

	COMPANY HEALTH AND SAFETY PROGRAM	
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	Ladder Safety Practices	Revision: 0

1.0 PURPOSE

The purpose of the Ladder Safety Practices is to promote safe working conditions for HES personnel who may use portable or fixed ladders and to understand the ladder requirements and specifications. The requirements are set forth in OSHA 29 CFR 1926 Subpart X and specifically 1926.1053.

2.0 SCOPE

The practices identify requirements and guidelines that apply to all HES projects involving the use of ladder equipment.

3.0 DOCUMENT MAINTENANCE

This document will be maintained by the Health & Safety Manager and approved by the Director, Environmental Services with each new revision.

4.0 DEFINITIONS

Many of the terms used in this document have been defined in 29 CFR 1926 Subpart X:

- *Cleat* - means a ladder crosspiece of rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder.
- *Extension trestle ladder* - means a self-supporting portable ladder, adjustable in length consisting of a trestle ladder base and a vertically adjustable extension section, with a suitable means for locking the ladders together.
- *Fixed-ladder* - means a ladder that cannot be readily moved or carried because it is an integral part of a building or structure.
- *Job-made ladder* - means a ladder that is fabricated by employees, typically at the construction site, and is not commercially manufactured.
- *Ladder stand* - a mobile fixed size self-supporting ladder consisting of a wide flat tread ladder in the form of stairs. The assembly may include handrails.
- *Maximum intended load* - means the total load of all employees, equipment, tools, materials, transmitted loads, and other loads anticipated to be applied to a ladder component at any one time.
- *Portable ladder* - means a ladder that can be readily moved or carried.
- *Single-cleat ladder* - means a ladder consisting of a pair of side rails, connected together by cleats, rungs, or steps.

Ladder Safety Practices	
Document No.: 8.2	Revision: 0

- *Riser height* - means the vertical distance from the top of a tread to the top of the next higher tread or platform/landing or the distance from the top of a platform/landing to the top of the next higher tread or platform/landing.
- *Single-rail ladder* - means a portable ladder with rungs, cleats, or steps mounted on a single rail instead of the normal two rails used on most other ladders.
- *Step stool (ladder type)* - means a self-supporting, foldable, portable ladder, nonadjustable in length, 32 inches or less in overall size, with flat steps and without a pail shelf, designed to be climbed on the ladder top cap as well as all steps.
- *Unprotected sides and edges* - means any side or edge (except entrances to points of access) of a stairway where there is no stair rail system or wall 36 inches or more in height, and any side or edge (except entrances to points of access) of a stairway landing, or ladder platform where there is no wall or guardrail system 39 inches or more in height.

5.0 POLICY

HES personnel will not be allowed to use any ladder that is broken, loosened, bent, structurally defective, or damaged in any other way. Ladders found in any of these conditions should be tagged with “DO NOT USE” removed from service and either repaired or decommissioned. Only wooden, plastic, or fiberglass ladders will be used during indoor or asbestos work activities.

Supervisors or personnel using ladders in their work areas will check the ladder prior to use to verify the ladders integrity and that no damage has occurred. If a ladder is unacceptable for use then the supervisor will decommission the ladder and either repair or decommission it.

6.0 GENERAL LADDER REQUIREMENTS

A ladder must be provided at all personal points of access where there is a break in elevation of 19 inches or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.

A double-cleated ladder or two or more separate ladders must be provided when ladders are the only means of access or exit from a working area for 25 or more employees, or when a ladder is to serve simultaneous two-way traffic.

When a building or structure has only one point of access between levels, that point of access must be kept clear to permit free passage of personnel. When work must be performed or equipment must be used in that free passage at that point of access is restricted, a second point of access must be provided and used. When a building or structure has two or more points of access between levels, at least one point of access must be kept clear to permit free passage of personnel.

Ladder Safety Practices	
Document No.: 8.2	Revision: 0

All ladder fall protection systems required by the federal regulations must be installed and all duties required must be performed before personnel begin work that requires them to use ladders.

Ladder rungs, cleats, and steps must be parallel, level, and uniformly spaced when the ladder is in position for use.

Rungs, cleats, and steps of portable and fixed ladders must not be spaced less than 10 inches apart, nor more than 14 inches apart, along the ladder's side rails.

Rungs, cleats, and steps of step stools must not be less than 8 inches apart, nor more than 12 inches apart, between center lines of the rungs, cleats, and steps.

Rungs, cleats, and steps at the base section of extension trestle ladders must not be less than 8 inches nor more than 18 inches apart, between center lines of the rungs, cleats, and steps. The rung spacing on the extension section must not be less than 6 inches nor more than 12 inches.

