



**SMU**

**PROGRAM**

# STAIRWAYS AND LADDERS

**Owner:** Risk Management

**Revision No:** 01

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## Table of Contents

1.0	Applicability .....	2
2.0	Scope .....	2
3.0	Definitions.....	2
4.0	Core Information and Requirements .....	5
5.0	Roles and Responsibilities .....	10
6.0	Goals, Objectives and Performance Measures .....	10
7.0	Training .....	11
8.0	Program Evaluation.....	12
9.0	Resources .....	12
10.0	Associated Forms, Documents, and References.....	12
11.0	Reviewed By .....	13
12.0	Revision History .....	13
13.0	Decision Record.....	13



**SMU**

Please contact ORM EHS for any required changes to this Program.

Uncontrolled when printed



1.0 Applicability

This Program applies to all SMU faculty, staff and service providers who work under contract for SMU at all facilities owned and/or operated by SMU.

2.0 Scope

This Program provides instruction to prevent injuries by outlining the acceptable minimum guidelines for the development and implementation of Stairways and Ladders Program in furtherance of SMU's accident prevention efforts, and to comply with regulations and SMU Programs.

This Program conforms to SMU's policies and EHS Management System standards and guidance documents; and complies with regulatory requirements.

3.0 Definitions

The following terms are defined in order to allow a better understanding of this Program:

**Alternating tread-type stair:** means a type of stairway consisting of a series of treads that usually are attached to a center support in an alternating manner such that an employee typically does not have both feet on the same level while using the stairway.

**Anchorage:** means a secure point of attachment for equipment such as lifelines, lanyards, deceleration devices, and rope descent systems.

**Authorized:** means an employee who SMU assigns to perform a specific type of duty, or allows in a specific location or area.

**Cage:** means an enclosure mounted on the side rails of a fixed ladder or fastened to a structure behind the fixed ladder that is designed to surround the climbing space of the ladder. A cage also is called a "cage guard" or "basket guard."

**Carrier:** means the track of a ladder safety system that consists of a flexible cable or rigid rail attached to the fixed ladder or immediately adjacent to it.

**Combination ladder:** means 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.

**Dangerous equipment:** means equipment, such as vats, tanks, electrical equipment, machinery, equipment or machinery with protruding parts, or other similar units, that, because of their function or form, may harm an employee who falls into or onto the equipment.

**Designated area:** means a distinct portion of a walking-working surface delineated by a warning line in which employees may perform work without additional fall protection.

**Dockboard:** means a portable or fixed device that spans a gap or compensates for a difference in elevation between a loading platform and a transport vehicle. Dockboards include, but are not limited to, bridge plates, dock plates, and dock levelers.

**Equivalent:** means alternative designs, equipment, materials, or methods, that SMU can demonstrate will provide an equal or greater degree of safety for employees compared to the designs, equipment, materials, or methods specified in this subpart.

**Extension ladder:** means a non-self-supporting portable ladder that is adjustable in length.

**Failure:** means a load refusal, breakage, or separation of component parts. A load refusal is the point at which the ultimate strength of a component or object is exceeded.

**Fall hazard:** means any condition on a walking-working surface that exposes an employee to a risk of harm from a fall on the same level or to a lower level.

**Fall protection:** means any equipment, device, or system that prevents an employee from falling from an elevation or mitigates the effect of such a fall.



**Fixed ladder:** means 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.

**Grab bar:** means an individual horizontal or vertical handhold installed to provide access above the height of the ladder.

**Guardrail system:** means a barrier erected along an unprotected or exposed side, edge, or other area of a walking/working surface to prevent employees from falling to a lower level.

**Handrail:** means a rail used to provide employees with a handhold for support.

**Hoist area:** means any elevated access opening to a walking-working surface through which equipment or materials are loaded or received.

**Hole:** means a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least 2 inches (5 cm) in its least dimension.

**Individual-rung ladder:** means a ladder that has rungs individually attached to a building or structure. An individual-rung ladder does not include manhole steps.

**Ladder:** means a device with rungs, steps, or cleats used to gain access to a different elevation.

**Ladder safety system:** means a system designed to eliminate or reduce the possibility of falling from a ladder. A ladder safety system usually consists of a carrier, safety sleeve, lanyard, connectors, and body harness. Cages and wells are not ladder safety systems.

