

San Diego Community College OSHA Standards

Fall Protection Program

Revision 3 - 11/10/2015

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PURPOSE

The fall protection program identifies potential fall hazards and establishes effective fall prevention measures. The program applies to employees that are exposed to unprotected sides that indicate a falling hazard greater than or equal to 6 feet from the ground. Fall hazards include any unprotected sides from the edges of roofs, excavations, floor holes, wall openings, and other walking/working surfaces. The appropriate parties cited at the end will be responsible for carrying out the policies of this program.

AUTHORITY CITATIONS

<u>CCR, Title 8, § 1669-1771.1, 3209-3214, 3299</u> CFR, Title 29, § <u>1910</u>, <u>1926.451</u>, <u>500-503</u> ANSI, <u>A14.1-.2-1990</u> ANSI, A14.3-1984

DIVISION OF RESPONSIBILITIES

Risk Management Office

The Risk Management office is responsible for the implementation and maintenance of this program as described above and maintaining records of any fall hazards and site specific fall protection plans.

Supervisors

Responsible for implementing and enforcing the provisions of this program, including:

- Recognizing fall hazards from any elevated work activities
- Training employees on proper fall protection hazards by providing personal protective equipment and technical expertise
- Documenting elevated workplaces that may harbor fall hazards
- Stopping work when a fall hazard is too dangerous to correct
- Reporting to the Risk Management office any potential dangers in the workplace or any injuries that may occur as a result of falling

Employees

Employees are responsible for complying with the provisions of this program, including:

- Completing all necessary training for fall protection
- Properly implementing safe practices in the field
- Stopping work immediately if a fall hazard is identified
- Reporting any deficiencies or safety issues to the supervisor or Risk Management office

HAZARD ASSESSMENT

Before conducting any operations involving elevated surfaces that require fall protection, the supervisor will assess the worksite and document a list of fall hazards and protective measures to be maintained. To assess a fall hazard, the supervisor and employee will evaluate the worksite using the following steps.

- Identify a hazard
- Eliminate the hazard
 - Performing work on the ground (if permissible)
 - Negotiate the hazard using engineering controls such as using guardrails or moving equipment on the ground
- Utilize fall restraint systems
 - Use lanyards to help prevent falls
- Utilize a personal fall arrest system
- Develop a rescue/evacuation plan
- Supply employee with appropriate personal protective equipment
- Document the assessment

FALL PROTECTION

General housekeeping

In order to prevent accidental slips, trips, and falls in the workplace, permanent floors and platforms shall be maintained in good repair, kept free of dangerous projections and obstructions, and kept reasonably free of oil, grease, or water. Where operations require work to be performed on slippery floors, employees shall be protected against slipping by using mats, grates, cleats, or other methods which provide equivalent protection. Where wet processes are used, drainage shall be maintained and false floors, platforms, mats, or other dry standing places shall be provided. Employees and supervisors will regularly inspect equipment for any defects prior to use.

Safety Systems

A fall protection system is to be used whenever an employee performs work which exposes them to a fall greater than or equal to 6 feet. For work performed on structures, a fall hazard exists when employees come within 6 feet of a point where they could fall. For surfaces steeper than 30 degrees, a fall hazard exists regardless of the distance to the fall point.

- Covers
 - Covers for holes shall be capable of supporting at least twice the weight of the employee, equipment, and material that may be on top of the cover at any one time.
 - Covers shall be secured when installed to prevent accidental displacement by the wind, equipment, or other employees.
 - Appropriate markings such as "Hole" or "Cover" will be placed in the cover to indicate a fall hazard
 - If a fall hazard lacks a cover, the opening shall be attended by an employee or will be protected by railing.
- Guardrails
 - 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.

