

# FALL PROTECTION PROGRAM (FPP)

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# FALL PROTECTION PROGRAM (FPP)

## 1. SCOPE and APPLICATION

- 1.1. This program identifies the requirements for preventing injuries from falls from elevated work locations for faculty, staff, student assistants, or identified volunteers.
- 1.2. A fall hazard exists when working:
  - 1.2.1. Over glass or dangerous machinery.
  - 1.2.2. Any height over uncapped rebar or any unprotected elevation more than 6' above capped rebar.
  - 1.2.3. 30 inches above landings, balconies, porches, platforms, runways, ramps or other working levels.
  - 1.2.4. Above 4' on poles for electrical or telecommunications work.
  - 1.2.5. More than 6' to a lower level from roofs, excavation perimeters, or similar locations.
  - 1.2.6. This program use the 6' elevation threshold identified in 29CFR 1926.501 "Duty to have Fall Protection". The 7.5', 15', 20, and 30' thresholds in Cal/OSHA are based on industry and task which are not as protective as the Fed/OSHA standard. The Cal/OSHA thresholds are applicable in California, but Cal Poly uses the Fed/OSHA threshold for this program.
- 1.3. A fall hazard is removed when protected by a 42" tall guardrail, wall, parapet, or similar structure.
- 1.4. The Fall Protection Program provides the information necessary to:
  - 1.4.1. Identify work situations that present a fall hazard, conduct a fall hazard assessment, and determine when the use of protective equipment is required.
  - 1.4.2. To properly select, install, use, maintain, and inspect protective equipment, and to establish the means for documentation of this information.
  - 1.4.3. To identify the appropriate training for employees working in elevated work locations.

## 2. ROLES AND RESPONSIBILITIES

### 2.1. EHS Program Administrator is responsible to:

- 2.1.1. Establish, communicate and maintain this program in accordance with applicable regulations, and executive orders.
- 2.1.2. Review training content to maintain compliance with this program.
- 2.1.3. Conduct program reviews and communicate results to the organization.
- 2.1.4. Track and trend results of program review by college or unit.
- 2.1.5. Communicate hazard and control measure information to the organization.
- 2.1.6. Assist the campus with identification of fall hazards and appropriate control measures related to Fall Protection.
- 2.1.7. Communication any changes related to the written program, training content or program review stakeholders.

### 2.2. Associate Vice President (AVP)/Deans, or designee are responsible to:

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- 2.2.1. Communicate program to directors and department chairs
- 2.2.2. Provide resources to directors and department chairs to communicate, implement and maintain program
- 2.2.3. Request feedback from directors and department chairs on the communication and implementation of this program.
- 2.2.4. Set priorities for the college or unit on implementation and maintenance with assistance from EHS

## **2.3. Directors/Department Heads and Chairs are responsible to:**

- 2.3.1. 2.3.1. Communicate program to managers, supervisors, leads, and principal investigators
- 2.3.2. 2.3.2. Provide resources to managers, supervisors, leads, and principal investigators to communicate, implement and maintain program
- 2.3.3. 2.3.3. Request feedback from managers, supervisors, leads, and principal investigators on the communication and implementation of this program.
- 2.3.4. 2.3.4. Set priorities for managers, supervisors, leads, and principal investigators on implementation and maintenance with assistance from EHS

## **2.4. Managers/Supervisors/Leads/Principal Investigators are responsible to:**

- 2.4.1. Identify fall hazards present in the work areas they manage.
- 2.4.2. Communicate program to Staff/Student Workers/Official Volunteers
- 2.4.3. Provide resources to Staff/Student Workers/Official Volunteers to communicate, implement and maintain program
- 2.4.4. Request feedback from Staff/Student Workers/Official Volunteers on the communication and implementation of this program.
- 2.4.5. Set priorities for Staff/Student Workers/Official Volunteers on implementation and maintenance with assistance from EHS

## **2.5. Faculty are responsible to:**

- 2.5.1. 2.5.1. Identify and report hazards associated with their teaching and research activities to the Department Chair and College/Department Safety Coordinator
- 2.5.2. 2.5.2. Attend/complete required training
- 2.5.3. 2.5.3. Work with Safety Coordinator and EHS to implement program requirements

## **2.6. Staff/Student Workers/Identified Volunteers are responsible to:**

- 2.6.1. Review this program and associated hazard assessments prior to performing any activities subject to this program
- 2.6.2. Attend /complete required training
- 2.6.3. Report hazards, injuries, illness and near misses to your supervisor
- 2.6.4. Workers are NOT responsible for purchasing their own protective equipment.

## **2.7. Facilities Planning Project Managers are responsible to:**

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- 2.7.1. Review this program, specifically section 3.6 Fall Protection Requirements for New Construction, and incorporate the requisite design elements.

## 2.8. Fall Protection Specific Designations

### 2.8.1. Fall Protection Authorized Persons:

- 2.8.1.1. May use fall protection equipment.
- 2.8.1.2. Has a working knowledge of Cal Poly's Fall Protection Program.
- 2.8.1.3. Has the knowledge and training necessary to properly inspect, use, and care for fall protection equipment.
- 2.8.1.4. Is able to recognize fall hazards.
- 2.8.1.5. Has the knowledge and training necessary to implement the procedure needed to minimize those hazards.
- 2.8.1.6. Immediately reports any safety issues to the competent person and/or supervisor.
- 2.8.1.7. Follows all fall protection hazard controls developed by the competent person.
- 2.8.1.8. Has successfully completed an Authorized User fall protection course.
- 2.8.1.9. Is authorized by their supervisor through an Employee Job Safety Analysis for each pertinent application.

### 2.8.2. Fall Protection Competent Person:

- 2.8.2.1. Competent Persons may use fall protection equipment.
- 2.8.2.2. Has a working knowledge of Cal Poly's Fall Protection Program.
- 2.8.2.3. Able to identify hazards of work tasks by conducting fall hazard assessments.
- 2.8.2.4. Authorized to stop or limit work at the hazard site.
- 2.8.2.5. Is authorized and directed to take prompt corrective measures to eliminate or mitigate fall hazards, including stopping work until the hazards are corrected.
- 2.8.2.6. Assists in the selection and use of fall protection equipment.
- 2.8.2.7. Verifies equipment is compliant with appropriate Cal OSHA and ANSI Standards.
- 2.8.2.8. Participates in investigations.
- 2.8.2.9. Conducts equipment use and competent person inspections and removes damaged equipment from service.
- 2.8.2.10. Is knowledgeable in the application, use, handling, and storage of fall protection equipment.
- 2.8.2.11. Has completed a Competent Person training program approved by Cal Poly.
- 2.8.2.12. Is authorized by their supervisor through an Employee Job Hazard Analysis for each pertinent application.

### 2.8.3. Fall Protection Qualified Person:

- 2.8.3.1. NOTE: This function is typically provided by a consulting engineer of firm

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- 2.8.3.2. Qualified persons may use fall protection equipment.
- 2.8.3.3. Supervises the design, selection, installation, and initial inspection of fall protection equipment for horizontal lifelines (HLL's) and certified anchorages.
- 2.8.3.4. May participate in incident investigations.
- 2.8.3.5. Has specialized training (to fulfill requirements such as those of a registered professional engineers), has extensive knowledge and experience in fall protection, and has demonstrated an ability to solve problems related to fall protection.
- 2.8.3.6. Is responsible for designing and approving specialized fall protection systems, equipment, and anchorage points.

## **2.8.4. Fall Protection Program Administrator requirements and responsibilities:**

- 2.8.4.1. Is responsible for developing, implementing, maintaining, reviewing, and evaluating the Fall Protection Program.
- 2.8.4.2. Provides guidance to all others involved with the program.
- 2.8.4.3. Establishes a procedure to identify fall hazards.
- 2.8.4.4. Develops fall protection and rescue procedures.
- 2.8.4.5. Specifies training requirements.
- 2.8.4.6. Participates in incident investigations.

## **3. REQUIREMENTS - Applicable Regulations**

### **3.1. Overview:**

#### **3.1.1. Implementation of the Fall Protection Program requires the following:**

- 3.1.1.1. Task/Location Hazard Assessment
- 3.1.1.2. Selection of Fall Protection Measure(s)
- 3.1.1.3. Implementation of the Fall Protection Measures
- 3.1.1.4. Training
- 3.1.1.5. Recordkeeping
- 3.1.1.6. Auditing

### **3.2. Hazard Assessment:**

#### **3.2.1. Supervisor/Competent Person:**

- 3.2.1.1. A fall protection hazard assessment shall be completed for each worksite. The Supervisor/Competent Person conduct the hazard assessment and document their findings. A complete list of fall hazards and protective measures shall be maintained for each worksite. See Attachment 9.2 for Fall Hazard Analysis sample/template.