**Low-slope roof:** means a roof that has a slope less than or equal to a ratio of 4 in 12 (vertical to horizontal).

**Lower level:** means a surface or area to which an employee could fall. Such surfaces or areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, equipment, and similar surfaces and structures, or portions thereof.

**Manhole steps:** means steps that are individually attached to, or set into, the wall of a manhole structure.

**Maximum intended load:** means the total load (weight and force) of all employees, equipment, vehicles, tools, materials, and other loads SMU reasonably anticipates to be applied to a walking-working surface at any one time.

**Mobile:** means manually propelled or moveable.

**Mobile ladder stand (ladder stand):** means a mobile, fixed-height, self-supporting ladder that usually consists of wheels or casters on a rigid base and steps leading to a top step. A mobile ladder stand also may have handrails and is designed for use by one employee at a time.

**Mobile ladder stand platform:** means a mobile, fixed-height, self-supporting unit having one or more standing platforms that are provided with means of access or egress.

**Open riser:** means the gap or space between treads of stairways that do not have upright or inclined members (risers).

**Opening:** means a gap or open space in a wall, partition, vertical walking working surface, or similar surface that is at least 30 inches (76 cm) high and at least 18 inches (46 cm) wide, through which an employee can fall to a lower level.

**Personal fall arrest system:** means a system used to arrest an employee in a fall from a walking-working surface. It consists of a body harness, anchorage, and connector. The means of connection may include a lanyard, deceleration device, lifeline, or a suitable combination of these.

**Personal fall protection system:** means a system (including all components) an employer uses to provide protection from falling or to safely arrest an employee's fall if one occurs. Examples of personal fall protection systems include personal fall arrest systems, positioning systems, and travel restraint systems.

**Platform:** means a walking-working surface that is elevated above the surrounding area.

**Portable ladder:** means a ladder that can readily be moved or carried, and usually consists of side rails joined at intervals by steps, rungs, or cleats.





**Positioning system (work-positioning system):** means a system of equipment and connectors that, when used with a body harness or body belt, allows an employee to be supported on an elevated vertical surface, such as a wall or window sill, and work with both hands free. Positioning systems also are called "positioning system devices" and "work-positioning equipment."

**Qualified:** describes a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

**Ramp:** means an inclined walking/working surface used to access another level.

**Riser:** means the upright (vertical) or inclined member of a stair that is located at the back of a stair tread or platform and connects close to the front edge of the next higher tread, platform, or landing.

**Rope descent system:** means a suspension system that allows an employee to descend in a controlled manner and, as needed, stop at any point during the descent. A rope descent system usually consists of a roof anchorage, support rope, a descent device, carabiner(s) or shackle(s), and a chair (seatboard). A rope descent system also is called controlled descent equipment or apparatus. Rope descent systems do not include industrial rope access systems.

**Rung, step, or cleat:** means the crosspiece of a ladder on which an employee steps to climb up and down.

**Runway:** means an elevated walking/working surface, such as a catwalk, a foot walk along shafting, or an elevated walkway between buildings.

**Scaffold:** means any temporary elevated or suspended platform and its supporting structure, including anchorage points, used to support employees, equipment, materials, and other items. For purposes of this subpart, a scaffold does not include a crane-suspended or derrick-suspended personnel platform or a rope descent system.

**Ship stair (ship ladder):** means a stairway that is equipped with treads, stair rails, and open risers, and has a slope that is between 50 and 70 degrees from the horizontal.

**Side-step ladder:** means a type of fixed ladder that requires an employee to step sideways from it in order to reach a walking-working surface, such as a landing.

**Spiral stairs:** means a series of treads attached to a vertical pole in a winding fashion, usually within a cylindrical space.

**Stair rail or stair rail system:** means a barrier erected along the exposed or open side of stairways to prevent employees from falling to a lower level.

**Stairway (stairs):** means risers and treads that connect one level with another, and includes any landings and platforms in between those levels. Stairways include standard, spiral, alternating tread-type, and ship stairs.

**Standard stairs:** means a fixed or permanently installed stairway. Ship, spiral, and alternating tread-type stairs are not considered standard stairs.