- 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.
- 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 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.
- 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.
- Guardrails installed on or before May 26, 2011. If constructed of structural metal, the top rails to be angle iron of at least 2-inch by 2-inch by 1/4-inch angles or other metal shapes of equivalent bending strength; and the single mid-rail, where permitted, to be iron or steel of at least 2-inch by 2- inch by 1/4-inch angles or other metal shapes of equivalent strength. The posts to be angle iron of at least 2-inch by 1/4-inch stock, the spacing not to exceed 8 feet.
- If constructed of structural metal, the top rails to be angle iron of at least 2-inch by 2-inch by 3/8-inch angles or other metal shapes of equivalent bending strength; and the single mid-rail, where permitted, to be iron or steel of at least 2-inch by 2-inch by 3/8-inch angles or other metal shapes of equivalent strength. The posts to be angle iron of at least 2-inch by 2-inch by 3/8-inch by 3/8-inch stock, the spacing not to exceed 8 feet.
- Other barriers (wire rails, parapets) may be used in place of guardrails as long as they surpass the above requirements.
- Fall Arrest, Restraint, and Positioning Device Systems
 - Approved personal fall arrest, personal fall restraint or positioning systems shall be worn by those employees whose work exposes them to falling in excess of 7 1/2 feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft-ways and openings, sloped roof surfaces steeper than 7:12, or other sloped surfaces steeper than 40 degrees not otherwise adequately protected under the provisions of these orders.
 - o Arrest
 - Personal fall arrest systems shall be inspected prior to each use for wear, damage, and other deterioration and defective components shall be removed from service.
 - Body belts shall be at least one and five-eighths (1 5/8) inches wide.
 - Personal fall arrest systems shall not be attached to hoists, except as specified in these
 orders, nor shall they be attached to guardrails.
 - When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the working level or working area
 - Each personal fall arrest system shall be inspected not less than twice annually by a competent person in accordance with the manufacturer's recommendations. The date of each inspection shall be documented.
 - o Restraint
 - Body belts or harnesses may be used for personal fall restraint.
 - Body belts shall be at least one and five-eights (1-5/8) inches wide.
 - Anchorage points used for fall restraint shall be capable of supporting 4 times the intended load.
 - Restraint protection shall be rigged to allow the movement of employees only as far as the sides of the working level or working area.
 - o Positioning Device

- Positioning devices shall be rigged such that an employee cannot free fall more than 2 feet.
- Positioning device systems shall be inspected prior to each use for wear, damage, and other deterioration and defective components shall be removed from service.
- The use of non-locking snaphooks shall be prohibited.
- Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.
- Anchor points
 - Anchor points must support at least 5000 pounds/person attached and shall be designed and installed under the direction of a supervisor.
 - o Independent of any anchorage being used to support or suspend platforms.
- Safety nets
 - Where the elevation is 25 feet or more above the ground, water surface, or continuous floor level below, and when the use of personal fall arrest systems, personal fall restraint systems, positioning device systems or more conventional types of protection are clearly impractical, the exterior and/or interior perimeter of the structure shall be provided with an approved safety net extending at least 8 feet horizontally from such perimeter and being positioned at a distance not to exceed 10 feet vertically below where such hazards exist, or equivalent protection provided safety nets shall extend outward from the outermost projection of the work surface as follows:

Vertical Distance from Working Level to Horizontal Plane of the Net	Minimum Required Distance of Outer Edge of Net from the Edge of Working Surface
Up to 5 Feet	8 Feet
5 Feet – 10 Feet	10 Feet
10 Feet – 30 Feet	13 Feet

- Nets shall be inspected for damage or deterioration.
- Toe boards
 - Toe boards shall be constructed of wood, concrete, metal, or other suitable material. Where constructed of metal grille, mesh shall not exceed 1-inch. The top of the toe board shall be not less than 3 1/2 inches above the platform, walkway, or other working level and the bottom clearance shall not exceed 1/4-inch.

APPLICABLE OPERATIONS

Ladders

- The appropriate ladder will be selected for the specific task at hand (break in elevation of 19 inches or more with no ramp, personnel hoist, or sloped embankment).
- The selected ladder must be long enough to provide access to the work area without standing on the top two steps and it must be sufficient to support the weight of the employee with tools.
- A straight ladder should have side rails that extend at least 3 feet above the support point at the eave/roof line.
- Ladders must be placed on a level surface.
- Metal ladders are prohibited from use around electrical equipment.
- Tools/materials should be raised to the top.

- Automatic locks on extension ladders must be in the proper position before climbing up the ladder.
- Personal protective equipment including hard hats must be worn within an area beneath elevated work.
- Ladders shall not be used as horizontal platforms, bracing, skids, or any other purpose excepted their intended use as climbing equipment.

Duty Rating	Ladder Type	Working Load (lbs)
Special	IAA	375
Extra Heavy-Duty	IA	300
Heavy-Duty	I	250
Medium-Duty	I	225
Light-Duty	III	200

- Step Ladders
 - Step ladders shall be a maximum of 20 feet in length.
 - The spreader shall be placed in the locked position whenever the ladder is in use. Step ladders without locking spreaders shall not be used.
 - Employees shall not stand or step on the topcap or the step below the topcap.
 - Planks shall not be placed on steps or on the topcap.
- Fixed Ladders
 - The number and position of additional concentrated live-load units of 200 pounds each as determined from anticipated usage of the ladder shall be considered in the design.
 - Any type of system attached to a fixed ladder must be inspected annually by a supervisor or qualified employee.

<u>Aerial lifts</u>

• Employees working in aerial lift devices shall use a fall restraint or arrest system in accordance with the requirements contained in this program. This requirement may be suspended if employees are working on an elevating work platform that operates in a substantially vertical axis (e.g., vertical towers, scissor lifts) and has guardrails which meet the requirements contained in this program.

