

Fall Protection Program



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DISTRIBUTION:

All revisions, modifications, addenda, etc., to be forwarded and posted to the following departments and web sites:

- **Affected departments listed in Appendix E**
- **Posted on Yale EHS Web Site: <http://www.yale.edu/ehs>**

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1. Introduction:

This document establishes Yale University's written compliance program for fall protection, as required by the Occupational Safety and Health Administration (OSHA) under Title 29 Code of Federal Regulations, Standard for General Industry Part 1910, Subpart D-Walking-Working Surfaces and Title 29 Code of Federal regulations, Standard for Construction Part 1926, Subpart M- Fall Protection. See: <http://www.osha.gov/>.

The purpose of the program is to establish guidelines to protect all employees and members of the Yale community engaged in outdoor and indoor work activities that exposes them to fall hazards. Fall hazards are defined as a risk of falling from a height of four or more feet or when working over dangerous equipment and/or machinery. Falls may also occur at the same level resulting from trips and slips. The goal of this program is to establish safe working conditions through effective education, engineering and administrative controls, use of fall protection systems and equipment, and enforcement of the program. This program does not cover falls associated with the use of scaffolds, portable ladders, or elevated work platforms i.e. man lifts, powered platforms, or aerial lifts.

The Physical Safety Engineer in the office of Environmental Health & Safety (EHS) is the Fall Protection Program Administrator.

2. Responsibilities:

Various Yale University departments and employees have responsibilities under this program, including:

a. Office of Environmental Health & Safety – Fall Protection Program Administrator

- Preparing, reviewing, and periodically revising this program.
- Providing and/or overseeing program and training and equipment fit testing.
- Monitoring and evaluating fall hazards in the workplace.
- Providing guidance to supervisors in the selection and purchase of approved fall protection equipment.
- Maintaining records of exposure assessments, training, and hands-on assessments.
- Coordinating recordkeeping and notifications through the Time Management System (TMS).

b. Supervisors/Managers

- Notifying Yale Environmental Health & Safety about workplace conditions and potentially affected employees. See Appendix D.
- Providing new employees with informal on-the-job instructions about potential fall hazards they may encounter in their work environment. See Appendix A, B, & C.
- Ensuring that affected employees receive necessary training before beginning work and are provided with the correct protective equipment. See Appendix F, & G and Checklist A.
- Ensuring that equipment used by employees is inspected annually and that appropriate records are maintained. See Checklist B.
- Ensuring overall employee compliance with this program.

c. Affected Employees

- Observing the procedures and requirements outlined in this Program.
- Understanding the fall hazards associated with the work you are to perform. See Appendix A, B, C, & D.
- Attending/participating in training sessions.
- Correctly using and inspecting the personal fall protective equipment and supplies provided. See Checklist A, Pre Donning Fall Arrest System Inspection.
- Maintaining fall protective equipment in a safe and sanitary condition. See Appendix F & G.
- Notifying supervisors of changes in the workplace that could change exposures.

3. Program Evaluation:

The Fall Protection Program will be reviewed at least once a year by a committee composed of representatives from EHS, union and supervisory personnel from all effected departments. This review will encompass changes in regulations, new and existing fall hazards, changing demands of the program, and changes in technology. The annual review will be conducted on, or about, the same time every year.

4. Definitions:

Active fall arrest system: equipment used to arrest an employee experiencing a fall from a working level. The primary components are: the anchorage, connectors from the anchorage to the individual, and a full body harness. Connections from the anchorage to the harness include an anchor strap, lanyard, D-rings, snaphooks, deceleration device, or other type of lifeline.

Anchorage: a secure point of attachment for lifelines, lanyards or deceleration devices. For fall arrest systems it must be capable of supporting 5000 pounds per individual tied off. It must be capable of supporting 1000 pounds for fall restraint systems.

Designated Area: a space which has a perimeter barrier erected to warn employees when they approach an unprotected side or edge and serves to designate an area where work may be performed without additional fall protection. Designated areas cannot be erected less than 10 feet from an unprotected side or edge and are only allowed for work of a temporary nature such as maintenance of roof top equipment. A designated area must be surrounded by a rope, wire, or chain supported by stanchions.

Catastrophe: The hospitalization of three or more employees resulting from a work-related incident or exposure; in general, from an accident or an illness caused by a workplace hazard

Fall Restraint System: Differs from the Fall Arrest System in that it limits the individuals travel in such a manner that the user is prevented from reaching a fall point (such as the edge of a roof or an elevated working surface). The Fall Restraint System is not designed to support an

individual and as such does not require the same design capacities. However, like the arrest system, it requires a full body harness, an anchorage, connectors and a lanyard.

Floor Holes: are openings measuring less than 12 inches but more than 1 inch in its least dimension, in any floor, platform or other work surface through which materials may fall or which may present a tripping hazard (examples include a pipe opening, or slot opening).

Floor Openings: are openings measuring 12 inches or more in its least dimension, in any floor, roof, platform or other working surface through which a person may fall (examples include a skylights, hatchway, stair or ladder opening, pit, or large manhole).