**Step bolt (pole step):** means a bolt or rung attached at intervals along a structural member used for foot placement and as a handhold when climbing or standing.

**Stepladder:** means a self-supporting, portable ladder that has a fixed height, flat steps, and a hinged back.

**Stepstool:** means a self-supporting, portable ladder that has flat steps and side rails. For purposes of the final rule, stepstool includes only those ladders that have a fixed height, do not have a pail shelf, and do not exceed 32 inches (81 cm) in overall height to the top cap, although side rails may extend above the top cap. A stepstool is designed so an employee can climb and stand on all of the steps and the top cap.

**Through ladder:** means a type of fixed ladder that allows the employee to step through the side rails at the top of the ladder to reach a walking-working surface, such as a landing.

**Tieback:** means an attachment between an anchorage (e.g., structural member) and a supporting device (e.g., parapet clamp or cornice hook).



**Toe-board:** means a low protective barrier that is designed to prevent materials, tools, and equipment from falling to a lower level, and protect employees from falling.

**Travel restraint system:** means a combination of an anchorage, anchorage connector, lanyard (or other means of connection), and body support that an employer uses to eliminate the possibility of an employee going over the edge of a walking-working surface.

**Tread:** means a horizontal member of a stair or stairway, but does not include landings or platforms

**Unprotected sides and edges:** mean any side or edge of a walking-working surface (except at entrances and other points of access) where there is no wall, guardrail system, or stair rail system to protect an employee from falling to a lower level.

**Walking-working surface:** means any horizontal or vertical surface on or through which an employee walks, works, or gains access to a work area or workplace location.

**Warning line:** means a barrier erected to warn employees that they are approaching an unprotected side or edge, and which designates an area in which work may take place without the use of other means of fall protection.

**Well:** means a permanent, complete enclosure around a fixed ladder.

## 4.0 Core Information and Requirements

The core information and requirements of this Program include the following:

### 4.1 Ladders

Ladders are tools. Portable ladders are used at Southern Methodist University in a wide variety of settings, both academic and administrative. Misuse of portable ladders can result in serious injuries from falls or, in the case of metal ladders, electrical shock. This program outlines safe work practices while using various types of ladders. Many of the basic safety rules that apply to most tools also apply to the safe use of a ladder:

- If you have not been trained in the safe use of a ladder, you may not use the ladder for the work performed for SMU.
- If you feel tired or dizzy, or are prone to losing your balance, stay off the ladder.
- Do not use ladders in high winds or storms.
- Wear clean slip-resistant shoes; free of mud or grease. Clean ladder rungs of mud, grease, or ice before climbing.
- If necessary, have another person hold the base of the ladder. If no one is available, the ladder should be securely lashed or fastened top and bottom to prevent it from slipping.
- Overreaching can cause instability.
- Always face the ladder and maintain a 3-point contact when climbing or descending.
- Always check to ensure tools and equipment have been removed from the top of the ladder before moving it.
- Ladders must be maintained in good condition at all times, and inspected prior to each use at regular, frequent intervals to confirm it is in good working condition.
- Ladders with loose or missing parts must be rejected. Rickety ladders that sway or lean to the side must be rejected.
- Only one person at a time is permitted on a ladder unless the ladder is specifically designed for more than one climber (such as a Trestle Ladder).
- Ladders must not be placed in front of closed doors that can open toward the ladder. The door must be blocked open, locked, or guarded.
- Read the safety information labels on the ladder.
- Place ladders on stable bases. Boxes, barrels, or other unstable surfaces should never be used to obtain additional height.
- Only one person should climb a ladder at a time.



4.1.1 Ladder Selection

Ladders come in a variety of types, duty ratings and composition materials. The length of the ladder must be sufficient so that the climber does not have to stand on the top rung or step. The ladder you select must be the right ladder for the job.

Ladder Type	Best Used For
Stepladders	Temporary tasks. Minimal storage space required.
Straight or extension ladders	Generally used for higher climbing heights. Extension ladders allow for a variation in height.
Platform ladders	Combination ladder/scaffold allows for both climbing structure and work surface
Rolling staircases	More gradual climbing angle and stable work platform. Requires larger area for storage.

