



**Duke University - Facilities Management Department  
Environmental Safety and Health Program**

LADDER SAFETY PROGRAM

**Area: All FMD Organizations**

**Date Effective: 1 August 2018**

**Issue No.: 1**

**Revision: 0**

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**A. Purpose.** To identify potential hazards and injury prevention measures related to working on and with ladders.

**B. Scope.** This program applies to all applicable FMD employees and supplemental labor working for FMD.

**C. Policy**

1. FMD will take all reasonable measures to provide a safe workplace. All FMD operations must be performed in a manner that will minimize potential risk to FMD and/or Duke employees, assets, the local community, and the environment.
2. The provisions of this program and all applicable standards will be followed to ensure the safety of personnel performing service or maintenance activities to equipment, machines, or systems.

**D. Definitions**

1. **Combination Ladder:** A portable ladder that can be used as a stepladder, extension ladder, trestle ladder, or stairway ladder. The components of a combination ladder also may be used separately as a single ladder.
2. **Duty Rated Ladder:** Ladders designed for extra heavy duty professional use where the total weight on the ladder does not exceed 300 lbs.
3. **Extension Ladder:** A non-self-supporting portable ladder that is adjustable in length.
4. **Fall Protection:** Any equipment, device, or system that prevents an employee from falling from an elevation or mitigates the effect of such a fall.
5. **Fixed Ladder:** A ladder with rails or individual rungs that is permanently attached to a structure, building, or equipment. Fixed ladders include individual-rung ladders, but not ship stairs, step bolts, or manhole steps.
6. **Ladder:** As defined by "Combination Ladder", "Extension Ladder", "Fixed Ladder", "Mobile Ladder", "Portable Ladder", or "Step Ladder".
7. **Professional Service Consultants:** Non-trade professionals, such as Engineers, Architects, etc.
8. **Portable Ladders:** A ladder that can readily be moved or carried, usually consisting of side rails joined at intervals by step, rungs, cleats, or rear braces. It can be readily moved or carried.
9. **Step Stool:** A portable ladder that has a fixed height, has no pail shelf, and does not exceed 32 inches.
10. **Working Height:** The height (in ft.) of where the employee's feet are placed at a work location.

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## E. Responsibilities

### 1. FMD supervisors/managers are responsible for:

- a. Ensuring employees are inspecting ladders before each use on each shift.
- b. Ensuring that any ladder reported to have structural or other defects shall be immediately tagged "Dangerous: Do Not Use" (see Appendix A) and removed from service until it is replaced or repaired after its condition is determined by certified personnel.
- c. Ensuring employees appropriate use of ladders (See Section F).
- d. Purchasing ladders that are 1A Duty Rated ladder; 300 lb. weight capacity.
- e. Re-ordering missing, faded, or worn manufacturer's labels.
- f. Ensuring all ladders be fiberglass. No wooden or aluminum ladders shall be used.
  - 1) If a wooden or aluminum ladder is found, please tag and dispose of properly.
- g. Ensuring that step ladders or extension ladders 10 feet in length or greater, or greater than 50 pounds shall require the two employees to carry and store in order to avoid injury.
- h. Ensuring any working height that requires a 10 ft. ladder, requires a second employee to:
  - i. Assist in carrying the ladder
  - ii. Hold the ladder in place while being used, and
  - iii. Monitor the work.
- i. Using their discretion for the use of two employees during work that requires less than a 10 ft. ladder.
- j. Ladder usage by professional service consultants.

### 2. FMD employees are responsible for:

- a. Inspecting any ladder before each use.
- b. Appropriate use of ladders.
- c. Reporting any defect(s) to your supervisor. Any ladder with structural or other defects shall be immediately tagged "Do Not Use" (see Appendix A) and removed from service until repaired based on manufacturers recommendations or replaced.

### 3. FMD Safety is responsible for:

- a. FMD specific program oversight and compliance auditing.
- b. Working with OESO to ensure that all employee training designations are correct.

### 4. OESO is responsible for:

- a. Duke University's Ladder Safety program oversight and compliance.

## F. Usage-

### 1. General

- a. Ensure appropriate use of ladders while ascending and descending by:
  - i. Facing the ladder
  - ii. Using at least one hand to firmly grasp the ladder
  - iii. Not carrying any object or load that could cause a loss of balance
  - iv. Not stepping on the top 2 rungs.
- b. Ensuring ladders are not loaded beyond the maximum intended load; Note that the maximum intended load, includes the total load (weight and force) of the employee and all tools, equipment, and materials being carried.

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- c. Ensuring ladders are used only on stable and level surfaces unless they are secured or stabilized to prevent accidental displacement.
- d. Ensuring ladders are used only for the purposes for which they were designed.
- e. Ensuring that no ladder is moved, shifted, or extended while an employee is on it.
- f. Ensuring ladders placed in locations such as passageways, doorways, or driveways where they can be displaced by other activities or traffic are secured to prevent accidental displacement or are guarded by a temporary barricade, such as a second employees, row of traffic cones or caution tape, to keep the activities or traffic away from the ladder.
- g. Ensuring that the top of a non-self-supporting ladder is placed so that both side rails are supported, unless the ladder is equipped with a single support attachment.
- h. Ensuring that ladders and ladder sections are not tied or fastened together to provide added length unless they are specifically designed for such use.
- i. Ensuring that ladders are not placed on boxes, barrels, or other unstable bases to obtain additional height.
- j. Any work being done above 10 feet requires a second employee as a spot at the bottom of the ladder.

2. Extension Ladders

- a. If possible and/or reasonable, extension ladders should be tied off for additional safety and security.

3. Portable Ladders

- a. Ensuring that portable ladders used on slippery surfaces are secured and stabilized.

4. Step Ladders

- a. Employees shall not climb the rear of a step ladder unless it designed by the manufacturer for such use.
- b. Unless designed to do so, do not use a step ladder in a folded position.

**G. Inspections**

1. Inspect all ladders before initial use on each work shift, or as necessary. Examine the ladder's condition to look for visible defects such as:
  - a. Sharp edges
  - b. Corrosion
  - c. Compression failures
  - d. Structural defects
  - e. Dents and bends
  - f. Secure fittings
  - g. Cracks
2. Manufacturers' labels should not be missing, faded, or worn from portable ladders. Manufacturer labels can be re-ordered if missing, faded or worn.
3. If a ladder fails inspection, it shall be immediately tagged "Dangerous: Do Not Use" (see Appendix A) and removed from service until it is replaced or repaired after its condition is determined by certified personnel.

**H. Storage**

1. If applicable, return ladders to storage area after use.
2. Whenever possible, store portable ladders where they are protected from the weather.
3. Keep ladders clean and free of foreign materials.
4. Ensure that storage areas are easy to reach.
5. Avoid long overhangs beyond support points when transporting ladders on vehicles.
6. Pad racks on vehicles with soft material to reduce wear and road shocks.

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7. Tie ladders to each support point to reduce damage.
8. Do not hang ladders from rails or rungs.
9. Do not store materials on ladders.
10. Do not expose fiberglass ladders to excessive temperatures (above 200°F).

**I. Training**

1. Employees who work with ladders will be provided this program’s awareness training by their supervisor or FMD Safety on this Program’s contents and requirements.
2. Online training will be provided via the OESO website, and is required by applicable employees upon hire and every three years, or as-needed. This might include when new equipment is introduced into the workplace, procedures change, and/or the work area changes.

**J. References**

1. 29 CFR 1910.10(d)
2. 29 CFR 1910.25
3. 29 CFR 1910.26
4. 29 CFR 1910.27

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