

# Ladders and Scaffolds

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## Purpose

This section establishes safety practices, means, methods, operating procedures, and guidelines for the use and care of ladders and scaffolds (walking/working surfaces). This manual describes methods and practices that can be read and understood by all managers, supervisors, and employees working for Carroll Community College. This written plan is intended to be used to create an awareness of the hazards among our employees; standardize procedures for use and care of the equipment; provide a consistent format for training employees on the proper procedures to be used; minimize the possibility of injury or harm to our employees; and demonstrate the College's compliance with OSHA's walking/working surfaces standard.

## Definitions

1. Beams - The side rails of the ladder where the rung attaches.
2. Cage - A guard that is fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space of the ladder for the safety of the person who must climb the ladder.
3. Competent Person - One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
4. Extension Ladder – A ladder that is made of two or more sections to allow it to be adjusted as needed.
5. Feet - Pads at the ends of the ladder to allow it to rest on a flat surface.
6. Fixed Ladder - A ladder permanently attached to a structure, building or equipment.
7. Ladder Safety Device – A device, other than a cage or well, designed to eliminate or reduce the possibility of accidental falls and may incorporate such features as life belts, friction brakes, and sliding attachments.
8. Landing Platform – A possible feature of fixed ladders which provides a means of interrupting a free fall and serves as a resting place during long climbs.
9. Locks - A mechanical device that is used to secure the ladder at a height when extended.

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10. Mobile Platform ladder - A self-supporting ladder of fixed size with a platform provided at the working level. The size is determined by the distance along the front rail from the platform to the base of the ladder.
11. Rungs - The cross piece of a ladder between the beams or rails.
12. Scaffolding— Any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.
13. Single Ladder – A non-self-supporting portable ladder, non-adjustable in length, consisting of but one section. Its size is designated by the overall length of the side rail.
14. Stepladder – A self-supporting, foldable, portable, ladder, non-adjustable in length, with flat steps.

## References

29 CFR 1910, Subpart D: Walking-Working Surfaces

## Procedures

General Requirements:

1. Use a stair or ladder when there is a break in elevation of 19 inches or more, or where there is no ramp, runway, or hoist provided.
2. Inspect ladders and scaffolds for any defects.
3. Prior to use, affected personnel shall be trained on the safe use of ladders and scaffolds.
4. Keep all areas of the ladders and scaffolds clear of debris and hazards.
5. The Coordinator of Environmental Safety and Health is responsible for:
  - a. Developing and updating the ladder and scaffold safety program.
  - b. Providing ladder and scaffold safety training as needed and if requested by a department.
  - c. Ensuring that training covers the proper use, care, inspection of, and hazards associated with ladders and scaffolds.

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- d. Being available for any safety-related questions involving ladders and scaffolds.
6. Department Managers and Supervisors are responsible for:
    - a. Providing the appropriate types of ladders and scaffolds.
    - b. Ensuring all ladders and scaffolds are inspected at least yearly and prior to each use.
    - c. Ensuring ladder and scaffold users, and other affected personnel, are trained to recognize hazards related to ladders and scaffolds and procedures to be followed to minimize those hazards.
    - d. Adhering to ladder and scaffold safety procedures and requirements.
    - e. Attending ladder and scaffold safety training as required.
  7. Employees are responsible for:
    - a. Adhering to ladder and scaffold safety procedures and requirements.
    - b. Attending ladder and scaffold safety training as required.

## Ladders:

1. Inspect all ladders before each use.
2. Remove and discard defective and/or damaged ladders from service immediately.
3. When selecting a ladder:
  - a. determine the ladder type and weight bearing capacity
  - b. consider the ladder must hold your weight plus the weight of any tools and materials.
  - c. choose the correct length. A ladder that is too long or too short will force you to overreach, adversely affecting your balance.
  - d. use a ladder only for the purpose for which it is designed.
4. Set the ladder base section on a secure footing that is firm, level, and free of debris and other materials. Do not use a ladder that wobbles or leans to the left or right of center.
5. If a ladder must be used in a location where it can be accidentally displaced, or become unstable, an additional means to tie, block, or secure the ladder must be employed.
6. Employees shall always climb ladders facing the rungs of the ladder.
7. Wear sturdy, closed toed, slip resistant shoes when climbing a ladder.