Harness: an array of straps secured around the wearer in a manner that distributes the fall arresting forces over the thighs, shoulders, and pelvis and contains provisions for attaching it to a lanyard, lifeline, or deceleration device. Attachment must only occur at the harness rear “D” ring.

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

Passive fall arrest system: includes, but is not limited to, a standard railing system or parapet or a designated area.

Standard railing: a barrier consisting of top rail, mid-rail, posts and toe board designed to prevent employees from falling. The tools section of this document contains specifications for various types of guardrail systems.

Steep-slope Roof: a roof having a slope greater than 4 in 12 (vertical to horizontal).

Walking/working surface: is any surface upon which an individual walks or works.

Wall Opening: an opening at least 30 inches high and 18 inches wide in any wall or partition through which employees can fall to a lower level.

5. Exposure Assessments:

Potential exposures to falls at Yale University are routinely evaluated through regular workplace inspections and upon employee or supervisor request. Environmental Health & Safety takes all practical steps to ensure that engineering or other controls, i.e. passive fall protection systems, are available to eliminate the need to utilize active fall arrest systems. However, certain situations and tasks are performed at locations where passive fall protection is not available and will therefore require the use of personal fall protection equipment and systems. This will typically occur at construction locations and/or areas not typically designated for work to be performed or for places of other human occupancy.

Roofs and other building external locations are areas typically associated with fall hazards. These

locations are continually evaluated by EHS to document the hazard and recommend enhancements to the passive and/or active fall protection systems as appropriate. See Appendix A, B, and C, Roof Fall Exposure Evaluation-Campus, Roof Fall Exposure Evaluation-Medical School, and Roof Fall Exposure Evaluation-West Campus respectively.

An often overlooked cause of falls is those resulting from slips and trips. A fall of this nature generally occurs at the same elevation and is often the result of poor housekeeping, spills, and/or inadequate maintenance of the walking and working surfaces. Due to the unpredictable nature of the exposure, personnel are encouraged to self assess conditions and to act quickly to eliminate the hazard. These hazards may include icy sidewalks, wet floors, torn floor coverings and stair treads, and missing or broken hand rails and guard rails.

6. Work Practices-Walking and Working Surfaces:

Housekeeping

Proper housekeeping assists in preventing falls from slips and trips. All work areas should be kept clean, orderly and in a sanitary condition. The floors of work areas should be maintained in a clean and dry condition. Where wet processes are used, drainage must be maintained and gratings, mats, or raised platforms provided. If work surfaces are temporarily wet or otherwise slippery, warning cones should be positioned in plain sight directly in front of the affected area. Every floor, working space, and passageway should be kept free of protruding nails, metal, splinters, holes, or loose grating/boards. Always sweep your work area, removing any debris, after completing your task.

Floor Slip Resistance

Walking and working surfaces should be maintained in a stable, firm, and slip resistant condition. This is particularly important when employees must push or pull carts or perform other material handling tasks. See Checklist C for help with evaluating Walking-Working surfaces. Slip resistance is defined by a surface's Coefficient of Friction (COF). EHS considers a static COF of 0.6 the minimum for slip-resistance and is available to evaluate surfaces upon request. Appendix H contains a table which identifies the coefficient of friction of various wet and dry surfaces you may encounter at Yale.

Floor Openings, Holes and Wall Openings

Standard guardrail systems should be provided to prevent falls from every open-sided floor or platform except where there is an entrance to a ramp, stairway, or a fixed ladder. Floor openings may be guarded with a guardrail system or covered by a cover capable of sustaining at least twice the anticipated load. When the floor opening cover is removed a temporary guardrail should be put in place or an attendant should be stationed at the opening to warn personnel. Wall openings with a lower edge less than 36 inches and representing a fall hazard must be protected with a guardrail system. Wall opening may also be protected with screens, grills, doors or other barriers. Every floor hole into which a person can accidentally walk should be guarded by either a standard guardrail system or a floor hole cover of sufficient strength. The cover should not create a tripping hazard.

In some cases a Restraining System may be used to prevent an employee from falling through a floor opening or over an edge when the floor cover or guardrail system is temporarily removed. This may be done to facilitate the transfer of materials as when an overhead crane is used to load in material or equipment and the railing is removed to facilitate material transfer. Appendix G describes the proper selection, use, and maintenance of a restraining system. All employees utilizing a restraint system must be specifically trained in their use and limitations. The Definitions section of this document describes the very important differences between a restraint and fall arrest system. Only harnesses shall be used with restraining systems; body belts are not to be used under this program.

Special Case – Protection from Falling into Dangerous Equipment

Regardless of height, open-sided floors, walkways, platforms, or runways above or adjacent to dangerous equipment, tanks, pits and similar hazards must be guarded with a standard guardrail system or employees should be provided personnel fall arrest gear selected to prevent contact with the hazardous equipment, material, and/or condition.

Special Case – Ditches

Ditches, holes and other depressions greater than four feet deep should be surrounded by a guardrail system or other substantial physical barrier to prevent falls into the opening.