### **3.3. Fall Protection Hierarchy:**

Protective measures for fall hazards shall be determined in the following order:

#### **3.3.1. Eliminate the fall hazard**

- 3.3.1.1. Move the work to a location without a fall hazard

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- 3.3.1.2. Engineer out the hazard, by installing guardrails or other passive fall protection equipment.
- 3.3.2.** When the control measures above are not feasible use a Fall Restraint System
  - 3.3.2.1. A Fall Protection system that is rigged to allow the movement of the employee only as far as the edges of the working area and not allow a fall.
- 3.3.3.** Use of Personal Fall Arrest Systems
  - 3.3.3.1. Use a Fall Arrest System
  - 3.3.3.2. Develop a rescue plan
- 3.3.4.** Implementation of a Fall Protection Plan
  - 3.3.4.1. A written plan developed and implemented by a qualified person; the plan permits work to be performed in a designated area without conventional fall protection and requires alternate measures to be used to reduce any fall hazard. There must be constant supervision and communication provided by a safety monitor. The area of work is known as a "controlled access zone" and only trained workers can enter the area.
  - 3.3.4.2. NOTE1: A Fall Protection Plan shall not be implemented without specific approval by EHS and the appropriate Facilities Administrator.
  - 3.3.4.3. NOTE2: The work cannot be performed unless all of the Fall Protection Hierarchy solutions listed above have been evaluated and found to be infeasible or create a greater hazard.
- 3.3.5.** Fall Protection Plan
  - 3.3.5.1. The purpose of the Fall Protection Plan is to supplement the Universities existing Fall Protection Program and is designed to be used only when conventional fall protection is impractical, infeasible to implement, or creates a greater hazard.
  - 3.3.5.2. The Fall Protection Plan may include the use of conventional fall protection at a number of areas on the project, and identifies specific activities that require non-conventional means of fall protection. In these cases, conventional fall protection systems may not be the safest choice for this project. This Plan is designed to enable employees to recognize fall hazards associated with this job and to establish safe procedures to prevent falls to lower levels through holes and openings in walking/working surfaces.
- 3.4. Work That Requires Fall Protection:**
  - 3.4.1.** Elevation Thresholds:
    - 3.4.1.1. 30 inches above landings, balconies, porches, platforms, runways, ramps or other similar, general access, working levels.
    - 3.4.1.2. Electrical or telecommunication industries, work that occurs four (4) or more feet above a lower level, on a pole.

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- 3.4.1.3. As a general rule, any construction work that occurs within six (6) feet of an unprotected fall hazard of six (6) or more feet above a lower level requires fall protection.
- 3.4.1.4. Employees must also use fall protection if there is a danger of falling into or onto hazardous equipment.
- 3.4.2.** A supervisor competent in the use of fall protection shall evaluate the worksite, (EHS is available to assist) and will determine the specific type(s) of fall protection to be used. The fall protection solutions will meet or exceed Cal/OSHA fall protection requirements. A Fall Protection Plan will only be used if conventional fall protection is infeasible and increases the hazards to the employees.
- 3.4.3.** Cal/OSHA has listed construction and general industry work activities that have specific fall protection requirements. The University will provide fall protection that meets or exceeds these requirements.

## **3.5. Types of Protection Systems:**

### **3.5.1. Floor and Roof Openings, Covers and Skylights**

- 3.5.1.1. To protect employees from falls, every floor and roof opening shall be guarded by a cover, a guardrail, or equivalent on all sides, or employees shall be provided with a personal fall protection system or fall protection plan.
- 3.5.1.2. All covers shall be properly secured to prevent accidental displacement.
- 3.5.1.3. Covers shall be color-coded or bear the markings "HOLE" or "COVER".
- 3.5.1.4. Floor and roof opening covers shall be able to support the greater of 400 pounds or twice the weight of employees, equipment, and materials that may be imposed on any one square foot of the cover at any time.
- 3.5.1.5. Covers located in roadways shall be able to support twice the axle load of the largest vehicle that might cross them.
- 3.5.1.6. Employees approaching within 6-feet of a skylight shall be protected from falling.

### **3.5.2. Guardrail Systems**

- 3.5.2.1. Guardrail Systems shall be erected at unprotected edges, ramps, runways, or holes where it is determined that erecting such systems will not cause an increased hazard to employees. See Appendix 8.3 for Guardrail Specifications.

### **3.5.3. Personal Fall Arrest Systems**

- 3.5.3.1. Personal Fall Arrest Systems shall be issued to and used by employees as determined by a competent person and may consist of anchorage, connectors, body harness, deceleration device, lifeline, or suitable combinations.
- 3.5.3.2. Personal Fall Arrest Systems shall:
  - 3.5.3.2.1. Limit the maximum arresting force to 1800 pounds.

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- 3.5.3.2.2. Be rigged so an employee cannot free fall more than 6-feet or contact any lower level.
- 3.5.3.2.3. Bring an employee to a complete stop and limit the maximum deceleration distance traveled to 3-½-feet.
- 3.5.3.2.4. Be strong enough to withstand twice the potential impact energy of an employee free falling 6-feet (or the free fall distance permitted by the system, whichever is less).
- 3.5.3.2.5. Harness attachment point must be in the center of the workers back near shoulder level.
- 3.5.3.2.6. Body belts may be used for fall position only, and must limit the arresting force to 900 pounds.
- 3.5.3.2.7. Be inspected prior to each use for damage and deterioration.
- 3.5.3.2.8. Ropes and straps used in lanyards, lifelines, and harnesses should be made from synthetic fibers, unless special precautions are required for hot work.
- 3.5.3.2.9. Be removed from service if any damaged components are detected.
- 3.5.3.2.10. Meet the design requirements of the OSHA Fall Protection standard and Cal/OSHA.
- 3.5.3.2.11. All components of a Personal Fall Arrest System shall meet the specifications of the OSHA Fall Protection Standard and Cal/OSHA, and shall be used in accordance with the manufacturer's instructions.
- 3.5.3.2.12. Snap hooks must be double acting and self-locking.
- 3.5.3.2.13. D-rings and locking snap hooks shall meet the following specifications:
  - 3.5.3.2.14. Have a minimum tensile strength of 5000 pounds; and
  - 3.5.3.2.15. Be proof-tested to a minimum tensile load of 3600 pounds without cracking, breaking, or suffering permanent deformation.
- 3.5.3.2.16. Anyone using a Personal Fall Arrest System must have a suspension trauma strap installed on their harness and be trained in its use.

## **3.5.4. Personal Fall Restraint:**

- 3.5.4.1. Harnesses shall be used for personal fall restraint. Anchorage points used for fall restraint must be able to support four times the intended load. Restraint devices must be rigged to allow the movement of employees only as far as the edges of the working level.
- 3.5.4.2. Anyone using a Personal Fall Restraint must have a suspension trauma strap installed on their harness and be trained in its use.

## **3.5.5. Positioning Device Systems:**

- 3.5.5.1. Harness systems shall be set-up so that an employee cannot fall more than 2- feet, and shall be secured to an anchorage capable of supporting

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twice the potential impact load or 3000 pounds, whichever is greater. The use of non-locking snap hooks is not permitted.

3.5.5.2. Ladder Assist climbing systems must attach directly with the supplied carabineer to the ventral D ring on the fall protection harness.

## **3.5.6. Anchorages:**

3.5.6.1. Anchorages must support:

3.5.6.1.1. For Personal Fall Arrest - at least 5000 pounds per person attached or be designed as part of a complete fall arrest system with a safety factor of 2 under the supervision of a qualified person.

3.5.6.1.2. For Fall Restraint - shall be capable of supporting 4 times the intended load. Most fall protection equipment manufacturer's specify a minimum capacity of 1000 pounds

3.5.6.1.3. For Positioning – shall be capable of supporting 3000 pounds or twice the intended load whichever is greater.

3.5.6.2. Designed, installed, and used under the supervision of a Fall Protection Competent Person.

3.5.6.3. Be installed according to the manufacturer's instructions.

3.5.6.4. Independent of any anchorage used to support or suspend platforms.

## **3.5.7. Safety Net Systems**

3.5.7.1. Safety nets are not used in any application, on campus, at this time.

## **3.5.8. Controlled Access Zones**

3.5.8.1. NOTE: There are no Controlled Access Zones currently in effect on campus. Controlled Access Zones require specific approval by EHS and the appropriate Facilities Administrator.

## **3.5.9. Excavations**

3.5.9.1. Fall protection will be provided to employees working at the edge of an excavation that is 6-feet or deeper. Employees in these areas are required to use the fall protection systems as designated in this program.

3.5.9.2. Excavations that are 6-feet or deeper and wider than 30-inches shall be protected by guardrail systems, fences, barricades, or covers.

3.5.9.3. Walkways that allow employees to cross over an excavation that is 6-feet or deeper and wider than 30-inches shall be equipped with standard guardrails.

## **3.5.10. Protection from Falling Objects:**

3.5.10.1. When guardrail systems are in use, the openings shall be small enough to prevent potential passage of falling objects. The following procedures must be followed by all employees to prevent hazards associated with falling objects.

