Fall Protection Program

GENERAL

The UNCW Environmental Health & Safety Department (EH&S) is authorized by UNCW Policy 05.600 (http://uncw.edu/policies/documents/05_600_EHandSPolicy_5Feb2010.pdf) to develop and manage comprehensive environmental, health and safety programs. Additionally, they are tasked to identify and address regulatory requirements. In that spirit, this Fall Protection Program has been developed to protect employees by ensuring that all employees understand Fall Protection use and practice before employees perform servicing and maintenance activities. This policy is intended to meet the Occupational Safety and Health Requirements for General Industry outlined in 29 CFR 1910 Subpart D and Construction Industry 1926.500.

SCOPE

This policy applies to all university employees regardless of status or type of employment. It may be used as minimum guidelines for contractors and/or vendors that are expected to maintain their own safety program.

APPLICATION

This written policy outlines responsibilities, training, specific procedures and inspections with regard to Fall Protection.

DEFINITIONS

Controlled Access Zone: An area in which certain work may take place without the use of guardrail systems, personal fall arrest systems, or safety nets. Access to the zone is controlled.

Guardrail System: A barrier erected to prevent employees from falling to lower levels.

Low Slope Roof: A roof having a slope of less than or equal to 4 in 12 (vertical to horizontal).

Lower Level: Those areas or surfaces to which a worker can fall, including but not limited to ground levels, floors, excavations, etc.

Personal Fall Arrest System: A system used to arrest an employee in a fall from a working level. This system consists of an anchorage, connectors, and a body harness.

Roof: The exterior surface on the top of a building.

Roofing: The hoisting, storage, application and removal of roofing materials and equipment.

Safety Monitoring System: A safety system in which a competent person is responsible for recognizing and warning workers of fall hazards.

Safety Net System: A net installed under the walking/working surface to catch employee when falling.

Unprotected sides and edges: Any surface, whether horizontal or vertical on which a person works or walks, including, but not limited to, floors, roofs, ramps, bridges, runways, but not including ladders.

RESPONSIBILITIES

Each Department shall be responsible for the implementation of Fall Protection procedures. Employees shall have training in understanding the significance of implementing the procedures. Employees will use the Ladder Safety procedures when performing servicing or maintenance activities, etc. Department Supervisors shall be responsible for training record keeping and record retention.

1. Manager/Supervisor: The manager/supervisor ensures that only authorized and trained employees work in elevated areas where fall protection is required. The manager/supervisor ensures that designated employees complete required training prior to working in these environments. The manager/supervisor ensures that appropriate protection devices and materials are provided as needed.

2. Employees: Employees are responsible for complying with this program. Affected employees complete training as required.

TRAINING

The department shall provide training so employees understand the purpose and function of the program (knowledge, skills, application, use, removal)

Retraining:

Retraining shall reestablish proficiency and introduce new or revised control methods

1. There shall be retraining with any change in job assignments, change in machines, equipment or process that presents a new hazard or a change in procedures
2. Retrain when inspection reveals a need, or whenever the employer sees a need

SPECIFIC REQUIREMENTS

Work Activities

This program is applicable for work including, but not limited to, work performed on roofs, leading edge work, and work performed over or adjacent to openings in floors, walls, walkways, etc. which could result in the worker falling through or over the edge.

- Employees performing work on walking or working surfaces with an unprotected side or edge which is six feet or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.
- The performance of work activities involving leading edge and roof fall hazards shall be performed using ladders, scaffolding, man lifts, or bucket truck whenever appropriate.
- The provisions of this plan do not apply when employees are making an inspection, investigation, or assessment of workplace conditions prior to the actual start of construction work or after all construction work has been completed.
- The provisions for fall protection for employees working on scaffolds, stairways and ladders are provided in 29 CFR 1926 subparts L and X respectively.
-

Fall Protection Systems

Appropriate fall protection will be determined by the task (job) to be performed.

