

Fall Protection Program

Purpose

This program provides written procedures and guidelines governing the requirements for fall protection.

- A. To ensure that each employee on, near or under a walking/working surface or dangerous equipment or process (horizontal and vertical surface) with an unprotected side or edge which is 6 feet or more above a lower level shall be protected from falling off, onto, or through working levels; and to protect employees from falling objects by the use of guardrail systems, safety net systems, or personal fall arrest systems.
- B. To comply with the regulations outlined in the Occupational Safety and Health Administration's (OSHA) Part 29 Code of Federal Regulations (CFR) 1926.500.
- C. To ensure that fall protection equipment meets American National Standards (ANSI) Z359.1 "Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components".
- D. To ensure that untested fall protection systems are prohibited for use at West Chester University

Scope

This program establishes the minimum requirements for using fall protection at the West Chester University

This program applies to West Chester University employees who may be involved in activities that require the use of fall protection within the facility.

West Chester University employees will be notified of the requirement to follow this program and are required to comply with the restrictions and limitations imposed upon them by West Chester University during fall protection activities.

Tenant employees, contractors and sub-contractors must comply with their own organization's program.

Responsibilities

Environmental Health and Safety (EHS) Department

The EHS Department is responsible for the implementation, enforcement and maintenance of the provisions outlined in this program and as specified below:

- A. Oversee the policies and procedures of the program
- B. Provide guidance on the requirements of the program
- C. Perform fall hazard assessments
- D. Perform fall protection evaluations
- E. Select and establish standard operating procedures for fall protection controls
- F. Assist in the design and selection of fall protection controls
- G. Coordinate activities where fall hazards are present
- H. Understand the fall hazards and fall protection controls
- I. Provide fall protection safety training
- J. Evaluate the effectiveness of the program on an annual basis

Managers and Departmental Supervisors are Responsible for:

- A. Ensuring employees are aware of fall hazards related to their assigned task
- B. Ensuring employees are provided with and use appropriate personal protective equipment and materials
- C. Ensuring that machines and equipment are maintained in a manner that eliminates conditions that may result in a fall

Employees are Responsible for:

- A. Recognizing when a fall hazard is present
- B. Reporting hazards to their supervisor or other responsible department

- C. Following appropriate safe work practices, including properly wearing all necessary personal protective equipment

Determinations of the Need for Fall Protection

Fall protection is required when work is conducted at unprotected heights at or exceeding 6 feet above the lower level or above dangerous equipment or processes, a fall hazard is present that must be addressed through either elimination or fall protection. No employee or work operation is exempt from the fall protection requirement. The following are examples where fall protection shall be utilized at the West Chester University facility.

- A. When employees are working in a hoist area, they shall be protected from falling 6 feet or more to lower levels by guardrail systems or personal fall arrest systems
- B. When employees are working on walking/working surfaces they shall be protected from tripping in or stepping into or through holes (including skylights) more than 6 feet above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes.
- C. When employees are working at the edge of a well, pit, shaft or excavation 6 feet or more in depth they shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or another visual barrier
- D. When employees are working less than 6 feet above dangerous equipment, they shall be protected from falling into or onto the dangerous equipment by guardrail systems or by equipment guards.
- E. When employees are working 6 feet or more above dangerous equipment, they shall be protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems.
- F. When employees are performing overhand bricklaying and related work 6 feet or more above lower levels, they shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or shall work in a controlled access zone.
- G. When employees are engaged in roofing activities on low-slope roofs, with unprotected sides and edges 6 feet or more above lower levels they shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or a combination of warning line system and guardrail system, warning line system and safety net system, or warning line system and personal fall arrest system, or warning line system and safety

monitoring system. Or, on roofs 50-feet or less in width, the use of a safety monitoring system alone [i.e., without the warning line system] is permitted.