Ladders must not be tied or fastened together to create longer sections unless they are specifically designed for such use.

When splicing side rails, the resulting side rail must be equivalent in strength to a one-piece side rail made of the same material.

Two or more separate ladders used to reach an elevated work area must be offset with a platform or landing between the ladders, except when portable ladders are used to gain access to fixed ladders.

Ladder components must be surfaced to prevent injury from punctures or lacerations, and prevent snagging of clothing.

Wooden ladders will not be used by HES.

7.0 PORTABLE LADDERS

Non-self-supporting and self-supporting portable ladders must support at least four times the maximum intended load; extra heavy-duty type 1A metal or plastic ladders must sustain 3.3 times the maximum intended load. The ability of a self-supporting ladder to sustain loads must be determined by applying the load in a downward vertical direction when the ladder is placed at a horizontal angle of 75.5 degrees.

Ladder Safety Practices	
Document No.: 8.2	Revision: 0

The minimum clear distance between side rails for all portable ladders must be 11.5 inches. The rungs and steps of portable metal ladders must be corrugated, knurled, dimpled, coated with skid-resistant material, or treated to minimize slipping.

8.0 FIXED LADDERS

Fixed ladders are not expected to be used by HES personnel. Fixed ladders encountered by personnel should meet the requirements set by federal standards. In the event fixed ladders are encountered by personnel the supervisor must contact the owner of the ladder to verify acceptable use and visually inspect the fixed ladder for acceptable use upon the owner's approval.

9.0 STEP LADDERS

Step ladders, typically referred to as "A" frame ladders, should not be used as straight ladders. The top two rungs or steps of the ladder must not be used to ensure personnel safety for those using the ladder as well as those surrounding the ladder.

A metal spreader or locking device must be provided on each stepladder to hold the front and back sections in an open position when the ladder is being used.

Due to the fact that stepladders are generally not tied off, if an employee is working on a step ladder above 10 feet from the ground or floor the ladder should be held and stabilized by another employee.

10.0 LADDER USAGE

When portable ladders are used for access to an upper landing surface, the side rails must extend at least 3 feet above the upper landing surface. When such an extension is not possible, the ladder must be secured, and a grasping device such as a grab rail must be provided to assist workers in mounting and dismounting the ladder. A ladder extension must not deflect under a load that would cause the ladder to slip off its support.

Ladders must be maintained free of oil, grease, and other slipping hazards.

Ladders must not be loaded beyond the maximum intended load for which they were built nor beyond their manufacturer's rated capacity.

It is extremely important to remember that ladders are to only be used for the purpose for which they were designed.

Ladder Safety Practices	
Document No.: 8.2	Revision: 0

Non-self-supporting ladders must be used at an angle where the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder.

Ladders must be used only on stable and level surfaces unless secured to prevent accidental movement.

Ladders must not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement. Slip-resistant feet must not be used as a substitute for the care in placing, lashing, or holding a ladder upon slippery surfaces.

Ladders placed in areas such as passage-ways, doorways, or driveways, or where they can be displaced by workplace activities or traffic must be secured to prevent accidental movement, or a barricade must be used to keep traffic or activities away from the ladder.

The areas around the top and bottom of ladders must be kept clear.

The top of a non-self-supporting ladder must be placed with two rails supported equally unless it is equipped with a single support attachment.

Ladders must not be moved, shifted, or extended while occupied.

Ladders must have nonconductive side rails if they are used where the worker or the ladder could contact exposed energized electrical equipment.

Cross-bracing on the rear section of stepladders must not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.

Single-rail ladders must not be used.

When ascending or descending a ladder, the worker must face the ladder.

Personnel must use at least one hand to grasp the ladder when moving up or down the ladder.

Personnel on ladders must not carry any object or load that could cause them to lose balance and fall.

Ladders will not be used outside during thunderstorm activity or if conditions are present for lightening to occur.

Wooden ladders will not be used by HES personnel.

Ladder Safety Practices	
Document No.: 8.2	Revision: 0

11.0 LADDER INSPECTION

Any ladder with loose, broken or missing rungs or steps, broken or split side rails, or other faulty or defective part must be removed from service, tagged "DO NOT USE", and repaired or decommissioned as soon as possible.

All parts should be checked for wear, corrosion, and structural failure. All sharp edges and burrs must be removed upon observation.

Ladder repairs must restore the ladder to a condition meeting its original design criteria, before the ladder is returned to use.

12.0 TRAINING

Personnel will be trained by their supervisor prior to the equipment use. The training will be supported by the practices set in this document and manufacturer specifications.