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- 3.5.10.2. No materials (except masonry and mortar) shall be stored within 4-feet of working edges.
  - 3.5.10.3. Excess debris shall be removed regularly to keep work areas clear.
  - 3.5.10.4. During roofing work, materials and equipment shall be stored no less than 6-feet from the roof edge unless guardrails are erected at the edge.
  - 3.5.10.5. Stacked materials must be stable and self-supporting.
  - 3.5.10.6. Canopies shall be strong enough to prevent penetration by falling objects.
  - 3.5.10.7. Toe boards erected along the edges of overhead walking/working surfaces shall be capable of withstanding a force of at least 50 pounds; and solid with a minimum of 3-½ inches tall and no more than one-quarter (1/4) inch clearance above the walking/working surface.
  - 3.5.10.8. Equipment shall not be piled higher than the toeboard unless sufficient paneling or screening has been erected above the toeboard.
- 3.5.11. Aerial Lift Devices:**
- 3.5.11.1. Aerial Lift Devices - Use Requirements:
    - 3.5.11.1.1. Operators must be trained in the specific inspection, operation, and use of the device
    - 3.5.11.1.2. The user manual must be available for review
    - 3.5.11.1.3. The operator must conduct and document the daily inspection checklist for the device.
    - 3.5.11.1.4. The operator must correct any deficiencies (if any) before using the device.
    - 3.5.11.1.5. The operator must use the fall protection specified in the user manual.
    - 3.5.11.1.6. Exception: Operators must use a full body harness and the shortest lanyard feasible from the short (2'-3') lanyard when transitioning self-propelled devices to the work site.
    - 3.5.11.1.7. In all cases the minimum length of connection device (lanyard) shall be used and in no event shall a fixed length connecting device greater than 6' long be used.
    - 3.5.11.1.8. A minimum crew of 2 people. The second person must be able to contact Campus dispatch for help in the event of a fall. In remote locations, out of radio or phone contact, the second person must be a qualified operator for the equipment.
- 3.5.12. Inspection, Maintenance & Storage**
- 3.5.12.1. As with all protective equipment, the equipment is only protective when it is functioning properly. The same holds true for fall protection equipment. Fall protection equipment must be visually inspected by the user prior to each use and at least twice annually by a competent person to ensure the equipment is in good working order and ready for use. The dates of each inspection shall be documented.

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- 3.5.12.2. Fall protection equipment must be inspected to ensure the equipment is properly functioning. Manufacturer's recommendations must be followed for inspection, maintenance and storage of fall protection equipment
  - 3.5.12.3. If a personal fall protection system has been subjected to a fall, affected components of the system must be taken out of service and inspected to ensure they are in functional condition. Some components, such as the shock absorbing lanyard or retractable lifeline, must be returned to the manufacturer for recertification following their use in a fall situation or destroyed.
  - 3.5.12.4. Soiled or contaminated body wear (harnesses) can be cleaned in warm water using a mild soap and scrub cloth. The equipment must be thoroughly rinsed with fresh water following any detergent cleaning. Other fall protection equipment can be surface cleaned with water. Harsh chemicals should never be used to clean the fall protection equipment. Upon the completion of cleaning, the equipment must be allowed to dry thoroughly and be placed in a clean and dry location.
  - 3.5.12.5. Manufacturer labels must be visible and legible on all fall protection equipment. If not, they must be removed from service, regardless of equipment condition.
- 3.5.13. Rescue Plan**
- 3.5.13.1. In the event of any fall or other emergency; employees are to immediately call 911 via any campus phone, blue light phone, or (805) 756-2281 University Police to summon Emergency Services. Be ready to give your exact location and tell the dispatcher that if fall has occurred and whether rescue is necessary.
  - 3.5.13.2. Whenever personal fall protection equipment is used a minimum crew of 2 people is required. The second person must be able to contact Campus dispatch for help in the event of a fall. Prior to the start of work contact with campus dispatch must be confirmed. The second person must maintain visual or audible contact with the person in fall protection.
  - 3.5.13.3. Aerial lift devices require a minimum crew of 2 people. The second person must be able to contact Campus dispatch for help in the event of a fall. In remote locations, out of radio or phone contact, the second person must be a qualified operator for the equipment. Accident Investigations
  - 3.5.13.4. All incidents that result in injury to workers, as well as near misses, regardless of their nature, shall be reported and investigated. Investigations shall be conducted by Environmental Health and Safety (EHS). The investigation will occur as soon after an incident as possible to identify the cause and means of prevention to eliminate the risk of reoccurrence.
  - 3.5.13.5. In the event of such an incident, the Fall Protection Program (and Fall Protection Plan, if in place) shall be reevaluated by EHS to determine if additional practices, procedures, or training are necessary to prevent similar future incidents.

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## 3.5.14. Training Requirements

- 3.5.14.1. All employees who may be exposed to fall hazards are required to receive training on how to recognize such hazards, and how to minimize their exposure to them. Employees shall receive training as soon after employment as possible, and before they are required to work in areas where fall hazards exist.
- 3.5.14.2. A record of employees who have received training and training dates shall be maintained by Environmental Health and Safety. Training records of training sessions not provided or conducted by EHS shall be forwarded to EHS for recordkeeping purposes.
- 3.5.14.3. Roof Access Training:
  - 3.5.14.3.1. All personnel must have Roof Access Training before accessing any roof. This training consists of: explanation of roof (fall) hazards; how to avoid them; prohibited roof access conditions; when fall protection is required.
  - 3.5.14.3.2. NOTE: This is an awareness level training only that explains how to avoid fall hazards, not mitigate them.
- 3.5.14.4. General Fall Protection Training Elements shall include:
  - 3.5.14.4.1. Nature of the fall hazards employees may be exposed to.
  - 3.5.14.4.2. Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems.
  - 3.5.14.4.3. Use and operation of guardrails, personal fall protection systems; as well as safety nets, warning lines, and safety monitoring systems, when appropriate.
  - 3.5.14.4.4. Role of each employee in the Safety Monitoring System (if one is used).
  - 3.5.14.4.5. Limitations of the use of mechanical equipment during roofing work on low-slope roofs (if applicable).
  - 3.5.14.4.6. Correct procedures for equipment and materials handling, and storage and erection of overhead protection.
  - 3.5.14.4.7. Role of each employee in a Fall Protection Plan (if used).
  - 3.5.14.4.8. Requirements of the Cal/OSHA Fall Protection Standard, Title 8.
- 3.5.14.5. Authorized User Training requirements:
  - 3.5.14.5.1. Successfully complete a 6-8 hour Fall Protection Authorized User training course as designated by EH&S
  - 3.5.14.5.2. The authorized user must be trained to:
  - 3.5.14.5.3. Recognize fall hazards
  - 3.5.14.5.4. Follow specific procedures to minimize these hazards
  - 3.5.14.5.5. Properly select, use, maintain, and store the fall protection equipment

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3.5.14.5.6. Understand and use the Job Safety Analysis for each applicable activity requiring fall protection

3.5.14.6. Competent Person Training requirements:

3.5.14.6.1. Successfully complete a 16 hour, minimum, Fall Protection Competent Person training program that is administered by a third party and approved by EH&S

3.5.14.6.2. The competent person must be trained to:

3.5.14.6.2.1. Identify the fall hazards of work tasks

3.5.14.6.2.2. Conduct fall hazard surveys and assist in producing Job Safety Analyses

3.5.14.6.2.3. Stop or limit work at a jobsite site as needed to mitigate a fall and other hazards

3.5.14.6.2.4. Assist authorized users in the selection and use of fall protection equipment

3.5.14.6.2.5. Train Authorized Users and Others how to inspect, don, and use fall protection equipment.

3.5.14.6.2.6. Properly select, use, maintain, and store the fall protection equipment

3.5.14.6.2.7. Verify that equipment is compliant with appropriate Cal OSHA and ANSI standards

3.5.14.6.2.8. Verify that equipment is used properly by the authorized users

3.5.14.6.2.9. Participate in investigations

3.5.14.6.2.10. Conduct equipment use and competent person inspections

3.5.14.6.2.11. Remove damaged equipment from service

3.5.14.6.2.12. Additional training shall be provided as needed, including when changes are made to this Fall Protection Program, when a new Fall Protection Plan is implemented or an existing plan modified, or, when changes occur to the OSHA Fall Protection Standard.

3.5.14.7. Program Evaluation

3.5.14.7.1. Any changes to the Fall Protection Program or an individual Fall Protection Plan shall be approved by Environmental Health and Safety, as acting Fall Protection Administrator, and shall be reviewed by a qualified person.

3.5.14.7.2. The program will be reviewed annually by Environmental Health and Safety, notification of changes will be provided to the Campus Community, including Managers and Supervisors. All affected employees will be notified of any and all procedure changes, and be trained as necessary

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## **3.6. Fall Protection Recommendations and Requirements for New Construction:**

### **3.6.1. Recommendations:**

- 3.6.1.1. Plan for building exterior and roof maintenance, including roof mounted equipment maintenance, to minimize or eliminate the need for fall protection.
- 3.6.1.2. When possible protect roof mounted drains and equipment with a rated guardrail, 42" parapet wall, or place them more than 6' from the roof edge.

### **3.6.2. Requirements: For new construction greater than 36' up to 48' in height.**

- 3.6.2.1. Tie-Back anchors are required unless roof mounted equipment is installed for surface building maintenance.

### **3.6.3. Requirements: For new construction greater than 48' in height.**

- 3.6.3.1. Tie-Back anchors are required.