Excavations

- Fall protection is required around all excavations over 6 feet deep and 30 inches wide.
- Excavations shall be protected by guardrail systems, fences, or covers.

Floor, Roof, and Wall Openings

- An opening in a wall or partition not provided with a glazed sash, having a height of at least 30 inches and a width of at least 18 inches, through which a person might fall to a level 30 inches or more below, shall be guarded by a guardrail or other barrier of such construction and mounting that the guardrail or barrier is capable of withstanding a force of at least 200 pounds applied horizontally at any point on the near side of the guardrail or barrier. Barriers may be of solid construction, grillwork with openings not more than 8 inches long, or of slate work with openings not more than 4 inches wide with unrestricted length.
- Every floor and roof opening shall be guarded by a cover, a guardrail, or equivalent on all open sides. While the cover is not in place, the openings shall be constantly attended by someone or shall be protected by guardrails. Toe boards shall be installed around the edges at openings where persons may pass below the opening.
- Floor holes through which materials or tools may fall and create a hazard or through which parts of a person's body may contact dangerous moving parts, shall be completely covered except when in use unless

these floor holes are used to feed machines or receptacles containing hot, toxic or corrosive materials, then these openings shall be guarded by hoppers, guardrails, or grates having openings not exceeding 1-inch by 5 inches. Floor holes through which transmission equipment passes may be guarded by toe boards.

• Floor and roof opening covers shall be designed by a qualified person and be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time. Covers shall be secured in place to prevent accidental removal or displacement, and shall bear a pressure sensitized, painted, or stenciled sign with legible letters not less than one inch high, stating: "Opening--Do Not Remove." Markings of chalk or keel shall not be used.

Scaffolds

- Fall protection is required for any scaffolds that are used 6 feet above a lower level.
- The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks, shall not be used to support scaffolds or planks.
- Guardrails and toeboards shall be installed on all open sides and ends of platforms more than 10 feet above the ground or floor, except needle beam scaffolds and floats [see paragraphs (p) and (w) of this section]. Scaffolds 4 feet to 10 feet in height, having a minimum horizontal dimension in either direction of less than 45 inches, shall have standard guardrails installed on all open sides and ends of the platform.
- Guardrails shall be 2 x 4 inches, or the equivalent, approximately 42 inches high, with a midrail, when required. Supports shall be at intervals not to exceed 8 feet. Toeboards shall be a minimum of 4 inches in height.
- Where persons are required to work or pass under the scaffold, scaffolds shall be provided with a screen between the toeboard and the guardrail, extending along the entire opening, consisting of No. 18 gauge U.S. Standard wire = inch mesh, or the equivalent.
- Scaffolds and their components shall be capable of supporting without failure at least 4 times the maximum intended load.
- Any scaffold including accessories such as braces, brackets, trusses, screw legs, ladders, etc. damaged or weakened from any cause shall be immediately repaired or replaced.
- All load-carrying timber members of scaffold framing shall be a minimum of 1,500 fiber (Stress Grade) construction grade lumber. All dimensions are nominal sizes as provided in the American Lumber Standards, except that where rough sizes are noted, only rough or undressed lumber of the size specified will satisfy minimum requirements.
- All planking shall be Scaffold Grades, or equivalent, as recognized by approved grading rules for the species of wood used. The maximum permissible spans for 2- x 10-inch or wider planks shall be as shown in Table L-3.
- The maximum permissible span for 1 < x 9-inch or wider plank of full thickness shall be 4 feet with medium duty loading of 50 p.s.f.
- All planking of platforms shall be overlapped (minimum 12 inches), or secured from movement.
- An access ladder or equivalent safe access shall be provided.
- Scaffold planks shall extend over their end supports not less than 6 inches or more than 12 inches.
- The poles, legs, or uprights of scaffolds shall be plumb, and securely and rigidly braced to prevent swaying and displacement.
- Overhead protection shall be provided for employees on a scaffold exposed to overhead hazards.

APPENDIX A: DEFINITIONS

<u>Aerial life device</u>: equipment such as powered platforms, vehicle-mounted elevated and rotating work platforms, extensible boom platforms, aerial ladders, articulating boom platforms, vertical towers, and powered industrial truck platforms.

Anchor point: a secure point of attachment for lifelines, lanyards or deceleration devices.

- <u>Body belt:</u> a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.
- <u>Body harness</u>: straps 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.
- <u>Connector</u>: 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 carabiner, or it may be an integral component of part of the system (such as a buckle or dee-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).
- <u>Deceleration device:</u> 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.
- <u>Fixed ladder:</u> a ladder, including a rung ladder which is permanently attached to a structure, building, or piece of equipment.