- H. When employees are working on a steep roof with unprotected sides and edges 6 feet or more above lower levels, they shall be protected from falling by guardrail systems with toe boards, safety net systems, or personal fall arrest systems.
- I. When employees are working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface, they shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.
- J. When employees are exposed to falling objects, they shall wear a hard hat and implement one of the following measures:
 - 1. Erect toe-boards, screens, or guardrail systems to prevent objects from falling from higher levels
 - 2. Erect a canopy structure and tether potential fall objects so that those objects would not fall to the ground if they were accidentally displaced
 - 3. Barricade the area to which objects could fall, prohibit employees from entering the barricaded area.
- K. When not protected by any other means of fall protection, such as safety nets or proper guardrails, employees shall use a personal fall arrest system (PFAS) which shall consist of a full body harness, lanyards with double locking snap hooks, and an anchor. To achieve the necessary fall protection, employees may need to use a double lanyard system and/or vertical or horizontal lifelines, retractable lifelines or other such approved devices.
 - 1. Employees shall setup fall arrest equipment so that they can neither free fall more than 6 feet, nor contact any lower object. Anchorage points for fall arrest equipment shall be capable of supporting a shock load and located above the employee's body harness attachment point where practical.
 - 2. When vertical lifelines are used, each employee shall be protected by a separate lifeline. The lifeline shall be properly weighted at the bottom and terminated to preclude a device such as a rope grab from falling off the line.

3. Horizontal lifelines should be limited to two persons at one time between supports.
 4. Prior to each use, employees shall visually inspect all fall arrest equipment for cuts, cracks, tears or abrasions, undue stretching, overall deterioration, mildew, operational defects, heat damage, or acid or other corrosion. Equipment showing any defect shall be withdrawn from service.
 5. All fall arrest equipment subjected to impacts caused by a free fall or by testing shall be removed from service.
 6. Employees should store all fall arrest equipment in a cool dry place not subjected to direct sunlight.
 7. Employees shall not use fall arrest equipment until they have been properly trained in its use.
 8. Supervisors shall ensure fall protection is available and used as required for all employees they are responsible for.
 9. Fall arrest equipment shall not be used for any other purpose such as tow ropes or hoist lines.
- L. Employees working on wall forms or rebar shall wear a body harness lanyard and/or positioning device when exposed to a fall more than 6 feet. Position devices shall be rigged to prevent a free fall greater than 2 feet.
- M. When guardrails are used for fall protection, they shall consist of a top railing intermediate rail and toe board. The top rail shall have a vertical height of 42 inches. The mid-rail shall be at 21 inches, and the toe board 4 inches.

Fall Protection Selection

General

Fall protection must be selected and provided based on the hazards to which the employees are exposed and before that employee begins the work that necessitates use of fall protection. The EHS department should be consulted and approve all temporary fall protection measure selections prior to implementation.

The development of a functional fall protection program shall contain at least the following elements:

1. Identification and evaluation of fall hazards.
2. Selection and use of fall hazard controls.
3. Established equipment use, inspection and maintenance guidelines.
4. Employee training.

Personal Fall Arrest System

A personal fall arrest system consists of a full body harness and a motion slowing lanyard. These will be used with a variety of specialty fall devices for protection in vertical, horizontal, and sloped roof applications. All personal fall arrest systems must be ANSI approved.

Vertical

Vertical lifelines with rope grab hardware are used to provide fall protection on swing stage scaffolds and in elevator shafts. Matching the harness, lanyard, and rope hardware to each application is best accomplished with the end user's input. There are a great many variations to vertical protection, including self-retracting lifelines, so each location requires coordination between all parties.

Horizontal

Tie-offs to walk lines (attaching a lanyard to a static attach point such as a structural member or to a retractable reel) have an inherent hazard that training, and supervision can eliminate. Horizontal work attachments can create fall exposures well in excess of 6 ft. if the worker(s) do not keep the point of attachment at shoulder height or above or use an attach point which would cause the lanyard to fall below the worker's shoulder height.

Sloped Roof

When a personal fall arrest system is selected, then the fall exposure is not necessarily a direct fall, but rather a slip down a slope to the edge. Using static lines or an attach point at the peak of a roof will provide fall protection as long as the employee prevented from falling more than six feet or contacting any object during a fall. Again, there are a variety of devices available and many types of lifelines. Coordination between all parties is necessary to avoid a system which appears adequate but may create exposures greater than six feet if misunderstood.

Guardrail Systems

When guardrail systems are used, they are to be installed on all unprotected sides or edges. If the guardrail system is removable or can be lowered, the means used to secure it in the normal operating position shall be readily accessible for inspection and maintenance.