- Guardrails, warning line system or safety-monitoring system, as appropriate, shall be the normal methods of fall protection on flat roofs or areas having unprotected sides or edges whenever feasible. Guardrails include a toe board, mid-rail, and top-rail.
- An articulating man lift provided with a restraint system and full body harness to an anchor point below the waist (preferably at the floor level).
- Employees working on sloped roofs must be trained to use and must use personal fall arrest systems. Personal fall arrest systems may include:
    - Anchor points (rated at 5000 pounds per person)
    - Full body harness
    - Restraint line or lanyard
    - Retractable lanyard
    - Rope grabs
    - Connectors (self-locking snap hooks)
- Engineered lifelines.
- Safety monitor systems.
- A safety net system will not be used unless no other feasible method of fall protection can be employed.
-

Storage of Fall Protection Equipment
Fall protection equipment must be appropriately stored to prevent damage or aging of material.

Inspections
A visual inspection of each item of fall inspection equipment must be completed prior to each use. Thorough inspections of fall protection equipment are completed and documented annually (see attachments).

Fall Protection Locations

Fall protection is required wherever the potential to fall 6 feet or more exists. The following places are recommended for fall protection:

- Flat and low-sloped roof locations, when within 15 feet of the roof edge or during roof repair/maintenance (4:12 pitch or less).
- Exterior and interior equipment platforms, catwalks, antennas/towers, etc.

- Exterior and interior fixed ladders above 20 feet.
- Mezzanine and balcony edges.
- Open excavations or pits.
- Tasks requiring use of the man lifts.
- Tasks requiring employees to lean outside the vertical rails of ladders (i.e., painting, stairwell light bulb replacement, etc.).
- Scaffolding erection – 10 feet in height or greater.
- Tuck pointing – chimney repair.

Protection of Open-Sided Floors, Platforms, and Runways

Every floor opening measuring twelve (12) inches or more in its' least dimension will be provided with a cover or a guardrail. The cover or guardrail will be designed to prevent persons from accidentally walking into the opening and shall also be so designed as not to

Stairway Railings and Guards

A standard stair railing must be equipped with standard stair railings or standard handrails on the open sides of any steps that have four or more risers. A standard stair railing is between 34 and 30 inches measured from the leading edge of the treads:

- On stairways less than 44 inches wide having both sides enclosed, at least one handrail, preferably on the right side descending.
- On stairways less than 44 inches wide having one side open, at least one stair railing on open side.
- On stairways less than 44 inches wide having both sides open, one stair railing on each side.
- On stairways more than 44 inches wide but less than 88 inches wide, one handrail on each enclosed side and one stair railing on each open side.
- On stairways 88 or more inches wide, one handrail on each enclosed side, one stair railing on each open side, and one intermediate stair railing located approximately midway of the width.

Ladders

Portable Ladder Procedure

1. Place the ladder base at a 1:4 ratio from the vertical (horizontal/vertical). For every 4 feet of working length the base of the ladder should be 1 foot out from the top support.
2. Extend ladder 3 feet above the top support point.
3. Use ladders only in a vertical position. Ladders are not a substitute for a scaffold or a runway between two elevated surfaces.
4. Keep ladder directly off of window panes or sashes.
5. Keep ladders away from front of a door that opens toward the ladder unless the door is locked, blocked, or guarded.
6. Place a portable ladder so both side rails have secure footing. Provide solid footing on soft ground to prevent the ladder from sinking.

7. Place the ladder feet on a substantial and level base not on movable objects.
8. Lean ladder against secured backing.
9. Securely lash or otherwise fasten ladder to prevent slipping when using a ladder for access to high places.
10. Secure bottom and top of ladder to prevent displacement when using ladder for access to a scaffold.
11. Keep ladder away from electrical wiring.
12. One person at a time will be on a ladder.

Fixed Ladders

Fixed ladders cannot be moved. Provide access to specific elevated locations. All fixed ladders over 20 feet in length must have a cage or well.