Guardrail system: a barrier erected to prevent employees from falling to lower levels.

- <u>Hole:</u> a gap or void 2 inches (5.1 cm) or more in its least dimension, in a floor, roof, or other walking/working surface.
- Ladder: a device used to gain access to a different elevation
- 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.
- <u>Lifeline</u>: 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.

Low slope roof: a roof having a slope less than or equal to 4 in 12 (vertical to horizontal).

- Lower levels: 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.
- <u>Openings:</u> 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.
- <u>Restraint line</u>: a device attached between the user and an anchor point which prevents the employee from walking or falling off an elevated surface.
- <u>Scaffold:</u> a temporary elevated or suspended platform, at its supporting structures, used for supporting users and/or materials.
- <u>Snaphook:</u> 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:

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

<u>Toe board:</u> a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls for personnel.

Tie off: a procedure of connecting directly or indirectly to an anchor point.

<u>Unprotected sides and edges:</u> 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.

APPENDIX B: CURRENT MEDICAL CONTRACTOR

Sharp Rees-Stealy Occupational Health Services Facility

Inform the receptionist if you have had an exposure to blood or other potentially infectious materials and need an appointment immediately.

Work-Related Injury Treatment Authorization

For treatment authorization and worker's compensation referrals, contact the Risk Management office at 619-388-6953.

In the event of a

WORK-RELATED

Send Employee to the Nearest Sharp Rees-Stealy Occupational Health Services Facility:



CHULA VISTA

525 Third Ave. Chula Vista, CA 91910 619) 585-4050 Occupational Health Services 8 a.m. to 5 p.m., Mon. to Fri. Urgent Care Center 8 a.m. to 8 p.m., daily



LA MESA

Grossmont Medical Plaza, Ste. 601 5525 Grossmont Center Dr. La Mesa, CA 91942 (619) 644-6600 Occupational Health Services 8 a.m. to 5 p.m., Mon. to Fri. Urgent Care Center 8 a.m. to 8 p.m., daily



DOWNTOWN

300 Fir St. San Diego, CA 92101 (619) 446-1524 Occupational Health Services 8 a.m. to 5 p.m., Mon. to Fri. Urgent Care Center 8 a.m. to 10 p.m., daily (except certain holidays)



RANCHO BERNARDO

16950 Via Tazon San Diego, CA 92127 (858) 521-2350 **Occupational Health Services** 8 a.m. to 5 p.m., Mon. to Fri. **Urgent Care Center** 8 a.m. to 8 p.m., daily



GENESEE

2020 Genesee Ave. San Diego, CA 92123 (858) 616-8400 Occupational Health Services 7 a.m. to 5 p.m., Mon. to Fri. Urgent Care Center No urgent care at this location



SORRENTO MESA

10243 Genetic Center Dr. San Diego, CA 92121 (858) 526-6150 **Occupational Health Services** 8 a.m. to 5 p.m., Mon. to Fri. **Urgent Care Center** 8 a.m. to 8 p.m., daily





AFTER-HOURS CARE For a WORK-RELATED INJURY or ILLNESS

Send Employee to the Nearest Sharp Hospital Emergency Department



Sharp Chula Vista Medical Center

751 Medical Center Ct. Chula Vista, CA 91911 (619) 502-5800



Sharp Grossmont Hospital

5555 Grossmont Center Dr. La Mesa, CA 91942 (619) 740-6000



Sharp Coronado Hospital 250 Prospect Pl.

Coronado, CA 92118 (619) 522-3600



Sharp Memorial Hospital

7901 Frost St. San Diego, CA 92123 (858) 939-3400



APPENDIX C: SAFETY PROGRAM APPROVAL

San Diego City College Safety Program

Reviewed by:	Date:
Risk Manager	
Approved by:	Date:
City College Vice President, Administrative Services	
Approved by:	Date:
City College President	

San Diego Mesa College Safety Program

Reviewed by:	_ Date:
Risk Manager	
Approved by:	Date:
Mesa College Vice President, Administrative Services	
Approved by:	_ Date:
Mesa College President	

San Diego Miramar College Safety Program

Reviewed by:	Date:
Risk Manager	
Approved by:	Date:
Miramar College Vice President, Administrative Services	
Approved by:	Date:
Miramar College President	

San Diego Continuing Education Safety Program

Reviewed by:	Date:
Risk Manager	
Approved by:	Date:
Continuing Education Vice President, Administrative Services	
Approved by:	Date:
Continuing Education President	

District Service Center Safety Program

Reviewed by:	Date:
Risk Manager	
Approved by:	Date:
Director, Facilities Services	
Approved by:	Date:
Vice Chancellor, Facilities Management	