### **3.6.4. Tie-Back Anchor Requirements:**

- 3.6.4.1. When required tie-back anchors must be spaced approximately every 12'.
- 3.6.4.2. The anchor must have a 2" closed eye.
- 3.6.4.3. The anchor must support 5,000 pounds without permanent deformation.
- 3.6.4.4. The building structure must be designed to accommodate the potential applied loads.
- 3.6.4.5. The anchors must be proof tested and documented according to the manufacturer and design specifications.

### **3.6.5. Requirements for specialized/custom building surface maintenance - Operating Procedures Outline Sheet (OPOS)**

- 3.6.5.1. The Building Owner must specify whether building surface maintenance will be performed according to Title 8 California Code of Regulations Article 5 (Window Cleaning Standards), Article 6 (Powered Platforms and Equipment for Building Maintenance), or if an Operating Procedures Outline Sheet (OPOS) will be needed for customized maintenance access.
- 3.6.5.2. If an OPOS is required then it must be documented and maintained.
- 3.6.5.3. The OPOS must be provided, along with required assurances, to employees and contractors that must use the system.
- 3.6.5.4. Currently no campus buildings require an OPOS.

### **3.6.6. Tieback anchors are not required to be retrofitted on existing buildings even when remodeled/reroofed unless ground to roof additions are constructed.**

## **4. DEFINITIONS**

- 4.1. Aerial Lift Device.** Equipment such as powered platforms, vehicle-mounted elevated and rotating work platforms, extensible boom platforms, aerial ladders,

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articulating boom platforms, vertical towers and powered industrial truck platforms.

- 4.2.** Anchorage or Anchor Point. A secure point of attachment for lifelines, lanyards or deceleration devices.
- 4.3.** Anchor, Tie-Back: Specialized anchor for roof mounted suspension equipment. Must have a 2" closed eye, be hot dip galvanized or similar corrosion resistance, and sustain a 5000 pound load without permanent deformation.
- 4.4.** Anteproscaenium Lighting Bridge. A feature of a public assembly building (theatre) where the architect, engineer, and builder have provided a position where employees can access through engineered fixed ladders, ships ladders, or stairways, and where a physical building component is permanently attached to building structural components for the purpose of providing a place to mount theatrical lighting instruments and effects, and does not expose the employee to an unencumbered fall hazard from the position.
- 4.5.** Approved: Safety measures, procedures, and fall protection equipment meeting the description and standards as listed in California Code of Regulations, Title 8; Cal/OSHA
- 4.6.** Authorized Person: A person with the necessary knowledge, training, and supervisory approval to inspect/use fall protection equipment to mitigate fall hazards.
- 4.7.** Body belt (safety belt): A strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.
- 4.8.** Body Harness: A manufactured strap assembly which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.
- 4.9.** Box Boom: A feature of a public assembly building (theatre) where the architect, engineer, and builder have provided a position where employees can access vertically mounted lighting instruments or effects using an engineered fixed ladder and work landing.
- 4.10.** Buckle: Any device for holding the body belt or body harness closed around the employee's body.
- 4.11.** 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.

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- 4.12.** Connector: A device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).
- 4.13.** Controlled Access Zone: A work area designated and clearly defined by control lines and warning signs, or other means that restrict access. Certain types of work may take place within this zone without the use of conventional fall protection systems, however only authorized employees working under the direction of a fall protection plan shall enter this zone.
- NOTE: There are no Controlled Access Zones currently in effect on campus. CAZ's must be used with Fall Protection Plan, Safety Monitoring System, and Warning Line System. They shall not be implemented without specific approval from EHS and appropriate Facilities Administrator.
- 4.14.** Dangerous Equipment: Equipment (such as pickling or galvanizing tanks, degreasing units, machinery, electrical equipment, and other units) which, as a result of form or function, may be hazardous to employees who fall onto or into such equipment.
- 4.15.** Deceleration Device: Any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.
- 4.16.** Deceleration Distance: The additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.
- 4.17.** Dorsal (means back). The dorsal D ring on a full body harness must be used for fall arrest attachment. The dorsal D ring should be positioned between the shoulder blades on a properly fitted harness.
- 4.18.** Equivalent: Alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

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- 4.19.** Failure: Load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.
- 4.20.** Fall Protection Plan: A written plan that is developed and implemented by a qualified person which permits work to be performed in a designated area, without conventional fall protection, and requires alternate measures to be used to reduce any fall hazard. There must be constant supervision and communication provided by a safety monitor. This designated area of work is known as a "controlled access zone" and only trained workers can enter the area.
- NOTE: There are currently no Fall Protection Plans in effect for any location on campus. Fall Protection Plans shall be used with a Safety Monitoring System and Warning Line System. They shall not be implemented without specific approval from EHS and Appropriate Facilities Administrator.
- 4.21.** Fixed Ladder: A ladder, including an individual rung ladder, which is permanently attached to a structure, building, or equipment.
- 4.22.** Free Fall: The act of falling before a personal fall arrest system begins to apply force to arrest the fall.
- 4.23.** Free Fall Distance: The vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.
- 4.24.** Guardrail System: A barrier at least 42-inches high which includes posts, a mid-rail, and toe boards if required. The guardrail is erected to prevent personnel from falling from working levels more than 30- inches above the floor, ground, or other working areas of a building. Guardrail systems can be permanent (attached), free standing, or temporary.
- 4.25.** Harness: Strap assembly which may be secured about the worker in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.
- 4.26.** Hole: A gap or void 2 inches (5.1 cm) or more in its least dimension, in a floor, roof, or other walking/working surface.
- 4.27.** Infeasible: That it is impossible to perform the construction work using a conventional fall protection system (i.e., guardrail system, safety net system, or

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personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.

- 4.28.** Job Safety Analysis (JSA): The systematic process of: breaking a job down into component tasks; identifying and evaluating the hazards associated with each task; and developing a detailed procedure for performing the job.
- 4.29.** Ladder Safety System: A fall protection positioning system required for fixed ladders in excess of 24 feet.
- 4.30.** Lanyard: A flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.
- 4.31.** 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. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.
- 4.32.** Lifeline: A component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection 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.
- 4.33.** Low-Slope Roof: A roof having a slope less than or equal to 4 in 12 (vertical to horizontal).
- 4.34.** Lower Levels: Those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.
- 4.35.** Mechanical Equipment: All motor or human propelled wheeled equipment used for roofing work, except wheelbarrows and mopcars.
- 4.36.** Opening – Floor: An opening in any floor or platform, 12" or more in its least dimension.
- 4.37.** Opening – Wall: A gap or void 30 inches (76 cm) or more high and 18 inches (48 cm) or more wide, in a wall or partition, through which employees can fall to a lower level.
- 4.38.** Operating Procedures Outline Sheet (OPOS): Customized operating instructions for specialized exterior building access where ground based (ladder

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or lift) or typical roof mounted systems (suspended scaffold or bos'uns chair) cannot be used.

- 4.39.** Overhand Bricklaying and Related Work: The process of laying bricks and masonry units such that the surface of the wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over the wall to complete the work. Related work includes mason tending and electrical installation incorporated into the brick wall during the overhand bricklaying process.
- 4.40.** Personal Fall Arrest System (PFAS): A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. As of January 1, 1998, the use of a body belt for fall arrest is prohibited. The anchorage must be rated for 5000 pounds or must be designed by a qualified person and rated for a minimum of twice the load.
- 4.41.** Personal Fall Restraint System: A system consisting of an anchorage, connectors, and body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. The anchorage base must support four (4) times the intended load and be rigged to allow the movement of the employee only as far as the edges of the working area.
- 4.42.** 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.
- 4.43.** Prohibited Roof Access Conditions: Roof conditions that present an immediate fall hazard and require fall protection for any access. For example: high slope sheetmetal roofs, clay tile roofs, and glass roofs. This applies to roofs with a potential perimeter fall height of 6' or more and are not adequately protected by a guardrail or parapet wall.
- 4.44.** Projecting Ledge or "Eyebrow": Buildings designed with projecting ledges or "eyebrows" at the roof or intervening levels that prohibit the normal suspension of ropes for suspending scaffolds. Rated rigging sleeves shall be installed for ropes and connectors to pass through the projecting ledge.
- 4.45.** Qualified Person: A person designated by the employer who by reason of their training and experience has demonstrated their ability to safely perform their duties and, where required, is properly licensed in accordance with federal, state, or local laws and regulations.

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- 4.46.** Restraint Line: An approved device which is attached between the employee and an anchorage; the arrangement is designed to prevent the employee from walking or falling off of an elevated surface.
- 4.47.** Rigging Sleeve: Rated sleeve in a projecting ledge or “eyebrow” to allow ropes or other suspension devices to pass through the ledge.
- 4.48.** Roof: The exterior surface on the top of a building. This does not include floors or formwork which, because a building has not been completed, temporarily become the top surface of a building.
- 4.49.** Roof Access Training: This training consists of the explanation of roof (fall) hazards; how to avoid them; prohibited roof access conditions; when fall protection is required. All personnel must have Roof Access Training before accessing any roof.
- 4.50.** Roof Davit: Rated suspension system that extends beyond the roof edge to support suspended work platforms such as scaffolds or bos’uns chairs.
- 4.51.** Roofing Work: The hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal, and vapor barrier work, but not including the construction of the roof deck.
- 4.52.** Rope Grab: A deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.
- 4.53.** Safety-Monitoring System: A safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

NOTE: There are currently no Safety Monitoring Systems in place on campus. A Safety Monitoring System is used with a Fall Protection Plan and Warning Line System. They shall not be implemented without specific approval from EHS and Appropriate Facilities Administrator.