Floor Loading Protection

Load rating limits should be conspicuously posted on plates, raised platforms, and other engineered elevated structures or projections. Never place a load on a floor or roof greater than its approved limit. Temporary covers should be able to withstand at least twice the anticipated load.

Inspection

A checklist for inspecting walking and working surfaces can be found in Appendix C.

7. Work Practices-Work on Roofs and Other Elevated Locations:

Falls from roofs may occur when an employee falls over an edge, through a skylight or down an access hatch. Employees may be protected from these fall hazards with either a passive control system, such as a guard rail or a parapet, or an active fall control system such as a personal fall arrest system. Roofs may be of different pitches, from flat to very steep. The roof slope will determine what fall protection systems are practical. Appendix D contains a fall protection system hierarchy for work on roofs with varying slopes. Please note that roofs with a slope greater than 8 in 12 (8 vertical to 12 horizontal) require special considerations. In all cases, doors and access hatches leading to roofs or elevated surfaces with fall hazards must be locked, restricting access to authorized, trained individuals only. On buildings that are only a few stories, it is advisable to perform this work from the ground using ladders, scaffolds, or aerial lifts.

Flat Roofs

Flat roofs are typically accessed by fixed ladders through access hatches or fixed stairs and

doors. Fall hazards on these roofs may include unprotected edges, skylights and access hatches. The preferred protection for these exposures is to use a passive protection system. In a passive system, the roof or elevated surface edge is protected by a standard guardrail system or a parapet that is a nominal 42 inches in height. Parapets less than 42 inches are not considered acceptable fall protection. An access hatch may be protected with guardrails (if materials must be moved in or out) or by simply closing the hatch. A skylight may be protected with guardrails or with a screen capable of supporting at least 200 lbs.

An acceptable alternative for protecting employees accessing equipment on flat roofs with unprotected edges is through the use of a designated area. The designated area must be surrounded by a rope or wire and supporting stanchions that can withstand a force of at least 25 pounds before tipping over and cannot be closer than 10 feet to the unprotected edge. Access to and from the designated area from the roof entry point must also be delineated with lines and stanchions meeting the same criteria. The lines are intended to keep workers from straying too close to the roof edge and must be clearly visible (day and night) as well as meet additional strength and height requirements. In cases where the equipment to be serviced is located within ten feet of a roof edge, the roof edge immediately adjacent to the equipment must be protected with a guardrail. The guardrail should extend around the equipment to a distance of ten feet in from the roof edge. Access to and from this area from the roof entry point must also be delineated with lines and stanchions meeting the same criteria identified for establishing a designated area. Work performed outside the designated area or lines require the use of a personal fall arrest or restraint system.

If an adequate passive system is not in place, an active system of fall protection must be employed such as a fall arrest or restraint system. Appendix E describes the components of these systems, their uses and the proper selection, inspection, maintenance and storage of these systems.

Sloped Roofs

Low-Sloped Roofs are defined as equal to or less than 4 in 12 and Steep Roofs are roofs with a slope greater than 4 in 12 but less than 8 in 12. Low sloped roof edges may be protected with a guardrail system or a parapet that is a nominal 42 inches in height. Weighted guard rail systems are not approved for use on sloped roofs. If an adequate guardrail system or parapet is not present a fall restraint or fall arrest system must be used. Steep sloped roofs require special considerations and must be individually evaluated for fall protection. Generally, a guardrail system or parapet will not provide adequate fall protect on a steep sloped roof.

Special precautions must be taken and fall protection techniques utilized when working on Extremely Steep Roofs (8 in 12 and greater). A fall arrest system must be worn at all times and special working surfaces may be required. Special working surfaces may include chicken boards, toe boards, roof racks, etc.

Weather Considerations

When adverse weather conditions exist, such as high winds, heavy rain or snow, or when the accumulation of ice or snow on surfaces significantly increase the risk of slips and falls when

performing tasks, a risk assessment should be conducted and where possible the work postponed until better conditions prevail or other precautions taken.

8. Rescue:

Before using a fall arrest system consideration should be given as to what emergency rescue strategy will be employed to remove an affected employee. Depending on the location and height of the work this strategy may be as simple as the availability of a retrievable ladder or as complex as involving the local fire and rescue department's ladder trucks and elevated equipment. At the beginning of any work activity where personnel fall protection equipment will be used, a rescue plan must be identified and discussed with the employee by the employee's supervisor. The rescue plan may or may not be written but should include the following elements and considerations:

Before on-site work begins

- Identify emergencies that could affect your work site.
- Establish a chain of command.
- Document procedures for responding to emergencies and make sure they're available at the site.
- Know emergency-responder phone numbers.
- Identify critical resources and rescue equipment.
- Train on-site responders.
- Identify off-site responders and inform them about any conditions at the site that may hinder a rescue effort.
- Identify emergency entry and exit routes.
- Make sure responders have quick access to rescue and retrieval equipment, such as lifts and ladders.

During on-site work

- Identify on-site equipment that can be used for rescue and retrieval, such as extension ladders and mobile lifts.
- Maintain a current rescue-equipment inventory at the site. Equipment may change frequently as the job progresses.
- Re-evaluate and update the emergency-response plan when on-site work tasks change.