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8. Do not lean or reach out while standing on ladders.
9. Do not get on or off a ladder from the side or back.
10. Never slide down a ladder.
11. Maintain a three-point contact by keeping both hands and one foot, or both feet and one hand, on the ladder at all times when climbing up or down.
12. Climb or stand on a ladder with your feet in the center of the rung. This keeps the rest of your body aligned with the center of the ladder to avoid extreme reaching or side loading.
13. Avoid carrying materials or tools when climbing a ladder. Climb the ladder first then pull up the materials with a rope.
14. Do not sit on ladders.
15. Never tie ladders together to extend the length.
16. Do not coat ladders with any opaque covering.
17. Do not remove or deface the ladder's manufacturer labels.
18. No employee shall move, shift, or extend a ladder while it is occupied.
19. Use ladders with nonconductive side rails when near energized electrical equipment.
20. Never place ladders on boxes, barrels, or other unstable bases to obtain additional height.
21. If it necessary to place a ladder in a doorway, lock or barricade the door and post warning signs. When ladders are erected in areas with pedestrian or vehicle traffic, barricade the areas.
22. Only one person should be on a ladder at one time.
23. While working from a ladder keep both feet on the rungs.
24. Do not use ladders in a horizontal position as platforms, runways, or scaffolds.
25. Ladders should never be used on a scaffold.
26. Ladders should not be used outdoors in high winds or during severe weather conditions.
27. Do not leave tools or materials on ladders.

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28. Rungs and steps should be clear of grease, oil, wet paint, snow, and ice before climbing.
29. When not in use, store ladders lying down or secured in an upright position.
30. Never use a ladder while under the influence of alcohol or prescription drugs.

## Stepladders:

1. All stepladders should be equipped with a metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in an open position.
2. Make sure the ladder is fully opened and the spreaders are locked, then place the ladder level on all four feet.
3. Keep all four legs of the ladder in contact with the footing support.
4. Never use a stepladder as a straight ladder.
5. Do not use the rear braces as steps unless they have been specifically designed to be used as steps by the manufacturer.
6. Do not straddle a stepladder.
7. Do not climb, stand, or sit on the top or top step of the ladder.
8. Do not place tools or materials on steps, on rear braces, or on platforms.
9. Tie off stepladders when used close to the edge of an elevated platform or floor opening.

## Straight and Extension Ladders:

1. When using extension ladders, have a co-worker help to raise and lower the ladder.
2. Ladders shall not be moved, shifted, or extended while occupied.
3. When setting up the ladder:
  - a. Ensure the work area, including overhead, is unobstructed by trees or wires.
  - b. Lay the ladder on the ground.
  - c. Brace the bottom of the ladder to keep it from moving.
  - d. Starting at the top of the ladder, walk it to an upright position.

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- e. Establish the proper angle and footing.
  - f. Secure or foot the ladder firmly before extending it. Extend the ladder using manufacturer instructions.
    - i. Ladders shall be installed at a working pitch of 4 vertical and 1 horizontal. This means that for every 4' in height, the base of the ladder shall be 1 foot out at the base.
    - ii. The side rails shall extend at least 3 feet above the landing surface and tied off when used to gain access to an upper surface.
    - iii. 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 employees in mounting and dismounting the ladder. A ladder extension must not deflect under a load that would cause the ladder to slip off of its supports.
    - iv. Make sure the rungs on the upper half of the ladder are properly secured by the locking mechanism.
    - v. If possible, tie the ladder off or have someone steady the ladder as you climb it.
4. Do not work from the top three rungs of any straight or extension ladder.

## Training

Carroll Community College will train employees in the use and inspection of ladders and scaffolds applicable to their job duties. This training shall be completed before an employee performs related tasks and shall be conducted by a person competent in the subject matter. The training will be refreshed at intervals stipulated by the current and applicable OSHA standard.

All third-party contractors are responsible to ensure their employees are trained, certified, and/or licensed as required by the industry standards and all applicable OSHA standards related to the scope of work.

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## Record Keeping and Certification

1. Safety Training records for Carroll Community College employees shall include the following:
  - a. Names of training attendees.
  - b. The dates of the training sessions.
  - c. The contents or a summary of the training sessions.
  - d. The name(s) and title(s) of person(s) conducting the training sessions.
2. Safety Training records shall be maintained for a length of time in accordance with industry and OSHA standards.
3. All third-party contractors are responsible to maintain safety training records for their employees in accordance with industry and OSHA standards.
4. Inspection records for all ladders and scaffolds owned by Carroll Community College will be maintained in the Office of the Coordinator of Environmental Safety and Health.
5. Inspection records for ladders and scaffolds will be kept for the length of ownership by Carroll Community College.