- 4.54.** Safety Nets: An approved and pre-tested net used when working at heights of 25-feet or more, when the use of Personal Fall Arrest or other conventional types of systems are not practical.

NOTE: There are no safety net systems in use at this time.

- 4.55.** Scaffold: Any temporary elevated or suspended platform, and its supporting structures, used for supporting employees or materials or both.
- 4.56.** Self-Retracting Lifeline/Lanyard: A deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum

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under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

- 4.57.** Snaphook, Double Locking: A connector comprised 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. Snaphooks are generally one of two types:
- 4.57.1.** The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or
  - 4.57.2.** The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.
- 4.58.** Steep Roof: A roof having a slope greater than 4 in 12 (vertical to horizontal).
- 4.59.** Suspension Trauma Straps: A strap system attached to a harness that allows the user to relieve the constriction of the lower extremities in the event of a fall.
- 4.60.** Tie-Off: A procedure of connecting directly or indirectly to an anchorage point.
- 4.61.** Toeboard: A low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls for personnel.
- 4.62.** 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 (1.0 m) high.
- 4.63.** Ventral (Chest) D Ring: A ventral mounted D ring on a full body harness is not used for fall arrest attachment. It is mainly used for ladder climbing assist and similar devices.
- 4.64.** Vertical Lifeline: A component consisting of a vertically hanging flexible line for connection to an anchor point at one end that serves as a means for connecting other components of a personal fall arrest system to the anchor point.
- 4.65.** 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 but not

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including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

- 4.66. 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.
- 4.67. Work Area: That portion of a walking/working surface where job duties are being performed.

## 5. GOVERNING DOCUMENT

- 5.1. Safety and Health Executive Order 1039

## 6. COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT

### 6.1. California Code Of Regulations

**CSO = Construction Safety Orders, ESO - Electrical Safety Orders, GISO = General Industry Safety Orders, TeISO = Telecommunication Safety Orders**

- 6.1.1. Section 341, Regulations of the Division of Occupational Safety and Health - Permit Requirements
- 6.1.2. Section 1541, CSO - Excavations, General Requirements
- 6.1.3. Section 1644, CSO - Scaffolds - Various Types, Metal Scaffolds
- 6.1.4. Section 1649, CSO - Scaffolds - Various Types, Light-Duty Wooden Pole Scaffolds
- 6.1.5. Section 1669, CSO - Fall Protection, General
- 6.1.6. Section 1670, CSO - Fall Protection, Personal Fall Arrest Systems, Personal Fall Restraint Systems and Positioning Devices
- 6.1.7. Section 1671, CSO - Fall Protection, Safety Nets
- 6.1.8. Section 1671.1, CSO - Fall Protection Plan
- 6.1.9. Section 1671.2, CSO - Fall Protection, Controlled Access Zones and Safety Monitoring Systems
- 6.1.10. Section 1711, CSO - Fall Protection, Erection and Construction
- 6.1.11. Section 1712, CSO - Erection and Construction, Requirements for Impalement Protection
- 6.1.12. Section 1716.1, CSO - Erection and Construction, Structural Wood Framing Systems
- 6.1.13. Section 1724, CSO - Roofing Operations and Equipment, Roofing - General
- 6.1.14. Section 1730, CSO - Roofing Operations and Equipment, Roof Hazards

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- 6.1.15. Section 1731, CSO - Roofing Operations and Equipment, Roof Hazards - New Production - Type Residential Construction
  - 6.1.16. Section 2320.8, ESO - Work Procedures, Fall Protection
  - 6.1.17. Section 2940.6, ESO - Work Procedures and Operating Procedures, Tools and Protective Equipment
  - 6.1.18. Section 2940.8, ESO - Work Procedures and Operating Procedures, Material Handling
  - 6.1.19. Section 3210, GISO - Standard Specifications, Guardrails at Elevated Locations
  - 6.1.20. Section 3211, GISO - Standard Specifications, Wall Openings
  - 6.1.21. Section 3273, GISO - Access, Work Space, and Work Areas, Working Area
  - 6.1.22. Section 3277, GISO - Access, Work Space, and Work Areas, Fixed Ladders
  - 6.1.23. Section 3282, GISO - General Requirements for All Window Cleaning Operations
  - 6.1.24. Section 3284, GISO - Window Cleaning, General Requirements for All Window Cleaning Operations
  - 6.1.25. Section 3286, GISO - Window Cleaning, Window Cleaner's Belts, Personal Fall Arrest Systems, Personal Fall Restraint Systems and Positioning Devices
  - 6.1.26. Section 3291, GISO - Special Design Considerations--Permanent Roof Top Installations
  - 6.1.27. Article 5, GISO – Window Cleaning
  - 6.1.28. Appendix A of Article 5 – GISO, Window Cleaning, Operating Procedures Outline Sheet (OPOS)
  - 6.1.29. Article 6, GISO – Powered Platforms and Equipment for Building Maintenance
  - 6.1.30. Section 8615, TelSO - Telecommunications, Overheard Lines
- 6.2. Federal Code of Regulations**
- 6.2.1. Section 1910.67, Vehicle-mounted elevating and rotating work platforms
  - 6.2.2. Section 1910.140, Personal fall protection systems
  - 6.2.3. Section 1910.268, Telecommunications
  - 6.2.4. Section 1910.269, Electric Power Generation, Transmission, and Distribution
  - 6.2.5. Section 1926.451, Scaffolds, General Requirements
  - 6.2.6. Section 1926.501, Fall Protection, Duty to have fall protection
  - 6.2.7. Section 1926.502, Fall Protection, Fall Protection systems criteria and practices
  - 6.2.8. Section 1926.503, Fall Protection, Training Requirements
  - 6.2.9. Section 1926.1051, Stairways and Ladders, General Requirements

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**6.2.10.** Section 1926.1053, Stairways and Ladders, Ladders

## **7. REFERENCE DOCUMENTS**

### **7.1. Developmental References:**

**7.1.1.** ANSI A10.14-1991 American National Standard for Construction and Demolition Use

**7.1.2.** ANSI Z359.1-1992 American National Standard Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

## **8. APPENDICES**

### **8.1. Fall Protection Equipment Inspection Protocols (Appendix 8.1):**

**8.1.1.** Use inspection protocols specified in equipment manufacturer's instructions.

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## **8.2. Locations with Installed Fall Protection Equipment and Document Boxes (Appendix 8.2):**

- 8.2.1. Performing Arts Center, Bldg. 006/013, Document Box located in 006/013
- 8.2.2. Graphic Arts, Bldg. 026, Document Box located in Room 302
- 8.2.3. Dexter Building, Bldg. 034, Document Box located in Room 300
- 8.2.4. Math and Science Building, Bldg. 038, Document Box located in Room 113
- 8.2.5. Science North, Bldg. 053, Document Box located in Room 402
- 8.2.6. University Union, Bldg. 065, Document Box located at Room 301
- 8.2.7. Tenaya Hall, Bldg. 110, Document Box Located in Room 300A
- 8.2.8. Sierra Madre Main Lounge, Bldg. 113, Document Box located in Room L204
- 8.2.9. Sierra Madre Tower 3, Bldg. 113D, Document Box located in Room 33U
- 8.2.10. Sierra Madre Tower 5, Bldg. 113F, Document Box located in Room 53U
- 8.2.11. Yosemite Tower 0, Bldg. 114A, Document Box located in Penthouse Mechanical Room
- 8.2.12. Yosemite Tower 1, Bldg. 114B, Document Box located in Penthouse Mechanical Room
- 8.2.13. Yosemite Tower 2, Bldg. 114C, Document Box located in Penthouse Mechanical Room
- 8.2.14. Yosemite Tower 3, Bldg. 114D, Document Box located in Penthouse Mechanical Room
- 8.2.15. Yosemite Tower 4, Bldg. 114E, Document Box located in Penthouse Mechanical Room
- 8.2.16. Yosemite Tower 5, Bldg. 114F, Document Box located in Penthouse Mechanical Room
- 8.2.17. Installed Systems Pending Certification:
  - 8.2.17.1. Rec Sports, Bldg. 043
  - 8.2.17.2. YTT-A, Bldg. 172A
  - 8.2.17.3. YTT-B, Bldg. 172B
  - 8.2.17.4. YTT-C, Bldg. 172C
  - 8.2.17.5. YTT-D, Bldg. 172D
  - 8.2.17.6. YTT-E, Bldg. 172E
  - 8.2.17.7. YTT-F, Bldg. 172F
  - 8.2.17.8. YTT-G, Bldg. 172G
  - 8.2.17.9. YTT-H, Bldg. 172H
  - 8.2.17.10. Baker Science, Bldg. 180
  - 8.2.17.11. Simpson Strong-Tie Materials Demonstration Lab, Bldg. 187

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## 8.2.18. Buildings with Installed Anchor Points that are NOT CERTIFIED

- 8.2.18.1. Administration, Bldg. 001, 5<sup>th</sup> Floor Roof
- 8.2.18.2. Business, Bldg. 003, Window Anchors
- 8.2.18.3. Architecture, Bldg. 005, 2<sup>nd</sup> and 3<sup>rd</sup> Floor Roofs
- 8.2.18.4. Kennedy Library, Bldg. 035, Window Anchors

## 8.3. Guardrail Specifications (Appendix 8.3)

8.3.1. Pre-engineered, manufactured, guardrail systems must be installed according to the manufacturer's specification and instructions.

