

Ladder Safety

PURPOSE

The purpose of the Ladder Safety Program is to make Advanced Excavating Specialists and Five Rivers Construction employees aware of the best practices for setting up and using ladders safely since falls from ladders are one of the leading causes of occupational injuries.

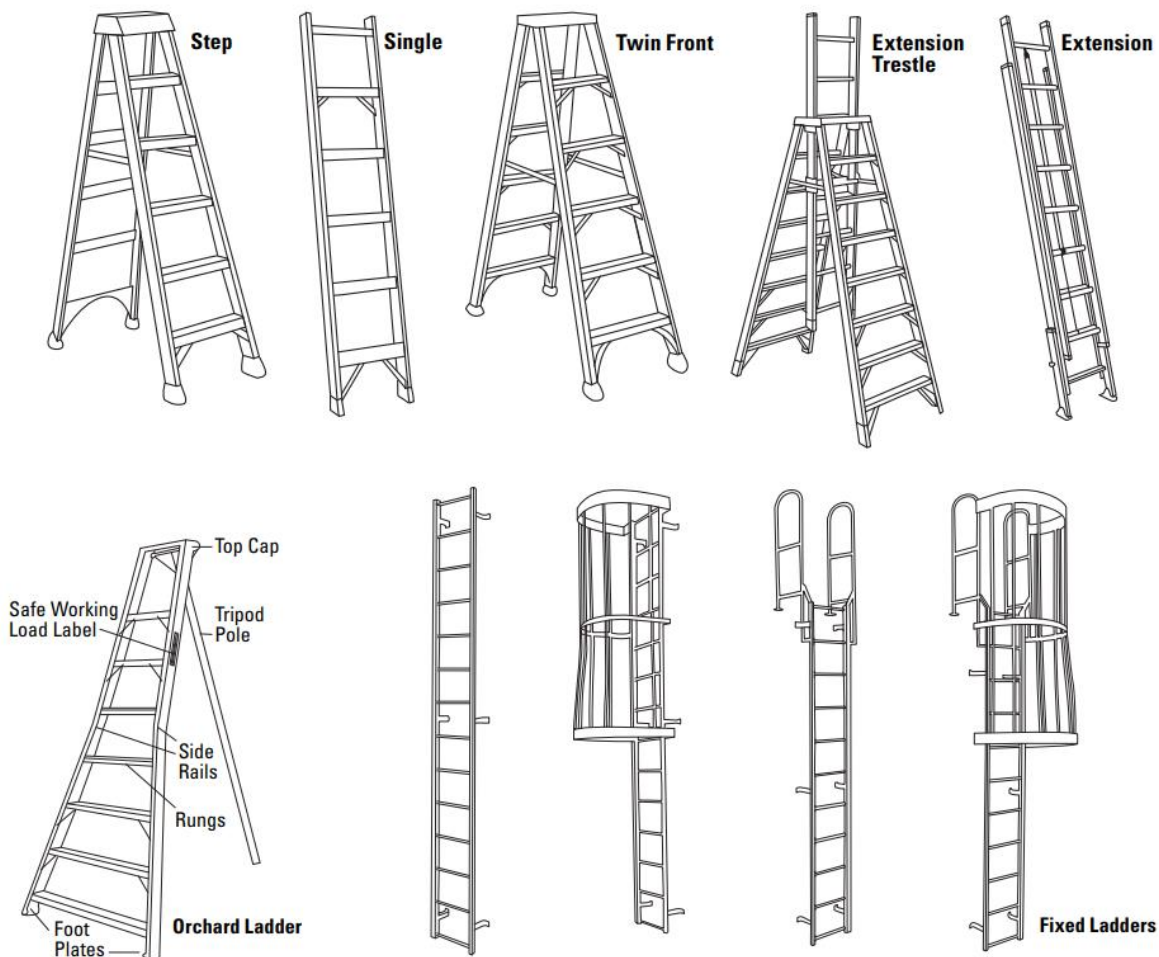
DEFENITIONS

Portable Ladder: A ladder that can be readily moved or carried.

