



COMMUNITY COLLEGE

OF RHODE ISLAND

LADDER SAFETY PROCEDURE

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1.0 Purpose

It is the goal of the Community College of Rhode Island (CCRI) to provide employees with a safe working environment. This program defines practices and procedures to be implemented in order to use ladders safely in compliance with 29 CFR 1910.23.

2.0 Scope

This program applies to all CCRI Facilities and Operations staff who may be expected to use a ladder during the course of their work. This program covers stepladders, extension ladders, and other portable ladders.

3.0 Responsibilities

3.1 Environmental Health and Safety Coordinator

The Director of the Physical Plant, or their designee, will be responsible for compliance with the program and inspection, maintenance, and replacement of ladders where applicable.

3.2 Supervisors

It is the responsibility of supervisors to ensure employees are appropriately trained on all parts of this program and following its procedures.

3.3 Employees

Employees are responsible for understanding the rules of ladder safety and following the procedures outlined in the program at all times. They are responsible for selecting the right ladder and inspecting prior to use. If there are any issues found during inspection, they must notify their supervisors of ladders that do not meet the standards outlined within.

4.0 Definitions

Combination ladder - A portable ladder capable of being used either as a stepladder or as a single or extension ladder. It may also be capable of being used as a trestle ladder or a stairwell ladder.

Effective working length - The distance along the side rails from the bottom of the support point of the upper portion of the ladder.

Extension ladder - A non-self-supporting portable ladder adjustable in length. It consists of two or more sections traveling in guides or brackets, or the equivalent, so the length may be adjusted.

Fixed ladder - A ladder that is permanently attached to a structure.

Ladder - A device with steps, rungs, or cleats on which can be used to access different elevations.

Ladder Safety System – A system meant to prevent the fall of a user, including a carrier and its associated attachment elements (brackets, fasteners, etc.), safety sleeve, body support and connectors, wherein the carrier is permanently attached to the climbing face of the ladder or immediately adjacent to the structure. Cages and wells are not ladder safety systems.

Platform - A surface that is used as a working or standing location.

Portable ladder – A ladder that can be moved or carried, consisting of rails joined at intervals by steps, rungs, or cleats.

Rail - The side members joined by either rungs or steps.

Stepladder - A self-supporting portable ladder, fixed in length, with flat steps and a hinged base.

Step stool - A self-supporting, foldable, portable ladder, fixed in length, 32-inches or less in size. These do not have a pail shelf but have flat steps and are designed to be climbed on the top cap so that the ladder top cap as well as all steps can be climbed. Side rails may continue above the top cap.

Top cap - The uppermost horizontal member of a portable stepladder.

Top step - The first step below the top cap of a portable stepladder. Where a ladder is constructed without a top cap, the top step is the first step below the top of the rails.

Working length - The length of a non-self-supporting portable ladder measured along the rails from the base support point of the ladder to the point of bearing at the top.

Working load - Maximum applied load, including the weight of the user, materials, and tools, that the ladder is to support for the intended use

5.0 Ladder Requirements

Ladder safety begins with the selection of the proper ladder for the job and includes inspection, setup, proper climbing and standing, proper use, care, and storage. In addition to the general safety rules for all ladders there are special rules for using stepladders and for single and extension ladders.

5.1 Construction Requirements

- 5. 1. 1 Ladders may be constructed of one of three basic materials: wood, metal, or fiberglass.
- 5. 1. 2 All ladders should meet the applicable Occupational Safety and Health Administration (OSHA) and American National Standards Institute (ANSI) requirements and specifications.
- 5. 1. 3 Portable ladders should be labeled or marked as ANSI compliant.
- 5. 1. 4 Newly installed fixed ladders longer than 24 feet must have a ladder safety system.
- 5. 1. 5 Metal steps and rungs should be grooved or roughened to prevent slipping.

5.2 Duty Ratings

- 5. 2. 1 Be sure the ladder being used has the proper duty rating to carry the combined weight of the user and the material being installed. A ladder's duty rating tells you its maximum weight capacity. It is important to note that a ladders size does not necessarily correlate to its duty rating.

There are five categories of duty ratings:

Type IAA – Weight capacity of 375 lbs. Recommended for extra heavy-duty use.

Type IA – Weight capacity of 300 lbs. Recommended for extra heavy-duty use.

Type I – Weight capacity of 250 lbs. Recommended for heavy-duty use.

Type II – Weight capacity of 225 lbs. Recommended for medium-duty use.