8.3.2. All guardrails must meet the following specifications as listed in CCR, Title 8, Sub Chapter 7, Group 1. Article 2, Section 3209 will be followed in the erection of guardrail systems:

8.3.2.1. A standard guardrail shall consist of top rail, mid-rail or equivalent protection, and posts, and shall have a vertical height within the range of 42-inches to 45-inches from the upper surface of the top rail to the floor, platform, runway, or ramp level. (Note: the permissible tolerance on height dimensions is one-inch). The top rail shall be smooth-surfaced throughout the length of the railing. The mid-rail shall be approximately halfway between the top rail and the floor, platform, runway, or ramp. The ends of the rails shall not overhang the terminal posts, except where such overhang does not constitute a projection hazard. (Title 24, Part 2, Section 2-1716(a))

8.3.2.2. All guardrails and other permissible types, including their connections and anchorage, shall be designed for a live load of 20 pounds per linear foot applied either horizontally or vertically downward at the top rail. Dimensional details of railing members of a few types of construction which comply with this strength requirement are given hereinafter in Subsection (c) .

8.3.2.3. Note: It is recognized that the minimum value of railing strength here specified is inadequate for safety under operating conditions where railings are liable to receive heavy stresses from crowds, trucking, handling materials, etc. For such conditions, additional strength shall be provided by use of heavier stock, closer spacing of posts, bracing, or otherwise.

8.3.2.4. Railing members shall be framed in such a position that they will afford the greatest support and protection, for example, top rails of structural steel angles shall have the outside face of vertical leg located on the side adjacent to the side of normal contact by the employee.

8.3.2.5. The following are some acceptable guardrail specifications: other combinations will be accepted as long as equivalent strength and protection are maintained:

8.3.2.5.1. In wooden construction, the posts to be of at least 2-inch by 4-inch nominal material spaced not to exceed 6-feet, the top rails to be smooth with corners rounded and not less than 2-inch by 4-inch nominal material. The posts may be spaced on 8-foot centers if the top rails

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consist of double 1-inch by 4-inch nominal boards, provided that 1 board is fastened in a flat position on top of the posts and the other is fastened in an edge-up position to the inside of the posts and the side of the top board. Single mid-rails, where permitted, shall be not less than 2-inch by 4-inch nominal material and installed on the contact side of the guardrail.

- 8.3.2.5.2. If constructed of standard metal pipe, the top rails and single mid-rail, where permitted, to be 1-1/2-inch outside diameter or larger. The posts to be 1-1/2-inch outside diameter or larger, the spacing not to exceed 8-feet.
- 8.3.2.5.3. Mid-rails, screens, mesh, intermediate vertical members, and solid panels shall be erected in accordance with the OSHA Fall Protection Standard.
- 8.3.2.5.4. Guardrails must be equipped with toe boards if used in an elevated area above 6-feet in height and where tools, equipment, or materials can fall onto employees below.
- 8.3.2.5.5. Gates or removable guardrail sections shall be placed across openings of hoisting areas or holes when they are not in use to prevent access

## 8.3.3. Additional Guardrails

- 8.3.3.1. Pre-engineered, non-penetrating guardrails may be used when installed according to the manufacturer's instructions and specifications.
- 8.3.3.2. Temporary parapet mounted guardrails may be used when installed according to the manufacturer's instructions and specifications.
- 8.3.3.3. Scaffolding may be used to create a perimeter guardrail when the scaffolding meets the ratings specified above.
- 8.3.3.4. Temporary custom fabricated guardrail sections that meet the specifications above may be held at the roof edge by forklift or high reach lift.

## 8.4. Prohibited/Restricted Roof (Appendix 8.4)

These conditions require the use of fall protection regardless of the activity, unless there is a 42" guardrail or parapet. Personnel must use fall protection prior to accessing the roof.

- 8.4.1. Any work on a clay tile roof where the potential perimeter fall height is more than 6 feet.
- 8.4.2. Any work on a sheet metal roof that is wet, slippery, or has a pitch greater than 5:12 (22 degrees) and has a potential perimeter fall height of more than 6 feet.
- 8.4.3. Any work over glass at any height where there is the potential to fall through the glass. The fall protection system must be designed to prevent contact with the glass surface in the event of a fall.
- 8.4.4. Any work on a roof with a pitch of 7:12 (30 degrees) or greater that has a potential perimeter fall height of more than 6 feet.

# FALL PROTECTION PROGRAM (FPP)

**8.4.5.** Any work within 6 feet of a skylight or opening unless the skylight or opening has an adequate cover, screen, or is protected by a guardrail. NOTE: A skylight is any clear or translucent roof surface.

**8.4.6.** When using a pneumatic nailer on a roof with a pitch greater than 1:3 (14 degrees) and a potential perimeter fall height of more than 6 feet.

## **8.5. General Roof Access Conditions (Appendix 8.5)**

**8.5.1.** Anyone working on a roof must have a means of requesting assistance either by radio, cell phone, or direct visual/audio contact with a co-worker with a radio or cell phone.

**8.5.2.** Prior to any roof work requiring fall protection or subject to a fall protection plan personnel must confirm that they can contact University Police Dispatch (805) 756-2281. Use 911 for actual emergencies only.

**8.5.3.** Any roof work, requiring fall protection or subject to a fall protection plan, must be done by a minimum crew of two people. Crews of two people are strongly recommended for all other roof work.

**8.5.4.** Anyone working on a roof or wearing fall protection must be adequately trained.

**8.5.5.** All fall protection plans must be written by a “qualified person” and implemented by a “competent person”.

**8.5.6.** A fall hazard is removed when protected by a 42” tall guardrail or parapet wall.

**8.5.7.** Roof work more than 6 feet from an edge or opening is allowed without fall protection unless the roof condition is restricted in the “General Prohibitions”.

**8.5.8.** When accessing a roof through a hatch, close the hatch once on the roof to protect the hatch opening.

**8.5.8.1.** NOTE: The hatch does not need to be latched, just closed.

**8.5.9.** When accessing a roof from a fixed or portable ladder, fall protection is not required to cross the 6’ zone at the ladder unless the roof condition is restricted in the “General Prohibitions”.

## **9. ATTACHMENTS**

### **9.1. Standard Fall Protection Equipment - Facilities Warehouse**

**9.1.1.** Standard Fall Protection equipment stocked in the Facilities Warehouse

### **9.2. Sample Fall Protection Job Hazard Analysis Form**

### **9.3. Fall Protection Equipment Inspection Label Form – Blank**

### **9.4. Code of Safe Practice; Roof Safety - Roof Installation, Replacement, Repair, Roof Maintenance and Inspection**

# FALL PROTECTION PROGRAM (FPP)

**9.5. Code of Safe Practice; Roof Safety – Roof Mounted Equipment Installation, Repair, Maintenance and Inspections**

**9.6. Code of Safe Practice; Fall Protection - General**

## **10. DOCUMENT MAINTENANCE**

**10.1. DOCUMENT RECISION-**

Delete or replace documents from the EH&S website due to this document release: NA

**10.2. DOCUMENT APPROVER-**

David Korpan, EH&S Director, Cal Poly

**10.3. DOCUMENT OWNER-**

Christina Juarez EH&S Supervisor, Cal Poly

**10.4. DOCUMENT CONTACT-**

Tim Hastings, Sr. Environmental Health Specialist, EH&S, Cal Poly  
Christina Juarez, EH&S Supervisor, EH&S Cal Poly

**10.5. REVISION NOTES-**

Revision Number: NA  
Changes from previous: NA

# **FALL PROTECTION PROGRAM (FPP)**

## **Attachment 9.1 - Standard Fall Protection Equipment - Facilities Warehouse**

# Cal Poly - Environmental Health and Safety

Standardized Fall Protection Harness and Lanyard Recommendations  
Stocked in Facilities Warehouse

The following equipment recommendations are based on the most flexible, in terms of use options, simplest to use, and simplest to maintain.