Other Characteristics

1. Pitch of 75-90 degrees
2. Designed to bear a load of 200 pounds
3. ¾ inch rung diameter
4. Rungs 16 inches wide
5. Rungs spaced no more than 12 inches apart
6. Hand or side rails extending 3 ½ feet above the landing
7. Minimum clearance of 2 ½ feet on the climbing side of ladders with 90 degree pitch and 3 feet for a 75 degree pitch
8. Clear width of 15 inches on each side of the center line of ladder
9. 7 inch clearance in back of ladder to assure adequate footing
10. Painted, if metal or appropriately treated to prevent deterioration if conditions indicate

Ascending/Descending Ladder

1. Both hands must be used on ladders. Raise/lower needed material by mechanical means.
2. Keep the center of gravity centered as much as possible between the hands and the foot that is in contact with the ladder.
3. Always face the ladder going up or coming down.
4. Never slide down a ladder.
5. Make sure shoe bottoms are not greasy, muddy or slippery before you climb.
6. Do not climb higher than the third rung from the top on extension or straight ladders or the second tread from the top on step-ladders.

Safe Practices

1. Make sure step ladder is fully opened and the metal spreader locked before you start to climb ladder.
2. Keep ladders clean and grease free.
3. Do not use ladders during a strong wind except in emergency and only then when tied securely.
4. Do not leave placed ladders unattended.
5. Avoid using metal ladders around energized electrical circuits or equipment.

INSPECTION

1. Make periodic ladder inspections for structural integrity.
2. Conduct quarterly inspections as a minimum. Record all inspections made.
3. Remove defective ladders from service when noted during inspection. Tag it with "DANGEROUS – DO NOT USE". Do not use until ladder is repaired.
4. Dispose of any ladder that cannot be repaired.

Protection from Falling Objects

At no time shall employees be beneath the work site. Ground area beneath work site will be barricaded off to comply with Warning Line area with no one allowed within the barricaded area.

Contractors

Contractors performing work on state property shall follow all OSHA guidelines for fall protection as applicable in 29 CFR 1926.500.

Fall Protection Inspection Checklist

Full Body Harness

Users of a full body harness perform annual inspections of this equipment to maintain the service life and performance, in addition to a visual inspection prior to each use. If you have any questions or concerns, please contact the Safety Director. Keep this form on file for your records.

Division:	**Facility:**
Building:	**Location/Area:**
Inspector:	**Date:**
Harness Model/Name:	**Serial Number:**
Date of Manufacture:	**Date of Purchase:**

General Factors	Accepted	Rejected	Comments
Hardware: includes D-rings, buckles, keepers and back pads. Inspect for damage, distortion, sharp edges, burrs, cracks and corrosion.			
Webbing: Inspect for cuts, burns, tears, abrasions, frays, excessive soiling and discoloration.			
Stitching: Inspect for pulled or cut stitches.			
Labels: Inspect, making certain all labels are securely held in place and are legible.			
Other:			
Other:			
Overall Disposition:			

Comments:

Reviewed October 2016

Fall Protection Inspection Checklist

Lanyards

Users of a fall protection lanyards perform annual inspections of this equipment to maintain the service life and performance, in addition to a visual inspection prior to each use. If you have any questions or concerns, please contact the Safety Director. Keep this form on file for your records.

General Factors	Accepted	Rejected	Comments
Hardware: (includes snap hooks, carabiners, adjusters, keepers, thimbles and D-rings) Inspect for damage, distortion, sharp edges, burrs, cracks, corrosion and proper operation.			
Webbing: Inspect for cuts, burns, tears, abrasions, frays, excessive soiling and discoloration.			
Stitching: Inspect for pulled or cut stitches.			
Synthetic Rope: Inspect for pulled or cut yarns, burns, abrasions, knots, excessive soiling and discoloration.			
Energy Absorbing Component: Inspect for elongation, tears and excessive soiling.			
Labels: Inspect, making certain all labels are securely held in place and are legible.			
Other:			
Overall Disposition:			

Comments:

Reviewed October 2016

Fall Protection Inspection Checklist

Snap Hooks/Carabiners

Users of a snap hooks/carabiners perform annual inspections of this equipment to maintain the service life and performance, in addition to a visual inspection prior to each use. If you have any questions or concerns, please contact the Safety Director. Keep this form on file for your records.

General Factors	Accepted	Rejected	Comments
Physical Damage: Inspect for cracks, sharp edges, burrs, deformities and locking operations.			
Excessive Corrosion: Inspect for corrosion, which affects the operation and/or the strength.			
Markings: Inspect and make certain marking(s) are legible.			
Other:			
Other:			
Other:			
Overall Disposition:			

Comments:

Reviewed October 2016