e.g., guardrails, personal fall protection system, etc.)
- Cast/crew should be trained to check the condition of the scaffolds before each use.
 - A damaged or weakened scaffold must be immediately reported to the Supervisor and taken out of service.
- Cast/crew access the scaffold by an access ladder or other safe means and never climb on the outside of a scaffold.
- Materials being hoisted onto the scaffold have a tag line.
- Overhead protection is provided when there are overhead hazards.
- Platforms must be at least 20 inches wide.
- Slippery and sloped platform conditions are prohibited.
- Work is suspended during high winds or slippery conditions.
- Permits and tags should be obtained based on local AHJ requirements
- For more information, please refer to the [OSHA Scaffolding eTool](#), [The Cal OSHA Guide for Working with Supported Scaffolds](#) and the manufacturer specifications.

Stunt Work

Common stunts involving work at height include, but are not limited to; wire work, high falls, climbing, jumping, working on top of various transportation equipment (trains, buses, cars), and working on top of various unprotected structures (platforms, rooftops).

- A stunt coordinator and/or qualified individual must oversee all aspects of a physical stunt. Refer to the safety bulletins recommended by Industry-Wide Labor-Management Safety Committee for the Motion Picture & Television Industry:
 - [Stunts](#)
 - [Guidelines for Safe Use Of Stunt Air Bags, Boxes Or Other Freefall Catch Systems](#)
- Stunt work should have a completed [Stunt Hazard Assessment](#) completed and reviewed by Production Safety.
- All structures and equipment involved in the lifting, suspending and arresting of an actor must be inspected before use, taking into consideration weight limits and arresting.
- A sufficient number of spotters should be designated by the stunt coordinator around each device or system to ensure safety.
- Minors should not participate in any activity which could be considered a “stunt.” If there is any doubt as to what constitutes a “stunt,” contact Production Safety for further guidance. [Click here for additional information.](#)

Sets (e.g., stages and locations)

- Sets are not typically designed to local building standards. Sets are commonly built as lightweight, temporary use structures and are not always rated to support crew and equipment. Proper planning, design and inspection must occur before cast or crew access an elevated set surface.
- All elevated walking and working surfaces must be rated for the intended load. This must be documented (e.g., design drawings, engineering review, manufacturer specifications, etc.).
- All elevated set surfaces above 4 feet (30” in California) must be designed with passive fall protection systems (e.g., guardrails, floor hole covers, window guards, etc.). Where passive systems are not possible, the appropriate active fall protection system must be installed and used at all times (personal fall arrest, personal fall restraint, etc.) Please refer to the Passive and Active Fall Protection sections above.
- It is not permitted to stand, walk, or crawl on set ceiling flats, unless the surface can support the maximum intended load and proper fall protection is installed.
- All set surfaces that are intended for continued occupancy must have compliant stairs with proper guardrails.
- It is prohibited to have elevated doors and stairwells that lead to nowhere, unless properly guarded and marked.
- All pre-existing elevated buildings or structures used for locations shoots that will be accessed must be reviewed by a certified engineer and proper documentation must be kept on file.

Emergency / Rescue Procedures

Each production must identify all fall hazards, identify adequate fall mitigation systems, and prepare for proper response and rescue in a fall arrest event. The [Fall Protection Hazard Assessment Checklist](#) should be completed by a competent person for each department, for all productions, anytime work is being conducted over 4ft (30" in California).

This checklist must be reviewed, communicated, and followed by all affected personnel and crew involved in working at heights. Each location, period of time, or working condition shall have a unique Hazard Assessment Checklist.

Proper response and rescue details to be followed are outlined in the [Fall Rescue Guidelines](#).

Employee Information & Training

Training Content

- Cast/crew required to work at heights (authorized persons) requiring fall protection need be trained prior to affected assignment. Training must include:
 - An understanding of the Fall Protection Guidelines and specific policies established where the work is being performed.
 - Proper anchor procedures using a fall protection system.
 - Estimation of free fall distance
 - Identification of locations and their limitations.
 - Inspection procedures for all components of a fall protection system.
 - Requirements for fall protection and identify procedures for reducing or eliminating the need for fall protection.
 - Proper donning and use and selection of all fall protection equipment and personal fall protection equipment - using manufacturers' recommendation.
 - Fall rescue planning and techniques.
 - What to do after a fall has occurred
- Additional training is required for Competent and Qualified person(s). Refer to OSHA regulations and your AHJ.
- Training may be provided internally or by a third party (e.g., CSATF-AMPTP Contract Services). System-specific fall protection must be provided by a third party or other internal means (e.g., Safety Department, equipment vendor, etc.)

Training Documentation

- Productions must maintain a current written certification record to document each cast/crew member's fall protection training. Retraining must be provided when there are any changes to the system, or a worker fails to recognize or avoid hazards or if the employee cannot demonstrate proper skills.