Fixed Ladder: A ladder that cannot be readily moved or carried because it is an integral part of a building or structure.

Orchard Ladder: A three-legged portable ladder used in orchards that can be readily moved or carried.

Portable ladders are typically manufactured from aluminum or fiberglass. The portable-ladder classification includes self-supporting ladders, single ladders, twin front ladders, extension trestle ladders, and extension ladders.



Ladder Safety

Wood Ladders: Wood provides a natural feel and good insulation against heat and cold. However, untreated wood ages quickly; wood ladders need a protective coat of linseed oil (not paint or varnish) to keep the wood from drying and splitting. Also, wood ladders are heavy, particularly longer ones.

Aluminum Ladders: Aluminum ladders are lightweight and corrosion resistant. Aluminum will not crack or chip with rough handling; however, aluminum doesn't insulate well against heat and conducts electricity. Never use aluminum ladders for work near sources of electricity or energized electrical lines.

Fiberglass ladders: Fiberglass is durable, weather resistant, and nonconductive when clean and dry. Unlike wood, fiberglass won't dry out or split and provides better insulation against heat than aluminum. However, fiberglass ladders are heavier than comparable aluminum or wood ladders and can chip or crack with improper handling.

PROCEDURE

An effective Ladder orientation/training course will be provided by Supervisory personnel prior to initial assignment and or use of specific Ladders. Mandatory refresher training may be required due to unsafe use, accidents, near misses, and or change in conditions.

The training program conducted by supervisory personnel will address the following:

1. **Select the Right Ladder for the Job:** Choose the correct type able to hold the weight of the person and his/her tool belt. You will probably use an ordinary straight ladder for most purposes. An extension ladder may be required for high work. Use a stepladder when you need a free-standing ladder or one with a bucket or pail shelf.
2. **Inspect Ladders:** Make sure ladders are inspected daily before use for physical defects and after any occurrence that could affect their safe use. If any physical defects should be observed remove that ladder from the work area and place out of service.
3. **Proper Setup:** This will vary depending on ladder type.
 - a. **Stepladders:** Make sure ground is stable, never setup step ladders on unstable surfaces or objects (i.e., boxes, barrels) for additional height. Make sure stepladder is setup on firm level surface. Do not use stepladders as straight ladders. Do not stand or step on the top cap. Make sure stepladders are fully open with spreader bars in a down, locked position before using it. If you must place a ladder in front of a doorway, make sure to block door open or close and lock the door to prevent door from being opened/closed.

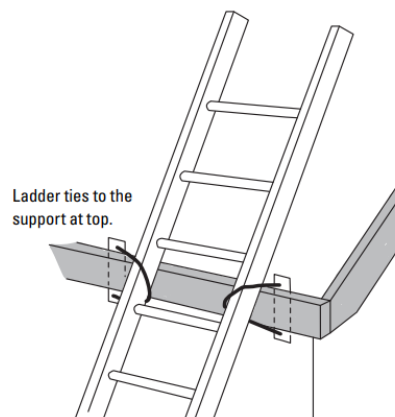
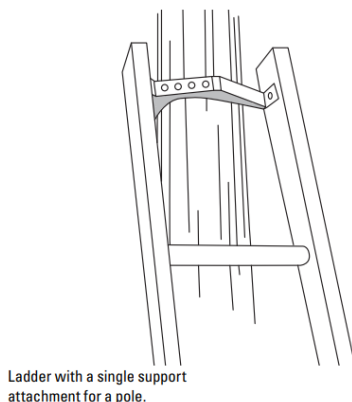
Ladder Safety

