

Ladder Safety for Construction: Setup and Use

Moving a Ladder

When you move a ladder, retract or collapse all parts, fully close the ladder, and lock everything in place. Carry the ladder horizontally. Always check for obstacles at each end before making a turn. You may also need someone to walk ahead of you to open doors in your path.

When carrying a ladder by yourself:

- Put your arm through the ladder
- Rest it on your shoulder
- Grab a forward rung with your other hand
- Keep the center balanced

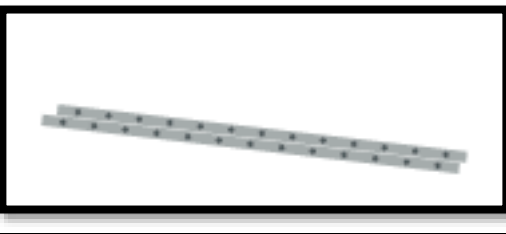
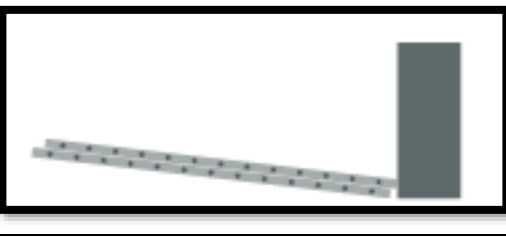
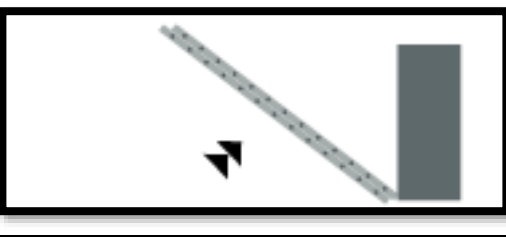
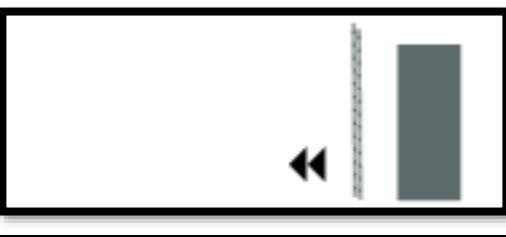
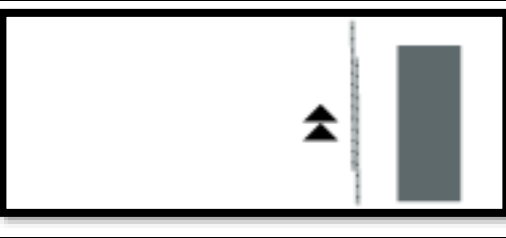
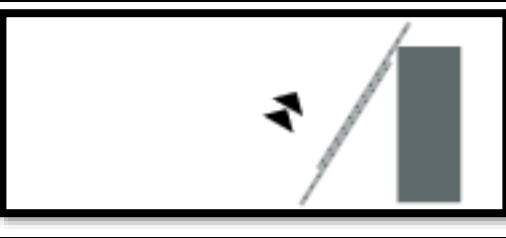
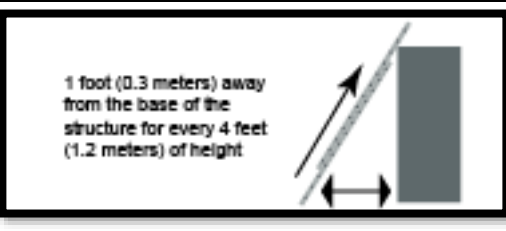
When possible, ask a co-worker for help carrying a ladder. Both people can carry the ladder with their arms through it and the side rail on their shoulders. Another common two-person technique is carrying the ladder much like a suitcase with each person's arms down at their sides. Very heavy or very long ladders may be carried using three people with the ladder flat on their shoulders.