4.1.2 Duty Ratings

Each ladder is rated with a specific duty rating. Remember that the capacity rating includes all personnel, tools and equipment. The Duty Rating of the ladder must be greater than the total weight of the climber, tools, supplies and other objects placed upon the ladder.

Ladder Type	Duty Rating	Load Capacity
Light Duty Household	Type III	200 lbs.
Medium Duty Commercial	Type II	225 lbs.
Heavy Duty Industrial	Type I	250 lbs.
Extra Heavy Duty Industrial	Type I A	300 lbs.
Special Duty Industrial	Type I AA	375 lbs.

4.1.3 Composition Materials

Ladders are typically made of wood, aluminum or fiberglass. Each material has characteristics which make it best for certain situations.

Only wood or fiberglass ladders may be used for electrical work or where exposure to electrical equipment may occur.

4.1.4 Stepladders

Stepladders (or A-frame ladders) are designed to be self-supporting. There are several important requirements when using stepladders:

- The spreaders must be fully extended and locked in place before climbing
- The maximum working height of a stepladder may not be exceeded
- Paint trays are not steps and should only be used for holding paint cans and trays
- Unless designed for such use, the back of the ladder may not be used for climbing
- Stepladders should never be leaned against a wall for use as a straight ladder





#### 4.1.5 Straight Ladders

There are several important requirements when using straight ladders. Straight ladders should be positioned:

- So that the ladder is set to a 75 degree angle from the ground. There are several ways to approximate this angle. To measure this, the horizontal distance between the foot of the ladder and the support against which it is placed is equal to one-fourth the height of the ladder at the top point of support.
- So that both upper contact points rest firmly against the structure
- So that the ladder extends at least three feet above the point of support
- Users should make sure that both rung locking mechanisms are fully engaged.

#### 4.1.6 Fixed Ladders

Fixed ladders are subject to different standards and requirements than portable ladders. The following are just some of the requirements for fixed ladders.

- Ladder safety devices, such as cages or climbing systems are required if the total length of climb on a fixed ladder equals or exceeds 24 feet in length.
- Fixed ladders must be able to support at least two loads of 250 lbs. each.
- Rungs must be shaped to minimize slipping.

#### 4.1.7 Inspections:

Inspect ladders prior to each use and on a regular basis including, but not limited to the following:

- End caps and feet are in place and in good condition with slip-resistant material.
- Step connections are in good condition without bends or breaks.
- Rungs are tight and in good condition – no bent or missing rungs.
- Warning labels are present and legible.
- Hardware is tight and secure.
- Surfaces are free of grease, oil, rust or corrosion.
- Side rails are straight and free of cracks, bends, splits or corrosion.

#### 4.1.8 Storage and Maintenance

- Whenever possible, ladders should be hung horizontally on wall hooks in a dry place not subject to extremes of temperatures.
- Users can do minor maintenance, like lubricating hinges and tightening hardware. However, ladder repair is specialized work and should be completed by qualified persons or the manufacturer.
- If conditions exist that make a ladder unsafe for use, it should be removed from service immediately and marked with a warning such as "Dangerous - Do Not Use". If a ladder cannot be repaired, it should be destroyed prior to disposal.





## 4.2 Stairways

A stairway, staircase, stairwell, flight of stairs, or simply *stairs* is a construction designed to bridge a vertical distance by dividing it into smaller vertical distances, called steps. This section covers all stairways, except for stairs serving floating roof tanks, stairs on scaffolds, stairs designed into machines or equipment, and stairs on self-propelled motorized equipment. This section outlines safe work practices while using stairs.

- A stairway or ladder must be provided at all worker points of access where there is a break in elevation of 19 inches or more and no ramp, runway, sloped embankment or personnel hoist is provided.
- Wear clean slip-resistant shoes; free of mud or grease.
- Always maintain a 3-point contact when climbing or descending.
- Stairways that will not be a permanent part of the structure on which work is performed, must have landings at least 30 inches deep and 22 inches wide at every 12 feet or less of vertical rise.
- Stairways must be installed at least 30 degrees, and no more than 50 degrees, from the horizontal. Variations in riser height or stair tread depth must not exceed 1/4 inch in any stairway system, including any foundation structure used as one or more treads of the stairs.
- Where doors or gates open directly onto a stairway, a platform must be provided that extends at least 20 inches beyond the swing of the door.
- When there is only one point of access between levels, the access way must be kept clear to permit free passage by workers. If free passage becomes restricted, a second point of access must be provided and used.
- Except during construction of the actual stairway, stairways with metal pan landings and treads must not be used where the treads and/or landings have not been filled in with concrete or other material, unless the pans of the stairs and/or landings are temporarily filled in with wood or other material.
- All temporary treads and landings must be replaced when worn below the top edge of the pan.
- Temporary treads must be made of wood or other solid material and installed the full width and depth of the stair.
- All stairway parts must be free of dangerous projections such as protruding nails.
- Slippery conditions on stairways must be corrected immediately