- A. The guardrail system must include a top-rail around the upper periphery. The height of the top-rail above the platform must be 42 inches. The guardrail must include a mid-rail approximately midway between the top-rail and the platform surface. Each top-rail, mid-rail or equivalent vertical barrier must withstand a concentrated test load of 200 pounds applied at any point in all directions. Equivalent structure may be used in place of top-rails provided they meet the strength requirements
- B. Flexible materials such as cables, chains, and ropes may not be used in the guardrail system, except they may be used as a mid-rail at access openings 30 inches wide, or less
- C. The guardrail must include toe-boards on all sides. The minimum toe-board height is four 4 inches. Toe-boards may be omitted at the access opening(s)
- D. When wood railings are used, the post shall be of at least 2 inches by 4 inches stock spaced not to exceed 8 feet, the top rail shall be of at least 2 inches by 4 inches stock, and the intermediate rail shall be of at least 1 inch by 6 inches stock. If pipe is used, it shall be at least 1½ inch nominal diameter. If structural steel is used, it shall be of 2 inches by 2 inches by 3/8-inch angles or equivalent. If wire rope is used for railings, it shall have a diameter of at least inch and shall be stretched taut to allow no more than a 3-inch deflection.

Safety Nets

Safety nets should be chosen when large open web steel structures, external building protection, large span structures, require continuous protection for extended periods of time. Safety nets, when installed, tested, and maintained properly can provide total protection. Selecting nets must be a coordinated effort between the user and the EHS Department with all hazards understood and the limitations weighed against other fall protection choices.

Warning Lines

A warning line system is restricted to low slope or flat roof work only. If personal fall arrest, rails, or nets are not used, then a warning line can be used alone or in conjunction with any of the above.

- A. Warning lines, to protect employees from working within 6 feet of a roof edge or while working within the 6-ft area between the warning line and the roof edge, creates a zone for higher awareness of the fall hazard of the roof edge. The construction of the line must be so that foundations keep the line between 34 and 39 in. high, resist a 16-lb force, be flagged at least every 6 feet and be of a material with a breaking strength of at least 500 lb. These requirements are put into the standards to assure that a warning line, if chosen, will at least hold up to the daily wear and tear of construction projects.

Positioning Device Systems

The positioning fall protection system is designed to hold or support the user at an elevated surface, typically in an activity where both hands need to be free to perform work. The positioning system is an active system, which is engaged each time the user leans back or rests on the support system.

- A. The system should be set up to allow for a maximum of two (2) feet of free fall and be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds (13.3 kN), whichever is greater
- B. The system shall be drop forged, pressed or formed steel, or made of equivalent materials and have a corrosion-resistant finish, with all surfaces and edges smooth to prevent damage to interfacing parts of this system
- C. The system shall have connecting assemblies that have a minimum tensile strength of 5,000 pounds (22.2 kN) and shall have dee-rings and snaphooks that shall be proof-tested to a minimum tensile load of 3,600 pounds (16 kN) without cracking, breaking, or taking permanent deformation

Snaphooks

Snaphooks shall be a locking type snaphook designed and used to prevent disengagement of the snaphook by the contact of the snaphook keeper by the connected member.

Snaphooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snaphook by depression of the snaphook keeper by the connected member

Inspections

The system shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service.

Restrictions

Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.

Elevated Work Platforms

Elevated work platforms present a fall hazard if the platform contains unguarded edges, floor or wall openings, or openings for ladders. The best control on elevated work platforms is to eliminate the fall hazard. In most cases, the installation of guardrails is the most feasible and practical control. When guardrails cannot be installed or during the process of being installed on a work platform, fall protection or other protective means must be utilized to control the fall hazard.

Self-Propelled Elevated Working Platforms and Scissor Lifts

Self-propelled elevated working platforms, and scissor lifts pose similar hazards to fixed platforms with the additional characteristic of being mobile. They are power operated with primary functions (including drive controls) located on the platform. These platforms use guardrail systems, including top-rail, mid-rail, and toe-boards are the primary engineering control for the protection of workers from falls.

