

## Ladder Safety

**T**he use of ladders presents some significant workplace hazards. According to Cal/OSHA statistics, 13 people in California died in 2000 from falls from ladders.

Unsafe ladder use, such as using the wrong kind of ladder or upsetting the ladder's balance by leaning too far from its center of gravity, has resulted in injuries to University employees.

Following is an overview of the Cal/OSHA requirements and safe practices in ladder use. Supervisors should review and enforce these safe practices with their employees who use ladders in their work. Certain construction-related ladders such as job-built ladders, ladder stands (mobile work platforms), or trellis ladders are not covered in this Fact Sheet.

### Kinds of ladders

A ladder should have a mark indicating its type and size. Additionally, a mark indicating the ladder's compliance with ANSI A14 should be visible. Call EH&S to evaluate the ladder if the markings are not visible.

**Extension Ladder** An extension ladder is a non-self-supporting portable ladder, adjustable in length. It consists of two or more sections that travel in guides or brackets, which are arranged to permit length adjustment. An extension ladder's size is designated by the sum of the lengths of the sections measured along the side rails. It cannot exceed 44 feet.

**Sectional Ladder** A sectional ladder is a non-self-supporting portable ladder, adjustable or non-adjustable in length. It consists of two or more sections of ladder that may be combined to function as a single ladder. The overall length of the assembled sections designates its size.

**Single Ladder** A single ladder is a non-self-supporting portable ladder, similar to an extension ladder, non-adjustable in length, that consists of only one section. Its size is designated by the overall length of the side rail and cannot exceed 30 feet.

**Step Ladders** A stepladder is a self-supporting portable ladder, non-adjustable in length, having flat steps and a hinged back. It is measured along the front edge of the side rails.



## Type of stepladder

*Type I*— Industrial stepladder, 3 to 20 feet long for heavy-duty work, commonly used by contractors, utility companies, or industrial companies.

*Type II*— Commercial stepladder, 3 to 12 feet long for medium duty operations, such as painting, office repairs, or light industrial use.

*Type III*— Household step ladder, 3 to 6 feet long for light duties, such as light household use. These ladders are not permitted for use by University employees.

## Basic principles for safe use of *all* ladders

- Inspect the ladder for broken or defective parts prior to each use.
- Face the ladder while climbing and descending.
- Do not stand on the top three rungs of ladders (except for stepladders, see below).
- Remove damaged or defective ladders from use.
- Do not place ladders where they can be accidentally struck or displaced.
- Tie, block, or otherwise secure portable ladders while in use.
- Do not splice ladders together.
- Do not use metal ladders for electrical work or near live electrical parts.
- Mark portable metal ladders with the words — CAUTION — DO NOT USE AROUND ELECTRICAL EQUIPMENT.
- If working off the ladder, use an appropriate fall protection system as described in the EH&S Fact Sheet, “Fall Protection Equipment and Inspection.”
- Most wooden ladders on campus have been discarded, but those still in use may not be painted with any color other than clear. Opaque paint could hide cracks.

## Basic principles for safe use of *stepladders*

- Do not step on the top of the ladder (top cap) or on the step below the top cap.
- Do not place planks on the top cap.
- Do not use the X-bracing on the rear section of a stepladder for climbing.
- Make sure that the stepladder is properly set up and that the spreader is locked in place before use.
- Do not use the stepladder as a lean-to ladder.

## Housekeeping

Clear debris and equipment that could cause a slip, trip, or fall from working areas around the ladder. Prevent equipment and supplies from falling on other people.

## Fall protection for use with ladders

If working from a ladder is necessary and the worker will be more than 7 1/2 feet above the floor level, some form of fall protection has to be set up before starting the work and must be used during the work. Engineering controls, such as scaffolding with appropriate railings, should be considered before using ladders, but if they are unavailable, the employee should use fall protection devices.

For further explanations of fall protection devices, see the EH&S Fact Sheet, “Fall Protection Equipment and Inspection.”