Setting Up a Ladder

- Before setting up a ladder, **check for overhead electrical wires and moving objects**
- **Clear the area** around the base of the ladder of debris
- If you must use a ladder in high-traffic areas, **set up barricades**. In a doorway, post signs and lock or block the door
- Assess if you will need **fall protection**
- Never set ladders on top of boxes or bins to add height
- Never set ladders on top of a vehicle or machinery that can move
- Set ladders on a non-slippery, even surface
 - Sweep away sand and dirt that could cause the ladder to slip
 - Secure the ladder at the base anytime you must use it on a smooth or potentially slippery surface
- If your ladder has flexible feet:
 - Set the feet horizontally on hard surfaces
 - Turn the feet at right angles to the side rails and “plant” the feet vertically on soft surfaces
- Place the ladder on a **firm, level footing**
 - NEVER put a ladder on boxes, bins, vehicles, machines, or slippery or unstable surfaces
 - You may need to shovel out underneath to ensure an even surface (do NOT level with rocks or planks)

Raising an Extension Ladder

Raising an extension ladder can be a two-person job, but one person can raise a single or multi-section ladder by walking it into position using a hand-over-hand technique.

1. Close the ladder and position it with the base section on top of the fly section.	
2. Block the bottom of the ladder against a fixed object (such as a wall) or another person's foot.	
3. Check for overhead clearance and power lines, and "walk" the ladder up to a vertical position.	
4. Keep the ladder vertical and move it away from the supporting structure several feet or meters.	
5. Raise the fly section using the rope and pulley system, placing one foot on the base rung.	
6. Carefully lean the ladder against the supporting structure.	
7. Place the base of the ladder 1/4 of the working length of the ladder away from the base of the structure . This equals roughly 1 foot (0.3 meters) away from the base of the structure for every 4 feet (1.2 meters) of height.	

- The distance from the base of the ladder to the structure is correct when you can place one foot against each side rail, extend your arms straight out in front of you, and touch a rung without lowering or raising your arms
- Ensure that the upper section rests on (or is in front of) the bottom section with enough overlap. The bottom section and rung dogs should face the supporting structure
- Rest **both side rails on the top support**
- Ensure the ladder leans against something substantial
- Ensure ladder side rails won't slide across smooth wall surfaces

Verify Safe Setup

- On stepladders, make sure spreaders are fully open and locked
- Make sure the tallest point to be reached from the stepladder is accessible from the second rung from the top
- Regardless of the type of ladder, all ladder sections and parts need to be locked in place before climbing
- Physically secure the ladder whenever repeated or extended use is expected and when any aspect of setup and use presents a risk that requires extra stability
- Lash or otherwise secure the side rails at the landing surface so they don't move when people step onto or off ladders

Securing a Ladder

- To secure the base of a ladder, screw or nail a 2-foot x 4-foot (0.6-meter x 1.2-meter) cleat to the decking behind the ladder's feet to prevent the ladder from slipping backward
- A staked cleat can be used behind the ladder's feet on soft ground
- Another method is to lash or brace the ladder's side rails to a solidly anchored object or directly to the structure on which the side rails are resting
- Lashings should connect low on the ladder, ideally around the lowest rungs
- Stakes can be driven into the ground if there is no suitable structure to tie to

Weather

ALL work at heights is dangerous during lightning, high winds, rain, sleet or snow. Check with your company's safety officer to determine when work should be suspended.

Climbing a Ladder

- Remember: Only one person can be on a ladder at a time (unless it's intended for two)
- **Face the ladder** when going up or down and when working from it
- **Maintain three points of contact** by keeping two hands and one foot, or two feet and one hand, on the ladder at all times
- **Do NOT carry objects** in your hands while climbing

Prevent Falls

- Keep your belt buckle area between the side rails to avoid over-leaning
- Don't climb higher than is safe
 - Avoid going above the fourth rung from the top of a straight or extension ladder
 - Avoid going above the second rung from the top of a stepladder
 - **Never stand on the top rung of a ladder!**