When an emergency occurs

- First responders should clear a path to the victim. Others should direct emergency personnel to the scene. Call 911 and clearly indicate that the emergency involves a

rescue for a worker suspended in a personal fall-arrest system. Make sure only trained responders attempt a technical rescue.

- Prohibit all nonessential personnel from the rescue site.
- Talk to the victim; determine the victim's condition, if possible.
- If you can reach the victim, check for vital signs, administer CPR, attempt to stop bleeding, and make the victim comfortable.

After an emergency

- Report incident to EHS as soon as possible.
- Identify equipment that may have contributed to the emergency, tag it and put it out of service. Have a competent person examine equipment. If the equipment is damaged, repair or replace it. If the equipment caused the accident, determine how and why and do not use it again.
- Remove from service and tag any fall arrest equipment that may have been activated and/or loaded.
- Document, in detail, the cause of the emergency and record witness statements.
- Complete Yale's First Report of Injury form.
- Review emergency procedures. Determine how the procedures could be changed to prevent similar events; revise the procedures accordingly.

All personnel involved in a fall arrest or fall will be sent for medical evaluation to determine the possibilities and potential extent of injuries.

9. Training:

Individuals exposed to fall hazards must be trained in the recognition of these hazards and in the procedures to be followed in order to minimize these hazards; such as the use of guardrail systems and personal fall arrest systems. Individuals using personal fall protection systems as a means to control fall hazards must be trained and knowledgeable in the following areas:

- Application limits of the equipment,
- Proper hook-up, anchoring, and tie-off techniques, including determination of elongation and deceleration distance,
- Methods of equipment use, inspection, and storage.

Training is provided in two levels: Awareness and Hands-on. Awareness level training is provided as instructor lead or through a computer based training program and is recommended for anyone who may be exposed to fall hazards. A second level of training provides hands-on instruction for personnel who will be using personal fall protection systems for protection, i.e.

harness, anchor points, lanyards, etc. Training will be repeated when changes, such as the introduction of new equipment make previous training obsolete or when an employee has not retained the requisite understanding or skill. As a minimum all employees should attend refresher training at least once every three years.

10. Equipment

Personnel fall arrest and restraint systems are composed of specific components that must be selected and used properly. Equipment will include: the harness, lanyard and anchorage device. All fall arrest and restraint equipment must also be carefully inspected prior to use and used properly. Appendixes F & G of this document describes the components (and variants thereof) of these systems, the proper application of these systems and their inspection and storage requirements. All components of a fall arrest system subjected to the impact loading forces of a free-fall must be immediately removed from service and destroyed or sent to the manufacturer for evaluation.

Medical Surveillance/Physical Requirements

Employees utilizing personal fall arrest systems are expected to be physical fit with no physical conditions that could be aggravated by, or cause the employee harm, if he or she was involved in a fall and was to rely on the fall equipment for life safety.

Inspection

Fall arrest systems, including harnesses, lanyards, anchor straps and hardware and other related gear must be inspected before each use. See Checklist A: Pre Donning Fall Arrest System Inspection. Regular more detailed inspections should be performed at least annually or at a frequency consistent with the manufacturer's recommendations. See Checklist B: Annual Fall Protection Equipment Inspection. The date of the most current annual inspection should be recorded and maintained in a log along with records showing the date of purchase and dates when any service was conducted on the equipment. The annual inspections must also be recorded on an inspection tag which shall be attached to the harness. Records shall be kept for as long as the equipment is in service and maintained showing the date of purchase and dates when the harness assembly was inspected and by whom. Equipment taken out of service must be destroyed or rendered un-usable before discarding.

11. Security:

Access to areas with fall hazards (roof tops, etc.) will be limited to personnel trained in the recognition of fall hazards and the steps necessary to mitigate those hazards. All roof accesses should be locked and controlled by the building Superintendent, Facilities, or Physical Plant.