Harnesses: \*

DBI/SALA, Delta, Construction Vest Style Harness with Belt/Hip Pad and Tongue Buckles

Small, Model 1102201

Medium, Model 1101654

Large, Model 1101655

X Large, Model 1101655

2X Large, Model 1102205

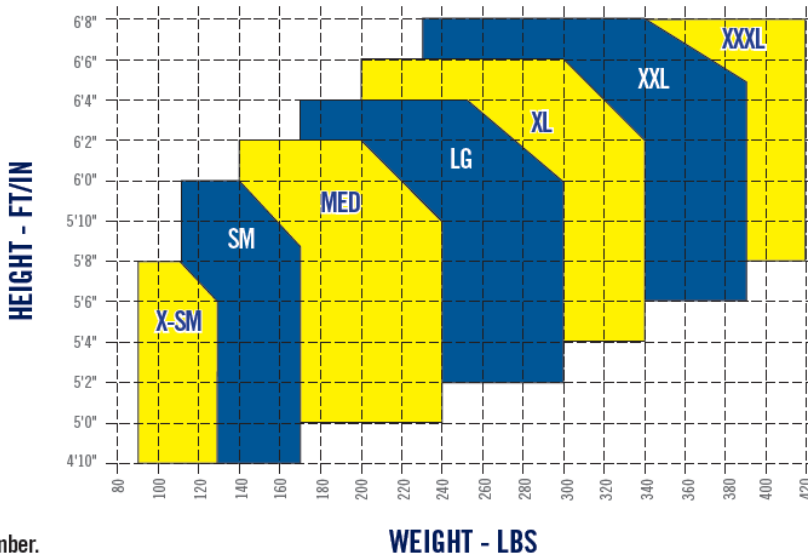
3X Large, Model 1101660



Size Chart:

**DELTA™ HARNESSES ARE AVAILABLE IN UNIVERSAL SIZES**

No matter if your Delta™ is XS or 3XL, it adds to your tool carrying capabilities and your job-site flexibility.



Suspension Trauma Straps



number.

\* NOTE: All harnesses require a set of Suspension Trauma Straps.  
Recommended: DBI/SALA Suspension Trauma Straps, Model 9501403

# Cal Poly - Environmental Health and Safety

## Standardized Fall Protection Harness and Lanyard Recommendations Stocked in Facilities Warehouse

### Positioning Lanyards:

Positioning lanyards are to be used as part of fall protection systems designed so that an employee can not freefall more than 2 feet.

DBI/SALA, Web Positioning Lanyard-

2 Foot, Model 1231102

3 Foot, Model 1231103

4 Foot, Model 1231104



### Shock Absorbing Lanyards:

Shock absorbing lanyards are designed to limit the fall arresting force to 1800 pounds when used with a full body harness.

DBI/SALA, Force 2 Shock Absorbing Lanyard-

Shock Absorber Only with Snap Hook and D ring, Model 1246130




4 Foot Single Leg Lanyard with Shock Absorber, Model 1246166

6 Foot Single Leg Lanyard with Shock Absorber, Model 1246167



# **FALL PROTECTION PROGRAM (FPP)**

## **Attachment 9.2 - Fall Protection Job Hazard Analysis Form**

<b>Picture of task/equipment:</b>	<b>Date:</b>	<b>04/26/2019</b>
 	<b>Program :</b>	Fall Protection
	<b>Analyzed By:</b>	EH&S – Tim Hastings
	<b>Bldg:</b>	University Union, Bldg. 65
<b>Task:</b>	Performing maintenance work on roof and on roof mounted equipment at University Union. 	

**General Fall Protection Requirements:**

- 1) Anyone working on a roof must have a means of requesting assistance either by radio, cell phone, or direct visual/audio contact with a co-worker with a radio or cell phone.
- 2) Prior to any roof work requiring fall protection or subject to a fall protection plan, personnel must confirm that they can contact University Police Dispatch (805) 756-2281. Use 911 for actual emergencies only.
- 3) Any roof work, requiring fall protection or subject to a fall protection plan, must be done by a minimum crew of two people.
- 4) Prior to work using fall protection equipment, verify 6 month competent person inspection is done on personal equipment and roof system.

**Required Training:**


Fall Protection: Authorized User or Competent Person Training as described in Cal Poly Fall Protection Program.

**Required PPE:**

- 1) Personal fall arrest harness
- 2) Fixed Lanyard- for doing equipment maintenance or
- 3) Self-retracting lanyard- maintenance tasks that require more mobility
- 4) Suspension trauma strap

<b>TASK</b>	<b>HAZARDS</b>	<b>CONTROLS</b>
Access to Roof:	Roof Hatches in Rooms 215 and 301A	<ol style="list-style-type: none"> <li>1) Use caution when transitioning through hatch opening.</li> <li>2) Close hatch, but do not latch, once on roof.</li> </ol>

TASK	HAZARDS	CONTROLS
Access to Roof. Climbing ladder between various roof levels.	Possible fall while climbing ladder.	Climb while facing ladder. Use both hands to grip ladder when climbing. Do not carry anything by hand up or down the ladder. Wear non-slip footwear.  Climb/descend the ladder using 3 point contact method.
Working on or near roof edge.	Fall from roof when working less than 6 feet from the edge of roof.	1) Utilize personal fall protection equipment: <ul style="list-style-type: none"> <li>• fixed roof anchor,</li> <li>• full body harness,</li> <li>• fixed lanyard for work doing equipment maintenance or</li> <li>• self-retracting lanyard for work/tasks that require more mobility on roof</li> </ul> 2) Inspect all fall protection equipment before use, by user and record inspection in Fall Protection Notebook. 3) Check label for competent person inspection within last 6 months.
Working around open access hatches.	Fall from roof to a lower level when working less within 6 feet of an open hatch.	1) Close hatch, but do not latch, after exiting the hatch. This removes the fall hazard.  OR 2) Utilize personal fall protection equipment: <ul style="list-style-type: none"> <li>• fixed roof anchor,</li> <li>• full body harness,</li> <li>• fixed lanyard for work doing equipment maintenance or</li> <li>• self-retracting lanyard for work/tasks that require more mobility on roof</li> </ul> 3) Inspect all fall protection equipment before use, by user and record inspection in Fall Protection Notebook. 4) Check label for competent person inspection within last 6 months.
Attachment into CB12 anchor point by user:	Disengagement of snap hooks, carabiners or other connectors.	1) Connectors must be compatible with CB Anchors: <ul style="list-style-type: none"> <li>• self-locking and self-closing</li> </ul> 2) All connectors must be inspected by user prior to use and by competent person every 6 months. 3) Connector must be closed and locked to D-ring 4) Snap hooks and carabineers must not be connected to one another. 5) Only <u>one</u> connection per D-ring
Working with tools at elevated heights:	Falling tools or equipment to ground level where bystanders may be located:	1) Maintain tools in a location away from the sides of the building. 2) If working near the edge of a building with tools and equipment; demarcate the area below to restrict access.
Unprotected edges:	Unprotected/unguarded edge at skylight on roof.	1) No work should be done within 6 feet of skylight on sections where the skylight is less than 42 inches height from roof surface.

		
<p><b>Site Specific Hazards:</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Low Light</li> <li><input checked="" type="checkbox"/> Trip Hazards</li> <li><input type="checkbox"/> Hidden Drop-offs</li> <li><input type="checkbox"/> Unstable Footing</li> <li><input checked="" type="checkbox"/> Slippery Surfaces</li> <li><input checked="" type="checkbox"/> Protruding Objects    <input type="checkbox"/> Moving Parts</li> <li><input type="checkbox"/> Pedestrian Traffic</li> <li><input type="checkbox"/> Open Floor Holes</li> <li><input type="checkbox"/> Floor Openings    <input type="checkbox"/> Sloping Surfaces</li> <li><input type="checkbox"/> Unstable Surfaces    <input checked="" type="checkbox"/> Skylights</li> <li><input type="checkbox"/> High Wind Velocity</li> <li><input type="checkbox"/> Weather Related</li> <li><input type="checkbox"/> Other _____</li> </ul>	<p>Use caution when walking. Wear non-slip shoes/boots. Watch for protruding object and other trip hazards.</p> <p>Keep at least 6' away from skylights unless wearing fall protection and connected to an approved anchor point.</p>

# **FALL PROTECTION PROGRAM (FPP)**

## **Attachment 9.3 - Fall Protection Equipment Inspection Label Form - Blank**



# **FALL PROTECTION PROGRAM (FPP)**

## **Attachment 9.4. - Code of Safe Practice; Roof Safety - Roof Installation, Replacement, Repair, Roof Maintenance and Inspection**

# Cal Poly

## Code of Safe Practice

### Roof Safety – Roof Installation, Replacement, Repair, Roof Maintenance and Inspection

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Safe practices require that personal fall protection devices and/or procedures be used whenever an employee is exposed to a potential fall.

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***BE AWARE! Know where the roof edge is! Check for fall hazards!  
Use extra caution whenever you are within 6 feet of the edge!***

#### Scope and Application:

- Roofing installation, replacement, repair, maintenance, and inspection
- Gutter and roof drain cleaning and maintenance (Does not include work on downspouts or other piping)
- Does not include framing or sheathing operations
- Does not include equipment maintenance and/or inspection

#### General Prohibitions: Restricted Conditions

These conditions require the use of fall protection regardless of the activity, unless there is a 42” guardrail or parapet.