- A. Only trained and qualified persons shall operate a scissor lift. All the manufacturer's recommendations for use must be followed during operation
- B. Qualified operators shall be designated by their supervisor
- C. The scissor lift shall have a guardrail system in place that is not to be removed or tampered with during operation. Never use with guardrails removed
- D. Employees shall wear personal fall protection systems utilizing full body harnesses, anchor devices and lanyards while working on unguarded platforms. Those working inside an elevated platform should utilize the anchor points located inside the platform to tie-off. If anchor points are not present, employees shall ensure that each component of the guardrail system are present and in place
- E. Operators shall never stand on another object while on the platform or lift for extra height
- F. The work location of the platform or lift shall be free from obstructions such as electrical lines, over hangs, other utilities, or any other obstruction

- G. The platform or lift shall be moved safely from each work location with the lift fully lowered.
- H. The platform or lift shall not be loaded above its rated load capacity
- I. The platform or lift shall only be set up on a firm and level surface away from any hazards that may cause the lift to become unstable (e.g., holes, slopes, bumps, debris, etc.)
- J. An area five (5) feet around the perimeter of the platform or lift shall be secured using barriers or personnel to prevent individuals from coming close to the lift during operation
- K. Set the brakes and stabilize the platform or lift before operation
- L. If used outdoors the platform or lift shall not be used in unsafe weather conditions such as high winds, rain, snow, sleet, or any other unsafe condition
- M. Test, inspect and maintain scissor lifts according to the manufacturer's recommendations

Vehicle-Mounted Elevating and Rotating Aerial Devices

A vehicle-mounted elevating and rotating aerial device is any vehicle-mounted device, telescoping or articulating, or both, which is used to position personnel. The following is a list of the types of vehicle-mounted aerial devices:

1. Extensible boom aerial device
2. Aerial ladder
3. Articulating boom aerial device
4. Vertical tower
5. A combination of any of the above

Aerial equipment may be made of metal, wood, fiberglass reinforced plastic, or other material; may be powered or manually operated; and are deemed to be aerial lifts whether or not they are capable of rotating about a substantially vertical axis.

- A. Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition. Only trained persons shall operate an aerial lift. During operation of the aerial device the operator must wear a body belt or harness and be connected to the aerial device with a lanyard at the platform position

- B. If a body belt is used the lanyard must be short enough to prevent the employees from climbing the sides of the platform or bouncing out of the basket. This would be considered a restraint device and would not permit a fall
- C. A body harness must be used with a fall arrest system. The aerial lift must be able to withstand the vertical and lateral loads caused by an arrested fall
- D. Employees must always stand firmly on the floor of the basket and must not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position

Boom-Supported Elevating Work Platforms

Self-propelled, boom-supported elevating work platform means a self-propelled elevating work platform which has its platform supported by an elevating means that both elevates and rotates relative to the machine base, and which is not mounted on a separate self-propelled vehicle. These platforms are used to position personnel, along with their necessary tools and materials at work locations. Primary functions (including drive controls) are located on the platform.

- A. Guardrail systems, inclusive of top-rail, mid-rail, and toe-boards are the primary engineering control for the protection of workers from falls while utilizing boom-supported elevating work platforms
- B. Employees while operating or utilizing boom-supported self-propelled elevating work platforms must use personal fall protection systems
- C. The occupants of the boom-supported elevating work platform must secure their personal fall protection systems to an anchorage point provided by the manufacturer and designed to withstand a static force of 5,000 pounds
- D. Employees may not utilize the top-rail or the mid-rail of the guardrail system as the anchorage point for the personal fall protection. The guardrail system is not designed for or structurally adequate to be used as a personal fall protection anchorage point. The same requirements and warnings regarding the installation of anchorage points on self-propelled aerial lift platforms apply to boom-supported elevated work platforms
- E. Personnel shall maintain a firm footing on the platform floor while working on boom-supported aerial lift platforms. Climbing on the mid-rail or top rail of the aerial platform is prohibited. The use of planks, ladders, or any other devices on the elevated platform for achieving height or reach is prohibited

Refer to the Ladder Policy for more information

There are two basic types of ladders, portable and fixed. Each type presents a different hazard to the employee and different means to control. Portable ladders present fall hazard typically controlled through good employee work practices and ladder use fundamentals. Portable ladders do not use fall protection as described in this document. Fixed ladders, however, are controlled similar to the other fall hazards by the use of proper ladder design and use of fall protection.

Portable Ladders

Portable ladders rely almost exclusively on good employee work practices and ladder use fundamentals to minimize fall hazards. Two types of portable ladders are:

- A. Extension ladders and step ladders
- B. 4-to-1 Rule: Follow the “4-to-1” use rule to determine the proper ladder angle. This general rule states that for every four (4) feet the ladder extends vertically from the ground to the support point, the ladder base should be one (1) foot out horizontally from and directly below the support point.