## 4.3 Stair Rails and Handrails

The following apply to all stair rails and handrails:

- Do not slide down handrails.
- Every flight of stairs having four or more risers or rising more than 30 inches, whichever is less, must be equipped with one stair rail system along each unprotected side or edge; and at least one handrail.
- Always maintain a 3-point contact.
- Mid rails must be located midway between the top of the stair rail system and the stairway steps.
- Vertical members, when used, must not be more than 19 inches apart.
- Handrails must have a minimum clearance of 3 inches between the handrail and walls, stair rail systems and other objects.
- Handrails must be capable of withstanding at least 200 pounds of weight applied within 2 inches of the top edge in any downward or outward direction, at any point along the top edge.
- The height of handrails must not be more than 37 inches or less than 30 inches from the upper surface of the handrail to the surface of the tread.
- Stair rail systems and handrails must be surfaced to prevent injuries such as punctures or lacerations and to keep clothing from snagging.
- Handrails must provide an adequate to grasp to prevent falls.
- Unprotected sides and edges of stairway landings must be provided with standard 42-inch guardrail.







#### 4.4 Use of Fall Protection

All stairway and ladder fall protection systems required by this program must be installed, and all duties required by the stairway and ladder program must be performed before employees begin work that requires them to use stairways or ladders and their respective fall protection systems.

**Fixed ladders:** fall protection must be provided for employees climbing or working on fixed ladders above 24 feet.

A fixed ladder is "a ladder that cannot be readily moved or carried because it is an integral part of a building or structure" (§1926.1050(b)). Also, even if the length of climb is less than 24 feet, under §1926.1053(a)(18), cages, wells, ladder safety devices, or self-retracting lifelines must be provided where the top of the fixed ladder is greater than 24 feet above lower levels.

**Portable ladders:** fall protection is not required for employees climbing or working on portable ladders. Although the OSHA standards do not require fall protection for workers on fixed ladders below 24 feet or on portable ladders, it is encouraged to provide additional protection where the worker could fall four feet or more or will be within six feet or less of a fall hazard. Identify the appropriate means of protection, i.e., netting, pfs, 100% tie-off, and other fall arrest means as appropriate.

##### 4.4.1 Fall Protection Systems

Fall protection systems may include one or more of the following:

- Guardrails with mid rails and toe boards
- PFAS (fit test body harnesses annually)
- Positioning device systems when used in conjunction with PFAS
- Warning line systems six feet from edge
- Controlled access zones
- Covers for holes in floors, roofs, and other walking/working surfaces

#### 4.5 Protection From Falling Objects

When personnel are exposed to falling objects, the use of approved hard hats is required, as well as at least one of the following:

- A canopy structure must be erected and potential falling objects kept far enough back from the edge of a higher level that they will not go over the edge if accidentally displaced; or,
- The area to which overhead objects could fall must be barricaded, and personnel must be prohibited from entering the area. Potential fall objects must be kept far enough from the edge of a higher level so that they will not go over the edge if accidentally displaced.
- Toe boards, when used as falling object protection, shall be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below. Toe boards must be at least 3 1/2 inches high, must not have more than 1/4 inch clearance above the walking/working surface, and must be either solid or have openings no greater than 1 inch wide.
- Guardrail netting systems, when used as falling object protection, must keep all openings small enough to prevent the passage of potential falling objects.



## 5.0 Roles and Responsibilities

### 5.1 Executives and Administrators

- Ensure that responsibilities assigned within this Program are carried out within their administrative work units.
- Monitor implementation of this Program within their work unit.
- Ensure adequate funding is available to support this Program.