- Any work on a clay tile roof where the potential perimeter fall height is more than 6 feet.
- Any work on a sheet metal roof that is wet, slippery, or has a pitch greater than 5:12 (22°) and has a potential perimeter fall height of more than 6 feet.
- Any work over glass at any height where there is the potential to fall through the glass. **The fall protection system must be designed to prevent contact with the glass surface in the event of a fall.**
- Any work on a roof with a pitch of 7:12 (30°) or greater that has a potential perimeter fall height of more than 6 feet.
- Any work within 6 feet of a skylight or opening unless the skylight or opening has an adequate cover, screen, or is protected by a guardrail. NOTE: A skylight is any clear or translucent roof surface.
- When using a pneumatic nailer on a roof with a pitch greater than 1:3 (14°) and a potential perimeter fall height of more than 6 feet.

#### General Requirements/Conditions:

- Anyone working on a roof must have a means of requesting assistance either by radio, cell phone, or direct visual/audio contact with a co-worker with a radio or cell phone.
- Prior to any roof work requiring fall protection or subject to a fall protection plan personnel must confirm that they can contact University Police Dispatch (805) 756-2281. Use 911 for actual emergencies only.
- Any roof work, requiring fall protection or subject to a fall protection plan, must be done by a minimum crew of two people. Crews of two people are strongly recommended for all other roof work.
- Anyone working on a roof or wearing fall protection must be adequately trained.
- All fall protection plans must be written by a “qualified person” and implemented by a “competent person”.
- A fall hazard is removed when protected by a 42” tall guardrail or parapet wall.
- Roof work more than 6 feet from an edge or opening is allowed without fall protection unless the roof condition is restricted in the “General Prohibitions”.
- When accessing a roof through a hatch, close the hatch once on the roof to protect the hatch opening.  
NOTE: The hatch does not need to be latched, just closed.
- When accessing a roof from a fixed or portable ladder, fall protection is not required to cross the 6’ zone at the ladder unless the roof condition is restricted in the “General Prohibitions”.

#### Inspections:

- Roof inspections (Inspection, measurement, and assessment ONLY) are allowed on any roof area not restricted in the “General Prohibitions”. The inspection must be performed by a crew of 2 when working above 20’. Special care must be taken to assess fall hazards.

#### Emergency Procedures:

- Prior to using fall protection plan for self-rescue. If a fall occurs attempt to self-rescue.
- If unable to self-rescue contact University Police Dispatch at 756-2281, 911, or by radio, as appropriate. Identify your location, that a fall has occurred, and that rescue is needed. Do not hang up until directed to do so by Dispatch personnel.

# **FALL PROTECTION PROGRAM (FPP)**

## **Attachment 9.5. - Code of Safe Practice; Roof Safety – Roof Mounted Equipment Installation, Repair, Maintenance and Inspections**

# Cal Poly

## Code of Safe Practice

### Roof Safety – Roof Mounted Equipment Installation, Repair, Maintenance and Inspections

Safe practices require that personal fall protection devices and or procedures be used whenever an employee is exposed to a potential fall.

***BE AWARE! Know where the roof edge is! Check for fall hazards!  
Use extra caution whenever you are within 6 feet of the edge!***

#### Scope and Application:

- Roof mounted equipment-
  - Installation
  - Repair
  - Maintenance
  - Inspection

#### General Prohibitions: Restricted Conditions

These conditions require the use of fall protection regardless of the activity, unless there is a 42” guardrail or parapet.

- Any work on a clay tile roof where the potential perimeter fall height is more than 6 feet.
- Any work on a sheet metal roof that is wet, slippery, or has a pitch greater than 5:12 (22 degrees) and has a potential perimeter fall height of more than 6 feet.
- Any work over glass at any height where there is the potential to fall through the glass. **The fall protection system must be designed to prevent contact with the glass surface in the event of a fall.**
- Any work on a roof with a pitch of 7:12 (30 degrees) or greater that has a potential perimeter fall height of more than 6 feet.
- Any work within 6 feet of a skylight or opening unless the skylight or opening has an adequate cover, screen, or is protected by a guardrail. NOTE: A skylight is any clear or translucent roof surface.
- When using a pneumatic nailer on a roof with a pitch greater than 1:3 (14 degrees) and a potential perimeter fall height of more than 6 feet.

#### General Access and Safety Requirements:

- Anyone working on a roof must have a means of requesting assistance either by radio, cell phone, or direct visual/audio contact with a co-worker with a radio or cell phone.
- Prior to any roof work requiring fall protection or subject to a fall protection plan personnel must confirm that they can contact University Police Dispatch (805) 756-2281. Use 911 for actual emergencies only.
- Any roof work, requiring fall protection or subject to a fall protection plan, must be done by a minimum crew of two people. Crews of two people are strongly recommended for all other roof work.
- Any equipment maintenance above 6 feet and within 6 feet of an unprotected edge must be performed while wearing fall protection unless a fall protection plan is in place.
- Anyone working on a roof or wearing fall protection must be adequately trained.
- All fall protection plans must be written by a “qualified person” and implemented by a “competent person”.
- A fall hazard is removed when protected by a 42” tall guardrail or parapet wall.
- Roof work more than 6 feet from an edge or opening is allowed without fall protection unless the roof condition is restricted in the “General Prohibitions”.
- When accessing a roof through a hatch, close the hatch once on the roof to protect the hatch opening. NOTE: The hatch does not need to be latched, just closed.
- When accessing a roof from a fixed or portable ladder, fall protection is not required to cross the 6’ zone at the ladder unless the roof condition is restricted in the “General Prohibitions”.

#### Emergency Procedures:

- Prior to using fall protection plan for self-rescue. If a fall occurs attempt to self-rescue.
- If unable to self-rescue contact University Police Dispatch at 756-2281, 911, or by radio, as appropriate. Identify your location, that a fall has occurred, and that rescue is needed. Do not hang up until directed to do so by Dispatch personnel.

# **FALL PROTECTION PROGRAM (FPP)**

## **Attachment 9.6. - Code of Safe Practice; Fall Protection - General**

# Cal Poly

## Code of Safe Practice

### Fall Protection - General

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Safe practices require that personal fall protection devices and or procedures be used whenever an employee is exposed to a potential fall.

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## Fall Protection Procedures

### **EVALUATE FALL HAZARDS: The following activities automatically require fall protection.**

- Use of an aerial lift in any elevated position.
- Any work above uncapped rebar or any work more than 6' above capped rebar unless guardrails are in place.
- When working 4 feet or more above the ground on any pole, tower, or similar structure.
- Any other activity where there is a potential to fall more than 6 feet from the perimeter of a structure, unprotected sides, leading edges, roofs with a slope steeper than 7:12, or other surfaces sloped more than 40 degrees and where there is no guardrail.

### **SELECT THE PROPER FALL PROTECTION SYSTEM:**

- Personal fall arrest systems: The system of anchor points, lifelines, lanyards, deceleration devices, and body harness designed to limit a potential free fall to 4' and maximum deceleration distance to 3-1/2' as well as prohibit contact with any lower level.
- Personal fall restraint: The system of anchor points, life lines, lanyards, deceleration devices, and body belts or harnesses designed to limit a potential free fall to 4' and to allow employee movement only within and to the sides of the work area.
- Positioning systems: The system of anchor points, lanyards, body belts or harnesses designed to limit potential free fall to 2' and to allow two handed work while held in place by the positioning device.
- Fall protection plans: When other forms of fall protection are determined to be infeasible or not technically possible then a fall protection plan may be developed which specifies controlled access zones and safety monitoring systems.
- Additional fall protection options for roofing installations or replacements include catch platforms, scaffold platforms, eave barriers, and roof jack systems.

### **INSTALL THE PERSONAL FALL PROTECTION SYSTEM:**

- The anchor points for a personal fall arrest/restraint system shall be capable of supporting 5,000 pounds per employee attached and shall not be used to concurrently support or suspend any platform.
- The anchor points for any fall restraint system shall be capable of supporting 4 times the intended load, typically 1,000 pounds.
- The anchor points for any positioning system shall be capable of supporting 2 times the intended load or 3,000 pounds whichever is greater.
- Vertical lifelines must be able to support 5,000 pounds and only one person at a time may be attached to a vertical lifeline.
- Horizontal lifelines must be able to support 5,000 pounds per person attached and must be designed, installed, and used under the supervision of a qualified person.
- All components of a personal fall protection system shall be compatible with one another.
- Non-locking snap hooks are prohibited and body belts are prohibited as part of a personal fall arrest system
- Protect all components of a fall protection system from damage, abrasion, and deterioration.
- Only approved components shall be used.
- A fall protection plan must be designed by a qualified person and implemented by a competent person.

### **USE OF THE FALL PROTECTION SYSTEM:**

- Inspect the fall protection system for damage, each time it is used.
- A competent person shall inspect each fall protection system component, according to manufacturer's instructions, every six months and shall document the inspection in writing.
- Any damaged component shall be tagged and immediately removed from service.
- Any component subject to in-service loading (equivalent to a drop test) shall be tagged and immediately removed from service.
- Anyone who may use personal fall protection systems must be adequately trained in recognition of fall hazards; selection, installation, use, and maintenance of those systems.
- Anyone using a personal fall protection system must use the buddy system (have another employee present within visual/voice contact) and be able to contact Campus Dispatch in case of an emergency.