Fixed Ladders

Fixed ladders present a fall protection issue when the ladder extends to distances exceeding twenty 20 feet in elevation. When this height is exceeded, special fall protection provisions or equipment must be designed into the construction of the fixed ladder, such as cages or wells for ladders of more than 20 feet and landing platforms for each 30 feet of height. Ladder safety devices such as lifebelts, friction brakes, and sliding attachments must also be used, if available.

Procedures

Fall Protection Plan

A site-specific Fall Protection Plan (FPP) is required when either Controlled Access Zones (CAZ) or a Safety Monitor System (SMS) is selected. Choosing either can only be implemented when all other fall protection systems have been deemed infeasible.

The formulated FPP must be written to justify why and explain the hazards associated with each operation. Within the FPP, the reasons for choosing either CAZ or a monitor system, and why using conventional fall protection would create a greater hazard, must be explained thoroughly and submitted to the EHS Department for approval, prior to implementation.

Controlled Access Zones

Controlled access zones must be defined with a line, rope, chain, or warning tape (minimum breaking strength of 200 lb or 91 kg) where access is restricted. The different distances for each zone during each operation are as follows:

- A. Leading Edge: Between 6 ft and 25 from work area
- B. Pre-cast Erection: Between 6 ft and 60 ft from erection operations
- C. Overhand Brick Work: Between 10 ft and 15 ft from working masons

Each zone should be erected so the entire operation is enclosed, and access is restricted so only the employees, identified in the FPP and who are engaged in the operation, are exposed to the fall hazard.

Safe Monitor System

A system where a competent person in fall hazards is chosen to monitor employees who are exposed to fall hazards and who are not protected by conventional fall protection measures or a CAZ.

The reasons why conventional fall protection cannot be used or would create a greater hazard if used must be detailed in the FPP and submitted to the EHS Department for approval, prior to implementation. The monitor stays within oral communication range of workers and warns them when they come close to an edge where the fall is 6 ft or greater. A chosen safety monitor cannot have any other duty which would interfere with the hazard warning duties.

Inspection, Maintenance, and Care

As with all protective equipment, the equipment is only protective when it is functioning properly. The same holds true for fall protection equipment. Fall protection equipment must be visually inspected by the user prior to each use and periodically by a competent person to ensure the equipment is in good working order and ready for use.

- A. Fall protection equipment must be inspected to ensure the equipment is properly functioning. Manufacturer's recommendations must be followed for inspection, maintenance and storage of fall protection equipment.
- B. Fall protection equipment found to be defective must be removed from service immediately until properly repaired or replaced. Equipment must only be repaired by a qualified person familiar with the fall protection equipment.

- C. If a fall arrest system is used to control a fall, affected components of the system must be taken out of service and inspected to ensure they are in functional condition. Some components, such as the shock absorbing lanyard or retractable lifeline, must be returned to the manufacturer for recertification following their use in a fall situation.
- D. Soiled or contaminated body wear (harnesses) can be cleaned in warm water using a mild soap and scrub cloth. The equipment must be thoroughly rinsed with fresh water following any detergent cleaning. Other fall protection equipment can be surface cleaned with water. Harsh chemicals should never be used to clean the fall protection equipment.

Upon the completion of cleaning, the equipment must be allowed to dry thoroughly and placed in a clean and dry location to allow for proper storage.

Employee Training

Employee fall hazard training is critical to ensuring a complete fall protection program. As with all training, the employee must first be instructed on the proper identification of fall hazards prior to first use and before they are able to protect themselves from the hazard. The West Chester University fall protection training shall include the following elements:

- A. Types of general fall hazards
- B. Identification of site-specific fall hazards
- C. Means to eliminate or minimize fall hazards
- D. Types of fall protection used at the site
- E. Limitations of fall protection
- F. Use and care of fall protection
- G. Inspection of fall protection

Fall Protection Training Should be a Combination of Classroom and Hands-On Training

The classroom training should cover the fall protection fundamentals, while hands-on training is based upon site-specific fall protection applications. The misuse of equipment can result in serious injury or even death, it is extremely important that employees are able to physically

demonstrate their ability to properly use the equipment. Each employee must be able to demonstrate this understanding prior to any unsupervised exposure to fall hazards and use of fall protection equipment.

Completion of Training

Upon completion of the required training a written certification record is prepared, which contains the name or other identity of the employee trained, the date(s) of the training, and the signature of the person who conducted the training or the signature of the employer.