- b. **Extension Ladders:** All straight or extension ladders must be extended at least three feet beyond the supporting object when used to access an upper level such as a roof. However, if the extension ladder does not extend at least three feet, then either get a ladder that does or secure the top and provide hand holds. All extension or straight ladders must be secured to prevent displacement. Raising an extension ladder can be a two-person job but one person can raise a ladder if they walk it into position hand over hand. Make sure that all the ladder's feet are on a firm and level surface. All ladders must be equipped with safety (non-skid) feet. A straight ladder should be placed against the wall at an angle so that the base of the ladder is one foot away from the wall for every four feet of height. After raising the extension portion two or more rungs of the ladder to the desired height, check to ensure that the safety dogs or latches are engaged and on the same rung. Make sure the ladder is not moved, shifted or adjusted while you are on it.
- c. **Fixed Ladders:** A fixed ladder must be capable of supporting without failure the total of the following loads: at least two loads of 250 lbs. each, concentrated between any two consecutive attachments. Any additional concentrated loads of 250 lbs each determined from the anticipated use of the ladder. Anticipated loads caused by ice buildup, winds, rigging, and impact loads resulting from the use of ladder safety devices. Fixed ladders must be secured to the building or structure. A cage, well or ladder safety device must be provided if the safety cage is at least 27 inches wide and there is at least 27 inches but not more than 30 inches from the cage to the centerline of the step or rung at all points except where the cage flares at the bottom of the ladder. Defects in fixed ladders should be repaired as soon as possible. Fixed ladders without cages or wells must have at least 15-inch-clear width to the nearest permanent object on each side of the centerline of the ladder. Keep the top and base areas of the ladder clear of obstruction. Make sure the side rails of through or step-side ladders extend 42 inches above the top of the access level or landing platform. For additional details on this refer to ANSI A14.3-2018, American National Standards for Ladders-Fixed-Safety Requirements and CFR 29.1910.23.

Ladder Safety

GENERAL RULES & GUIDELINES

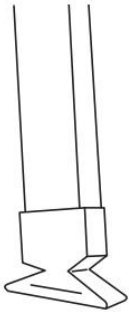
- Ladders are not to be painted except for numbering purposes.
- Ladders shall only be used for the purpose for which they were designed. Do not use ladders for skids, braces, workbenches, or any purpose other than climbing.
- Be sure to determine the correct type of ladder needed for the job and environment.
- Inspect ladder before use. All joints between steps, rungs and side rails must be tight.
- Rungs should be free of grease and/or oil.
- All ladders regardless of the type shall be placed on a stable, level surface.
- When ascending or descending the ladder, do not carry objects that will prevent you from grasping the ladder with both hands. You should have three points of contact.
- Only one person is allowed on a ladder at a time.
- Face the ladder when climbing up and down.
- Do not jump from the ladder when descending.
- Keep centered on the ladder, your belt buckle should always remain between the two side rails. Never lean away from the ladder because you can cause it to topple.
- Do not stand on the top two rungs of any ladder.
- Footwear should have clean soles made of non-skid materials.
- Ladder rungs, cleats, and steps shall be parallel, level and uniformly spaced or meeting OSHA/ANSI specifications, when the ladder is in position for use.
- Keep tools in belt or hoist them up after you.
- Never move a ladder while you are on it.
- Move slowly and carefully on a ladder.
- Never use a ladder or any other tools with 10ft of energized electrical equipment such as power lines.
- Stay off outdoor ladders during bad weather such as rain, wind, or lightning.



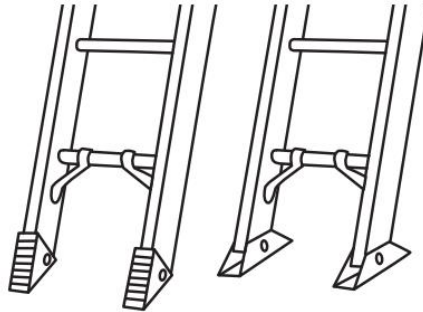
Ladder Safety

Ladders with supports on the bottom:

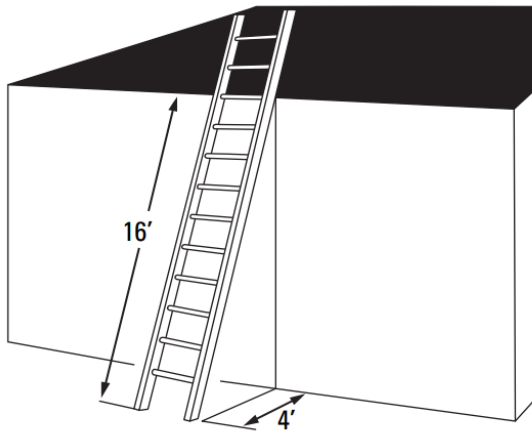
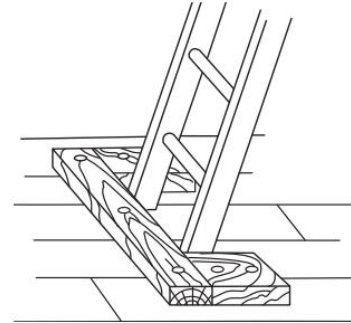
Rubber Safety Feet



Spikes



Cleats nailed to the floor



Note: Safe ladder angle

You must set up non-self-supporting ladders at a safe angle. The ladder is set at the proper angle when the horizontal distance from the top support to the foot of the ladder is approximately 1/4 the working length of the ladder.

You must set up job-made ladders with spliced side rails so that the horizontal distance from the top support to the foot of the ladder is not greater than 1/8 the working length of the ladder.

Portable ladders must be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one-quarter of the working length of the ladder or 4:1 ratio.

Ladder Safety



Ladder Safety Checklist

Date: _____

Employer/Business: _____

Completed By (Name/Title): _____

Job Location: _____

Length of Ladder: _____

	Yes	No	N/A
Have all employees received instruction on using ladders safety?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the right ladder been selected for the job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the ladder been inspected for defects, cracks, corrosion, and are bolts and rivets secure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have unsafe ladders been tagged and removed from service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the ladder been placed away from overhead electrical wires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is a fiberglass ladder in use if there is any chance of contact with electricity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do the ladder's feet work properly and have slip-resistant pads?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the ladder been placed away from exit doors or away from the path of pedestrian or vehicle traffic? If placed in front of a door — is the door open or locked shut?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the ladder been placed on firm, level footing and is there rigid support for the top of the ladder?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is help available if it is too difficult to handle the ladder alone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the load the ladder is supporting within the manufacture's duty rating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the stepladder legs completely open and the spreader brace bars locked?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are ladder rungs, shoes, and boots clean of substances that would make climbing the ladder slippery or hazardous?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is only one person at a time allowed to climb or stand on a ladder?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have employees been instructed not to pull, lean, stretch, or make sudden movements on a ladder that could cause it to tip over?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have employees been instructed not to reach beyond the ladders rails?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have employees been instructed to climb higher or move the ladder closer to the area where they are working if they are beginning to reach above their heads or lean out past the ladder rails?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the ladder extend three feet above the landing when employees must climb off the ladder at an upper level?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are employees instructed to never stand on the top step or top cap?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orchard Ladders			
Do the warning labels on step and orchard ladders clearly state that the top step and top cap are not to be used as a step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is a straight orchard ladder facing into an uphill or downhill slope?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the steps of a tripod orchard ladder level and the tripod leg extended straight from the center line of the ladder?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On sloping land, is the position of the tripod leg uphill?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When positioning the ladder across the land slope, is the tripod leg slightly downhill?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When using an orchard ladder, are the straps of the fruit sock or bucket positioned so that the weight of the picked crop is evenly distributed and the employees can maintain a stable posture on the ladder?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When using an orchard ladder, are employees instructed to never step off onto branches of the tree, except onto the main crotch?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F417-266-000 Helpful Tools — Ladder Safety Checklist 10-2016

For additional information please refer to WAC 296-876, CFR 29.1910.23, and ANSI A14.3-2018.