Type III – Weight capacity of 200 lbs. Recommended for light duty use.

- 5. 2. 2 ANSI requires that a duty rating sticker be placed on the side of every ladder so users can determine if they have the correct type ladder for each task/job.

6.0 Ladder Use

6.1 Intended Use

- 6. 1. 1 Ladders should only be used for their intended purpose.
- 6. 1. 2 Duty ratings must be clearly displayed on the ladder, and should not be exceeded including person, tools, and equipment.
- 6. 1. 3 Unless specifically designed for use by multiple people, ladders should only be used by one person at a time.
- 6. 1. 4 Do not step above the maximum standing level on any ladder or step stool. Never step on the top step or cap of any ladders.
- 6. 1. 5 Do not use the rear braces for climbing, storing, sitting, etc.
- 6. 1. 6 Select the proper size ladder for the job.

6. 2 Inclination

Ladders that are not self-supporting must be angled at 75 degrees. This allows for optimal resistance of sliding, balance, and ladder strength. To do this, place the base of the ladder 1/4 of the effective working length of the ladder away from the upper support.

6. 3 Support

- 6. 3. 1 Users should always maintain three points of contact with the ladder at all times.
- 6. 3. 2 Non self-supporting ladders should always be placed in a manner that the two rails support the ladder equally. Single support attachments may be used if this is not feasible (on poles, trees, etc), but must be capable of supporting the ladder and load.
- 6. 3. 3 The base of the ladder should be on a firm, level surface or use a ladder leveler to achieve this.
- 6. 3. 4 If slip resistance is required, use shoes, spurs, spikes, etc.
- 6. 3. 5 Do not use ladders on unstable surfaces or those with snow, ice, or other slip hazards.
- 6. 3. 6 The user should not push or pull unless the ladder is properly secured.

6. 4 Additional Rules for Use

- 6. 4. 1 The user should always face the ladder when ascending or descending and have a firm hold. The recommended climbing pattern is both hands first followed by both feet.
- 6. 4. 2 Do not try to move ladders while in use.

- 6. 4. 3 The users waist area should remain centered between the rails, and not extend beyond them.
- 6. 4. 4 Do not place ladders in front of doorways without ensuring they can be locked, guarded, or otherwise blocked.
- 6. 4. 5 Take proper safety measures when using ladders in areas with electrical hazards. Do not use metal ladders near exposed wiring.
- 6. 4. 6 Keep steps and rungs of ladders free of grease, oil, wet paint, paper and other slippery materials. Clean any debris off your shoes before climbing.
- 6. 4. 7 Never climb from the side or slide down ladders.
- 6. 4. 8 Do not carry heavy or bulky loads up the ladder.
- 6. 4. 9 Users should be in good health and not under the influence of drugs or alcohol.
- 6. 4. 10 Do not leave materials, tools, etc. on the tops of ladders or working areas.
- 6. 4. 11 Never use a ladder as a horizontal platform, plank, scaffold or hoist.

7.0 Ladder Maintenance

7.1 Ladder Inspection

Ladders should be inspected before being put into service and prior to each use.

- 7. 1. 1 Inspect wood ladders for cracks and splits in the wood.
- 7. 1. 2 Check all ladders to see that steps or rungs are tight and secure.
- 7. 1. 3 Be sure that all hardware and fittings are properly and securely attached.
- 7. 1. 4 Test movable parts to see that they operate without binding or without too much free play.
- 7. 1. 5 Inspect metal and fiberglass ladders for bends and breaks.
- 7. 1. 6 Check ropes on extension ladders for frays or excessive wear.

Never use a damaged ladder. If any issues are found during the inspection remove it from service and report it to a Supervisor or the Environmental Health and Safety Coordinator so that it may be tagged/marked and removed from the job. The user or inspector should not attempt to repair a damaged or defective ladder.

7.2 Ladder Maintenance

- 7. 2. 1 Pivoting connections and hardware should be checked and lubricated regularly.
- 7. 2. 2 Ensure bolts and rivets are secure.

- 7. 2. 3 Ensure all ladder accessories are in good condition.
- 7. 2. 4 Do not paint wooden ladders.

7. 3 Ladder Storage

- 7. 3. 1 Do not store materials on ladders.
- 7. 3. 2 Store fiberglass ladders in areas without sunlight or ultraviolet light.
- 7. 3. 3 Ensure ladders are properly supported by use of racks when storing.
- 7. 3. 4 Store all ladders in a way that will not damage them or their parts.