Retraining

Retraining shall be conducted when the supervisor/department manager has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by this program. Circumstances where retraining is required include, but are not limited to, situations where:

- A. Changes in the workplace render previous training obsolete
- B. Changes in the types of fall protection systems or equipment to be used render previous training obsolete
- C. Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill

Rescue

- A. When a personal fall arrest system is utilized, procedures shall be in place to provide prompt rescue in the event of a fall
- B. There are a variety of ways in which this requirement can be met, depending on the circumstances of the work site. Some examples include, but are not limited to, ensuring that at least one other designated employee shall be available to monitor ongoing operations, equipping the employee utilizing the fall arrest system with communication equipment that enables the worker to obtain help promptly or by calling 911 or local emergency services.
- C. All personal fall arrest systems (harness) must be equipped with at least one "Relief Step Safety Device" manufactured by Miller or an equivalent device (Appendix F). This device alleviates the effects of orthostatic intolerance (pooling of blood in the legs which restricts blood flow to the brain and other organs), also known as suspension trauma.

Recordkeeping Requirements

Each department is responsible for maintaining original records and forwarding copies of the following Fall Protection documents to the EHS Department:

1. List of Fall Protection Equipment Types
2. Fall Protection Evaluations
3. Maintenance Records
4. Documented Annual Inspections
5. Training Records

Records that are maintained pursuant to this section must be kept for a minimum of three years unless otherwise indicated.

Definitions

- A. EHS – Environmental Health & Safety
- B. Walking/Working Surface – Any surface on which an employee walks or works. It does not include ladders, vehicles, or trailers on which employees must be located to perform their work duties.
- C. Anchorage Point – Point of attachment used for security lifelines, lanyards, or deceleration devices.
- D. Body Harness – Harness that consists of straps worn around parts other than the soft tissue areas of the body. It is a configuration that may be secured on the person in a manner that distributes the fall-arrest forces over at least the thighs, pelvis, waist, chest, and shoulders. The harness is equipped with a means for attaching to other components of a personal fall arrest system.
- E. Guardrail System – Barrier constructed to prevent employees from falling to different levels.
- F. Lanyards – Short piece of flexible line, wire rope, or strap with a connector at each end allowing connection of a body harness to a deceleration device, lifeline, or anchorage point.
- G. Lifeline – Rope system that provides flexibility and freedom of movement and can arrest a fall and help absorb the shock. In addition, it is a system that consists of a flexible line for connecting to an anchorage point at one end to hang vertically, or for connecting to anchorage points at both ends to stretch horizontally. The lifeline should also serve as a means for connecting other components of a personal fall arrest system to an anchorage point.

- H. Personal Fall Arrest System – System that includes, but is not limited to, an anchorage point, connectors, and body harness used to arrest an employee in a fall.
- I. Positioning Device – Body harness system rigged to allow a person to be supported on an elevated vertical surface and work with both hands free while leaning backwards.
- J. Rope Grab – Deceleration device used on a lifeline to automatically engage and lock the lifeline during a fall.
- K. Safety Monitoring System – System whereby a competent person is responsible for recognizing and warning employees of potential fall hazards.
- L. Self-retracting Lifeline/Lanyard – Deceleration device containing a drum-wound line that can be slowly extracted from, or retracted into, during normal movement; and during a fall automatically locks and arrest the fall.
- M. Snaphook – Connector that consists of a hook-shaped member with a normally closed keeper that may be opened to permit a hook to receive an object and, when released, automatically closes to retain the object.
- N. Toe Board – Low vertical barrier that prevents material and equipment from falling.

References

1. 29 CFR 1910 Subpart D - Walking-Working Surfaces
2. 29 CFR 1910 Subpart F - Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms
3. 29 CFR 1926 Subpart L - Scaffolds
4. 29 CFR 1926 Subpart M - Fall Protection
5. ANSI/ASSP Z359 fall protection and fall restraint standards
6. West Chester University Walking and Working Surface Safety Program
7. West Chester University Ladder Policy
8. West Chester University Scaffold Safety Policy

Appendix A

Fall Protection Annual Inspection Checklist

User: _____

Type of Equipment: Harness / Lanyard / Self-Retracting Lifeline / Carabiner / OTHER
(specify) _____