APPENDIXES

A- Roof Fall Exposure Evaluation-Main Campus – Contact Yale EHS

B- Roof Fall Exposure Evaluation-Medical School – Contact Yale EHS

C- Roof Fall Exposure Evaluation-West Campus – Contact Yale EHS

D- Fall protection system hierarchy for work on roofs with varying slopes

E- Departments with Personal Fall Protection Equipment

F- Selection, Use, and Maintenance of Fall Protection Equipment

G- Selection, Use, and Maintenance of a Restraining System

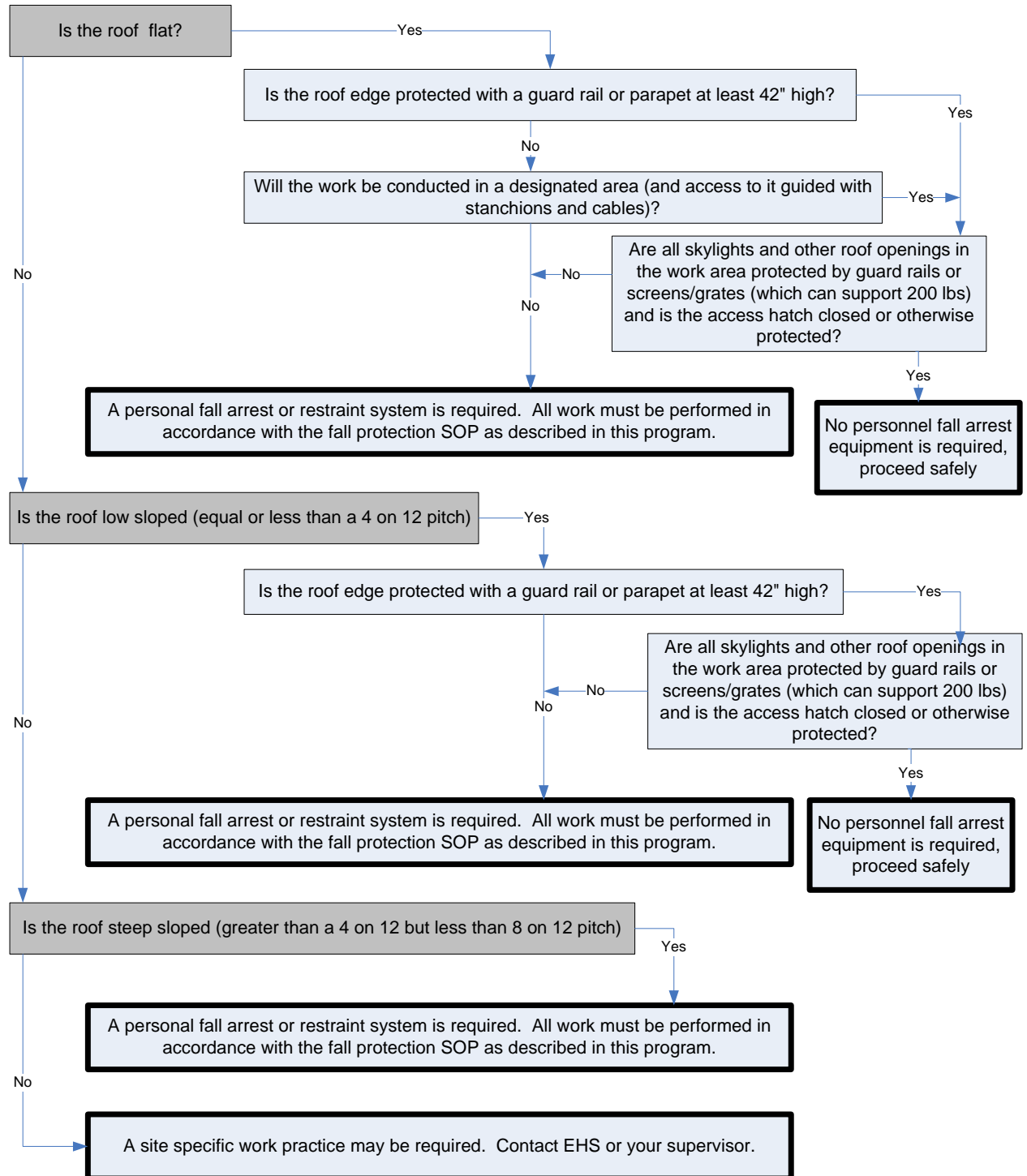
H- Coefficient Of Friction (COF) Readings of various floor surfaces at Yale

**Appendix A, B, C:
Roof Fall Exposure Evaluations**

Contact Yale EHS

Appendix D: Fall Protection systems hierarchy for work on roof with varying slopes

This flow diagram will assist you to determine what type (if any) fall protection is required when working on various sloped roofs



Appendix E: Departments with Personal Fall Protection Equipment

Contact Yale EHS

Appendix F: Selection, Use and Maintenance of Fall Protection Equipment

Selection, Use and Maintenance of Fall Protection Equipment

Body Harness:

Composed of straps which are secured on the individual in a manner that will distribute the fall arrest force over the thighs, pelvis, waist, chest and shoulders with means for attachment to other components of a personal fall arrest system.

Inspection: Inspect harness prior to donning (see checklist). Formal semi-annual inspections are to be conducted and the date of the last inspection placed on a tag on the harness (see checklist).

Maintenance and Storage: Harnesses should only be cleaned with a mild detergent and warm water, toweled off to remove excess water, and then hung by the D-Ring to dry. Never place the harness in a dryer or expose it to excessive heat. Harnesses should be stored in a cool dry place and not subjected to a direct sunlight. Harnesses are not repairable. If any part of the harness is damaged or if the harness has been subjected to a fall arrest, the harness must be removed from service, tagged, and replaced.

Variations:

- Harnesses may be constructed with padded shoulders, butt pads, and waist pads which provide additional comfort when worn for long periods of time,
- Harnesses can be constructed of non-conductive components for electrical protection,
- Straps can be constructed of Kevlar for added strength or abrasion resistance or Nomex for work involving welding or other hot work.