### 5.2 Office of Risk Management

- Assist work units in implementing the provisions of this Program.
- Develop training materials related to this Program.
- Assist in providing general Stairway and Ladder training to employees.
- Maintain records in accordance with this document.
- Periodically audit and update the Stairway and Ladder Program as needed.
- Coordinate implementation of the Stairway and Ladder Program within the work unit.
- Ensure required training is provided to employees within the work unit.
- Assist in the investigation of all injuries and incidents involving Stairways and Ladders.

### 5.3 Directors and Managers

- Be thoroughly informed of the contents of this Program and how it applies to their areas of responsibility and authority.
- Ensure employees comply with all provisions of the Program.
- Ensure employees receive general Stairway and Ladder safety training.
- Provide training to employees on equipment-specific Stairway and Ladder procedures within the work unit.
- Ensure that the records of this document are maintained for their work unit.
- Ensure copies of JSA (SF-002-1) are available for employee use.
- Make positive changes based off of corrective actions as determined from annual review of program and periodic inspection assessments.
- Investigate all injuries and incidents involving Stairway and Ladder failures.
- Complete quarterly Ladder inspections in accordance this document.

### 5.4 Employees

- Comply with all provisions of the Program.
- Perform and participate in Stairway and Ladder Inspections.
- Attend training sessions as required.
- Promptly report any concerns related to Stairway and Ladders to their immediate supervisor.

## 6.0 Goals, Objectives and Performance Measures

Work Unit and Contractor performance measures related to this program are incorporated into scorecards.

Individual performance measures related to this program are incorporated evaluations and monitoring.



### 6.1 Performance Measures

It is the Goal of SMU to have Zero accidents. This goal can only be met by setting objectives and measuring our current performance against those objectives. Audits and inspections of the Program and usage of the Program by SMU employees and contractors will take place periodically and annually.

Department performance measures are will be incorporated into EHS scorecards. Individual performance measures related to this Program may be incorporated evaluations and monitoring.

### 6.2 Periodic Inspections

Inspections will be conducted to evaluate and correct any deficiencies in the Program. Periodic inspections are completed as part of an ongoing quality process. Supervisors are responsible for completing periodic inspections in order to ensure adherence to the stairways and ladders requirements as described in this document.

### 6.3 Annual Inspections

- Ladders shall be inspected by a competent person for visible defects on an annual basis and after any occurrence that could affect their safe use. Ladders inspections will be conducted using the checklist found on form SF-002-1. Inspection records are to be maintained by the work unit and must be available for review by EHS.
- The inspection documents will be kept on record with EHS for three years.

### 6.4 Consequences

ORM will record any reports or observations of unsafe operations or conditions. Failure to follow this program, the procedures, render common practices or courtesies, or follow regulation standards may resulting in progressive disciplinary action up to and including termination.

## 7.0 Training

Training will be provided initially upon hiring for SMU Employees. SMU shall provide a training program for each employee using ladders and stairways, as necessary. The program shall enable each employee to recognize hazards related to ladders and stairways, and shall train each employee in the procedures to be followed to minimize these hazards. Each work unit is responsible for maintaining a master list of all authorized employees and delivering to the EHS Department. Authorized employees will be trained in the purpose and use of stairways and ladders. If you have not been trained in the safe use of a ladder, you may not use the ladder for the work performed for SMU.

SMU shall ensure that each employee has been trained by a competent person in the following areas, as applicable:

- The nature of fall hazards in the work area.
- The correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used.
- The proper construction, use, placement, and care in handling of all stairways and ladder.
- The maximum intended load-carrying capacities of ladders.
- The standards contained in this subpart.



Retraining shall be provided for each employee as necessary so that the employee maintains the understanding and knowledge acquired through compliance with this OSHA and S-002 Stairways and Ladders Safety Program.

Retraining will be provided to employees whenever there is a change in job assignments, processes, or equipment that creates a new hazard.

Retraining will also be provided whenever there is a change in stairways and ladders program.

SMU will keep records of employee training. The training records will include employee name, training date, and the content of the training. Documentation of training will be kept for at least three years from the training date.

EHS Group will provide general stairway and ladder training to their employees. Supervisors are responsible for training their employees on equipment-specific training.

Work units are responsible for maintaining a record of all training provided to their employees. EHS will maintain records of training provided by EHS personnel.