Make and Model: _____

Serial Number: _____

Competent Person conducting the inspection: (PRINT) _____

If any failures are found the unit must be removed from service

<i>Part</i>	<i>Criteria</i>	<i>Pass</i>	<i>Fail</i>	<i>N/A</i>	<i>Comment</i>
Label	Label present				
	Legible				
	Less than 5 years old (If not=fail)				
Fabric	Cut, torn, holes				
	Mildew				
	Fraying				
	Heat or chemical damage (discoloration)				
	Hardening				
	User self-repaired (if yes=fail)				
	Hardware	Corroded			
Bent					
Cracked					
Any alteration or absence of parts					
D-Ring	Cross-section cracked				
	Bent				
	Corroded				
Snaphook	Does it lock				
	Corroded				

	Bent				
	Cracked				
Shock Absorber	Signs that a fall occurred (different color showing)				
Self-Retracting Lanyard	Damage to outer casing				
	Nuts/bolts/rivets intact				
	Check entire length of nylon/metal cable for damage				
	Cable fully retracts				
	If cloth cable, is unit less than 5 yrs. old				
	Breaking mechanism function				

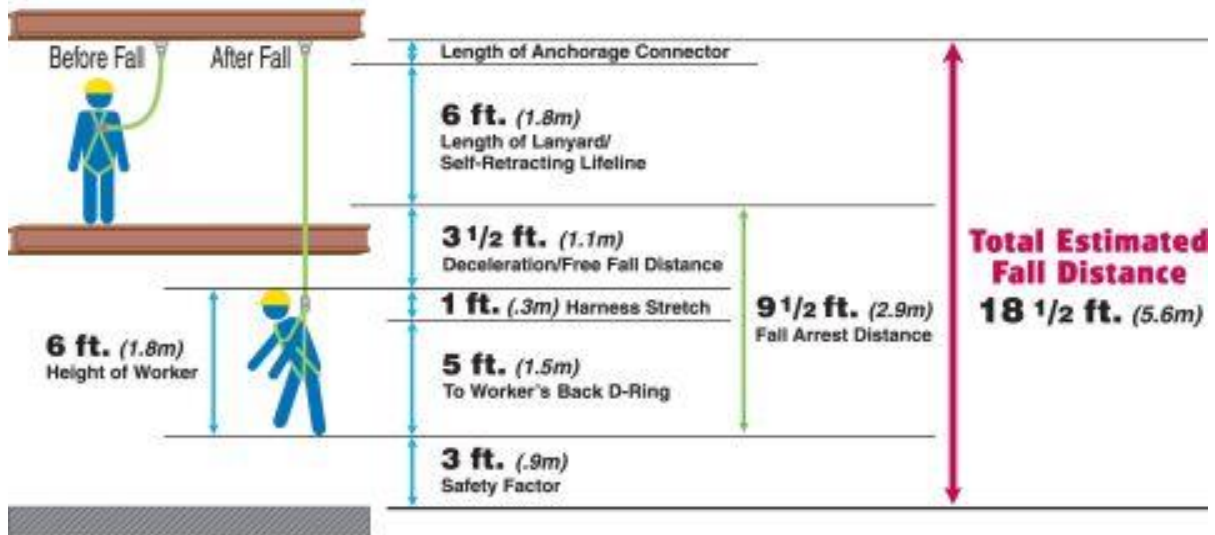
Other Comments: _____

Sign: _____

Date: _____

Appendix B

Diagram showing total fall distance



Picture obtained from Millerfallprotection.com

NOTE: Self-Retracting Lifelines



- Self-Retracting lifelines shall be utilized instead of lanyards whenever possible (not permitted when

utilizing a restraint system, positioning system or a body belt).

- **They come in various lengths and sizes.**
- **They drastically reduce not only fall distances but the force put on the body during a fall.**

Appendix C

Sample picture showing a guardrail system



Photo obtained from <http://www.wildeck.com/>

Appendix D

Sample picture showing a fall restraint system



Photo obtained from <http://kcontracts.com/site/>

Appendix E

Example of a Rigid Rail Ladder Safety System



Appendix F

Example of a “Relief Step Safety Device”



Easy to Deploy and Use (*Attaches to any brand full-body harness*)



Pull tab to deploy



Insert foot into loop
step and adjust



Ability to stand allowing
improved circulation



Two Relief Steps
provide added support,
balance and comfort