Selection, Use and Maintenance of Fall Protection Equipment

Lanyards:

A flexible strap that has a connector at each end for connecting the body harness to an anchorage point.

Inspection: Inspect lanyards prior to donning (see checklist). Formal semi-annual inspections are also conducted (see checklist).

Maintenance and Storage: Lanyard should only be cleaned with a mild detergent and warm water, toweled off to remove excess water, and then up to dry. Never place the lanyard in a dryer or expose it to excessive heat. Store in a cool dry place and not subjected to a direct sunlight.

Variations:

- A shock absorbing lanyard is designed to reduce the shock of a fall,
- Self-retracting lifelines, or lanyards, are a deceleration device containing a drum-wound cable which can be slowly extracted from, or retracted into, the drum under slight tension during normal employee movement. At the onset of a fall, the lifeline automatically locks in the drum and arrests the fall. These types of lifelines provide additional mobility for the user.



Connectors:

Are devices, which are used to connect parts of the personal fall arrest system together. It may be an independent component of the system, such as a carabiner, or it may be an integral component of part of the system such as a D-Ring sewn into a harness, or a Snap-Hook spliced or sewn to a lanyard or self-retracting lanyard. All connectors must have locking features to avoid rollout.

Maintenance and Storage: Wipe clean and store dry.

Variations: Snap-Hooks, carabiners.



Selection, Use and Maintenance of Fall Protection Equipment

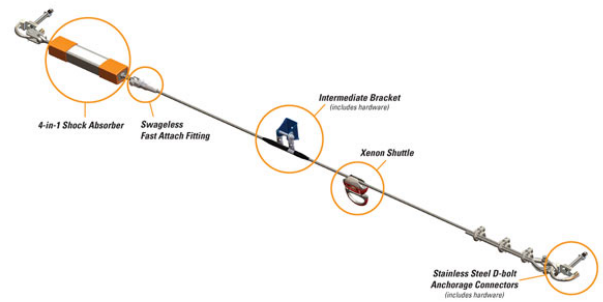
Anchorage: An engineered and designed point of attachment for lifelines, lanyards or deceleration devices. Anchorages must be able to sustain a 5,000 lb pull force for each person tied off to it.

Maintenance and Storage: wipe clean and store dry.

Variations: Anchors may be temporarily mounted or permanently installed. Examples include: Anchor straps, friction bolts, beam anchors, D-bolt and D-ring anchors.

Horizontal life line. In this device a line is suspended between two anchorage points and a connector of a personal fall arrest system is connected to the line.

Rope grabs. The rope grab is designed to move up and down the anchor rope when held in the open position and to grab in the event of a fall.



Appendix G: Selection, Use and Maintenance of a Restraining System

Selection, Use and Maintenance of a Restraining System

Body Harness:

Composed of straps which are secured on the individual in a manner that will distribute the fall arrest force over the thighs, pelvis, waist, chest and shoulders with means for attachment to other components of a personal fall arrest system.

Inspection: Inspect harness prior to donning (see checklist). Formal semi-annual inspections are to be conducted and the date of the last inspection placed on a tag on the harness (see checklist).

Maintenance and Storage: Harnesses should only be cleaned with a mild detergent and warm water, toweled off to remove excess water, and then hung by the D-Ring to dry. Never place the harness in a dryer or expose it to excessive heat. Harnesses should be stored in a cool dry place and not subjected to a direct sunlight. Harnesses are not repairable. If any part of the harness is damaged or if the harness has been subjected to a fall arrest, the harness must be removed from service, tagged, and replaced.

Variations:

- Harnesses may be constructed with padded shoulders, butt pads, and waist pads which provide additional comfort when worn for long periods of time,
- Harnesses can be constructed of non-conductive components for electrical protection,
- Straps can be constructed of Kevlar for added strength or abrasion resistance or Nomex for work involving welding or other hot work.



Lanyards:

A non-flexible strap that has a connector at each end for connecting the body harness to an anchorage point.

Selection, Use and Maintenance of a Restraining System

Inspection: Inspect lanyards prior to donning (see checklist). Formal semi-annual inspections are also conducted (see checklist).

Maintenance and Storage: Lanyard should only be cleaned with a mild detergent and warm water, toweled off to remove excess water, and then up to dry. Never place the lanyard in a dryer or expose it to excessive heat. Store in a cool dry place and not subjected to a direct sunlight.

Variations:

- Lanyard may be web, rope, or cable.



Connectors:

Are devices, which are used to connect parts of the personal fall arrest system together. I may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system such as a D-Ring sewn into a harness, or a Snap-Hook spliced or sewn to a lanyard or self-retracting lanyard. All connectors must have locking features to avoid rollout.

Maintenance and Storage: Wipe clean and store dry.

Variations: Snap-Hooks, carabineers.



CHECKLISTS

Checklist A: Pre Donning Fall Arrest System Inspection

Checklist B: Annual Fall Protection Equipment Inspection

Checklist C: Walking-Working Surfaces Inspection

Checklist A: Pre Donning Fall Arrest System Inspection

All components must be inspected before each use. **DO NOT** use the equipment if any component “fails” inspection. Notify your Supervisor and take any failed equipment out of service immediately.