### 8.0 Program Evaluation

The ORM will review the effectiveness of the Program by:

- Verifying and documenting that all qualified persons have had appropriate training.
- Reviewing of incidents related to Stairways or Ladders.
- Documenting and reviewing the periodic inspections of Stairways and Ladders as documented by individual departments. Identification of any deficiency will result in an appropriate change in the Program, or other SMU approved measure being taken.
- Providing an annual review of the JSA Program for compliance and opportunities for improvement.
- Revising the written JSA Program as required.

### 9.0 Resources

Business Units shall ensure that appropriate resources are identified, allocated, and verified to ensure this Program is communicated and implemented.

### 10.0 Associated Forms, Documents, and References

#### 10.1 Forms

Appendix A: (Authorized Employee) Ladder Safety Checklist SF-002-1

Appendix B: (Supervisor) Ladder Register SF-002-2

#### 10.2 Document Control

Owner Departments must keep records concerning ladder safety inspections, inventories and training. All records must be kept for a minimum of 3 years within the department. The records must be made available to regulatory agencies such as OSHA and EHS upon request.



SMU will keep records of employee training. The training records will include employee name, training date, and the content of the training. Keep documentation on training for at least three years from the training date.

10.3 References

- 29 CFR 1910.22, 23
- NIOSH Ladder Safety App. <https://www.cdc.gov/niosh/topics/falls/mobileapp.html>
- 29 CFR 1926.1053
- OSHA Publication 3124  
<https://www.osha.gov/Publications/osha3124.pdf>

11.0 Reviewed By

Date of Review	Reviewed By	Reason for Review
01-08-2018	EHS Group	Internal audit for compliance, design control
02-16-2018	Manager Review Group	Awareness, EHS quality process- Management Review
03-02-2018	AVP / CRO	Approval of draft program
	Legal	
	Human Resources	

12.0 Revision History

Revision Number	Date of Revision	Revision Description	Basis for Revision
Draft	01-11-2018		
V1	03-02-2018	Out of draft status	Internal reviews completed

13.0 Decision Record

Date of Decision	Approved By	Decision Description	Basis for Decision
03-09-2018	AVP / CRO	Implementation of program	EHS quality process - Continual Improvement



# LADDER SAFETY CHECKLIST

Owner: Risk Management  
Revision No: 01

Document number: SF-002-1  
Date last revised: 03-02-2018

LOCATION:	LADDER #											
Type of Ladder: ( ) Extension ( ) Step	Construction of Ladder: ( ) Wood ( ) Metal ( ) Fiberglass											
DATE (MM/DD)												
INSPECTOR'S INITIALS												
REPAIR DATE / REPAIRER'S INITIALS												
GENERAL ITEMS INSPECTED	OK	NR	OK	NR	OK	NR	OK	NR	OK	NR	OK	NR
Side rails in good condition												
Steps or rungs not loose or damaged												
Spreader braces not damaged and open fully												
Nails, screws, bolts not missing or damaged												
Ladder free from oil, grease, or slippery materials												
Manufacturer's labels, warnings, and ratings posted												
Movable parts operate freely												
Wooden parts free from splinters, cracks, decay												
Non slip feet not damaged and in good condition												
Ladder stored properly to prevent damage												
STEP LADDERS												
Stepladder is not wobbly and loose												
Paint shelf not damaged or missing												
Hinges not loose or damaged												
Ladder does not exceed 20 feet in height												
EXTENSION LADDERS												
Loose, broken, or missing extension locks												
Locks seat properly when ladder is extended												
Pulley, rung locks, and rope are in good condition												
Single section ladders do not exceed 30' in length												
Two-section ladders do not exceed 48' in length of metal ladders and 60' for wood ladders												
COMMENTS:												



Please contact ORM EHS for any required changes to this Program.

Uncontrolled when printed





SMU

FORM

# LADDER REGISTER

Owner: Risk Management  
Revision No: 01

Document number: SF-002-2  
Date last revised: 03-02-2018

## LADDER REGISTER

Project: \_\_\_\_\_

Department: \_\_\_\_\_

Ref No	Type of ladder	Length in Ft.	Ladder Serial No.	Location		Remarks
				In storage	On site	