Pre Donning Fall Arrest System Inspection			
BODY HARNESS	YES	NO	COMMENTS
Is the Body Harness fully intact?		FAIL	
Are any Tel-Tails visible?	FAIL		
Are there any unintended holes on the harness?	FAIL		
Are any of the straps on the harness discolored?	FAIL		
Is there any fraying on harness components?	FAIL		
Are all the clips / attachment points present?		FAIL	
Are there any cracked / bent clips or buckles?	FAIL		
Is the harness material right for the job being performed?		FAIL	

Pre Donning Fall Arrest System Inspection			
LANYARDS	YES	NO	COMMENTS
Is the lanyard fully intact?		FAIL	
Are any Tel-Tails visible?	FAIL		
Is there any discoloring / fraying or holes in the fabric?	FAIL		
Are any links bent or stretched (if metal links)?	FAIL		
Are any cable lines snapped or frayed (if cable)?	FAIL		
Is the retracting feature working (if self retracting)?		FAIL	
Are any of the clips/attachments cracked or bent?	FAIL		

Pre Donning Fall Arrest System Inspection			
CONNECTORS & ANCHOR STRAPS	YES	NO	COMMENTS
Are all hooks and carabineers intact?		FAIL	
Is there a locking mechanism present?		FAIL	
Are any connectors stretched, cracked or modified?	FAIL		
Has any of the stitching been ripped?	FAIL		
Are any Tel-Tails visible?	FAIL		

Checklist B: Annual Fall Protection Equipment Inspection

All components must be inspected annually, sooner if the component has been subjected to a load or is suspect of being damaged. **DO NOT** use the equipment if any component that is “Rejected”. Notify your Supervisor and take any failed equipment out of service immediately.

INSPECTOR: _____ DATE INSPECTED: _____

BODY HARNESS

Serial Number: _____

Date of Manufacture: _____

Date of Purchase: _____

Pre Donning Fall Arrest System Inspection			
WHAT TO LOOK FOR	Accepted	Rejected	COMMENTS
<u>HARDWARE</u> : Includes D rings, buckles, keepers, and back pads. Inspect for damage, distortion, sharp edges, burrs, cracks and corrosion.			
<u>WEBBING</u> : Inspect for cuts, burns, tears, abrasions, frays, excessive soiling, and discoloration.			
<u>STITCHING</u> : Inspect for pulled or cut stitches.			
<u>Other</u> :			
<u>Other</u> :			
<u>Other</u> :			
<u>Overall Condition</u> :			

LANYARDS

Serial Number: _____

Date of Manufacture: _____

Date of Purchase: _____

Pre Donning Fall Arrest System Inspection			
WHAT TO LOOK FOR	Accepted	Rejected	COMMENTS
<u>HARDWARE</u> : Includes snap hooks, carabineers, adjusters, keepers, thimbles, and D rings. Inspect for damage,			

Pre Donning Fall Arrest System Inspection			
WHAT TO LOOK FOR	Accepted	Rejected	COMMENTS
distortion, sharp edges, burrs, cracks, corrosion and proper operation.			
<u>WEBBING</u> : Inspect for cuts, burns, tears, abrasions, frays, excessive soiling and discoloration.			
<u>STITCHING</u> : Inspect for pulled or cut stitches.			
<u>SYNTHETIC ROPE</u> : Inspect for pulled or cut yarns, burns, abrasions, knots, excessive soiling, and discoloration.			
<u>ENERGY ABSORBING COMPONENT</u> : Inspect for elongation, tears and excessive soiling.			
<u>LABELS</u> : Inspect and make certain all labels are securely held in place and are legible.			
<u>Other</u> :			
<u>Other</u> :			
<u>Other</u> :			
<u>Overall Condition</u> :			

SNAP HOOKS and CARABINERS

Serial Number: _____

Date of Manufacture: _____

Date of Purchase: _____

Pre Donning Fall Arrest System Inspection			
WHAT TO LOOK FOR	Accepted	Rejected	COMMENTS
<u>PHYSICAL DAMAGE</u> : Inspect for cracks, sharp edges, burrs, deformities and locking operations.			
<u>EXCESSIVE CORROSION</u> : Inspect for corrosion, which affects the operations and/or strength.			
<u>MARKINGS</u> : Inspect and make certain marking(s) are legible.			
<u>Other</u> :			

Pre Donning Fall Arrest System Inspection			
WHAT TO LOOK FOR	Accepted	Rejected	COMMENTS
<u>Other:</u>			
<u>Other:</u>			
<u>Overall Condition:</u>			

SELF-RETRACTING LANYARD/LIFELINE

Serial Number: _____

Date of Manufacture: _____

Date of Purchase: _____

Pre Donning Fall Arrest System Inspection			
WHAT TO LOOK FOR	Accepted	Rejected	COMMENTS
<u>IMPACT INDICATOR:</u> Inspect indicator for activation (rupture of red stitch, elongated indicator, etc.).			
<u>SCREWS/FASTENERS:</u> Inspect for damage and make sure all screws and fasteners are tight.			
<u>HOUSING:</u> Inspect for distortion, cracks and other damage. Inspect anchoring loop for distortion or damage.			
<u>LANYARD/LIFELINE:</u> Inspect for cuts, burns, tears, abrasion, frays, excessive soiling and discoloration.			
<u>LOCKING ACTION:</u> Inspect for proper breaking action.			
<u>RETRACTION/EXTENSION:</u> Inspect spring tension by pulling lanyard out fully and allowing to retract fully (lifeline must be taut with no slack).			
<u>HOOKS/CARABINERS:</u> Inspect for physical damage, corrosion, proper orientation and markings.			
<u>Other:</u>			
<u>Other:</u>			
<u>Other:</u>			
<u>Overall Condition:</u>			

Pre Donning Fall Arrest System Inspection			
WHAT TO LOOK FOR	Accepted	Rejected	COMMENTS

Checklist C: Walking-Working Surfaces Inspection

All “NO” answers require a description of corrective action taken or planned to be written in the “COMMENTS” column.

GENERAL WORK ENVIRONMENT	YES	NO	COMMENTS
Is a documented, functioning housekeeping program in place?			
Are all surfaces clean, sanitary, and orderly?			
Are all surfaces kept dry or is appropriate means taken to assure the surfaces are slip-resistant?			
Are all spilled materials or liquids cleaned up immediately and according to proper procedures?			
Are accumulations of combustible dust routinely removed?			

WALKWAYS	YES	NO	COMMENTS
Are aisles and passageways kept clear?			
Are aisles and walkways marked as appropriate?			
Are wet surfaces covered with non-slip materials?			
Are holes in the floor, sidewalk or other walking surface repaired properly, covered or otherwise made safe?			
Is there safe clearance for walking in aisles where motorized or mechanical handling equipment is operating?			
Are materials or equipment stored in such a way that sharp projective will not interfere with the walkway?			
Are spilled materials cleaned up immediately?			
Are changes of direction or elevation readily identifiable?			
Are aisles or walkways that pass near moving or operating machinery, welding operations or similar operations arranged so employees will not be subjected to potential hazards?			

Is adequate headroom provided for the entire length of any aisle or walkway?			
Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than 48 inches above any adjacent floor or the ground?			
FLOOR AND WALL OPENINGS	YES	NO	COMMENTS
Are floor openings guarded by a cover, a guardrail, or equivalent on all sides (except at entrance to stairways or ladders)?			
Are skylight screens of such construction and mounting that they will withstand a load of at least 200 pounds?			
Is the glass in the windows, doors, glass walls, etc., which are subject to human impact, of sufficient thickness and type for the condition of use?			
Are grates or similar type covers over floor openings such as floor drains of such design that foot traffic or rolling equipment will not be affected by the grate spacing?			
Are unused portions of service pits and pits not actually in use either covered or protected by guardrails or equivalent?			
Are manhole covers, trench covers and similar covers, plus their supports designed to carry a truck rear axle load of at least 20,000 pounds when located in roadways and subject to vehicle traffic?			

STAIRS AND STAIRWAYS	YES	NO	COMMENTS
Are standard stair rails or handrails on all stairways having four or more risers?			
Are all stairways at least 22 inches wide?			
Do stairs have landing platforms not less than 30 inches in the direction of travel and extend 22 inches in width at every 12 feet or less of vertical rise?			
Do stairs angle no more than 50 and no less than 30 degrees?			
Are step risers on stairs uniform from top to bottom?			
Are steps on stairs and stairways designed or provided with a surface that renders them			

slip resistant?			
Are stairway handrails located between 30 and 34 inches above the leading edge of stair treads?			
Do stairway handrails have at least 3 inches of clearance between the handrails and the wall or surface they are mounted on?			
Where doors or gates open directly on a stairway, is there a platform provided so the swing of the door does not reduce the width of the platform to less than 21 inches?			
Where stairs or stairways exit directly into any area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?			
Do stairway landings have a dimension measured in the direction of travel, at least equal to the width of the stairway?			

ELEVATED SURFACES	YES	NO	COMMENTS
Are signs posted, when appropriate, showing the elevated surface load capacity?			
Are surfaces elevated more than 48 inches above the floor or ground provided with standard guardrails?			
Are all elevated surfaces (beneath which people or machinery could be exposed to falling objects) provided with standard 4-inch toe boards?			
Is a permanent means of access and egress provided to elevated storage and work surfaces?			
Are dock boards or bridge plates used when transferring materials between docks and trucks or rail cars?			
Are signs posted, when appropriate, showing the elevated surface load capacity?			
Are surfaces elevated more than 48 inches above the floor or ground provided with standard guardrails?			
Are all elevated surfaces (beneath which people or machinery could be exposed to falling objects) provided with standard 4-inch toe boards?			

Is a permanent means of access and egress provided to elevated storage and work surfaces?			
Are dock boards or bridge plates used when transferring materials between docks and trucks or rail cars?			
Are signs posted, when appropriate, showing the elevated surface load capacity?			