



**Fall Protection Plan**  
*Environmental Health & Safety Office*  
**September 2017**

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## **Acronyms**

<b>ANSI</b>	American National Standards Institute
<b>ASSE</b>	American Society of Safety Engineers
<b>CFR</b>	Code of Federal Regulations
<b>EHS</b>	Environmental Health and Safety Office
<b>LOTO</b>	Lockout/tagout Program
<b>OSHA</b>	Occupational Health and Safety Administration
<b>PFAS</b>	Personal Fall Arrest System
<b>PPE</b>	Personal Protective Equipment
<b>VOSH</b>	Virginia Occupational Safety and Health

## Foreword

George Mason University is required by United States Code of Federal Regulations Section 29 part 1910 Subpart D, *Walking-Working Surfaces*, part 1910.140 *Personal Fall Protection Systems*, part 1926 Subpart M, *Fall Protection*, and ANSI/ASSE Z359.0 to .18, *Fall Protection*, to design a fall protection plan that establishes the mechanisms, methods, and administrative controls that George Mason University will use to protect employees from falls when working on elevated surface.

## Document History

Version	Date	Comments
1	May, 2017	Initial <i>Fall Protection Plan</i>
2	July, 2017	Routine review format update

This *Fall Protection Plan* is reviewed biannually and amended as necessary and when:

- Applicable regulations are revised;
- An employee or contract personnel are injured in a fall;
- A “near miss” accident occurs; or
- When conditions in the workplace change to an extent that require Plan review.

All revisions to this *Fall Protection Plan* will be shared with the various parties identified in this document.

## **1.0 Introduction**

The fall protection procedures outlined in this document are designed to prevent fall hazards from elevated work locations. George Mason University's Environmental Health and Safety Office (EHS) provides or will make available this *Fall Protection Plan* to all employees, supervisors, and contractors who conduct activities subject to fall protection regulations. This *Fall Protection Plan* prescribes the duty to provide fall protection, sets criteria and practices for fall protection, and outlines required training and recordkeeping.

### **1.1 Purpose**

This document defines the structure of George Mason University's *Fall Protection Program* and describes specific procedures that must be followed to satisfy federal regulations and to protect employees from injury. This document is intended to be used as a reference to assist employees in identifying areas subject to fall protection, outline training requirements, prescribe roles and responsibilities, establish standard operating procedures, and describe how the institution will conduct employee rescue when personal fall protection systems are used.

### **1.2 Scope**

This *Fall Protection Plan* applies to all university employees working on George Mason University's property and leased spaces. This plan must be implemented and followed whenever any of the following conditions apply:

- An employee is performing work on an elevated work surface to include a roof with an unprotected side or edge four feet or more above a lower level; or
- An employee is performing work near dangerous equipment.

### **1.3 Exceptions**

Fall protection is not required under the following conditions:

- When employees are making an inspection, investigation, or assessment of workplace conditions prior to the actual start of work or after all work has been completed. This exemption does not apply when personal fall protection systems or equipment is available for employees to use for pre-work and post-work inspections, investigations, or assessments;
- When using portable ladders;
- When infrequent and temporary general industry tasks are performed on *low-slope* roofs and work occurs 15 feet or more from the roof edge or fall hazard; or
- To protect against falls from the exposed perimeters of entertainment stages.

## **2.0 Roles and Responsibilities**

All employees expected to perform work in a location that requires fall protection as outlined in this plan are responsible for following the guidance provided within this document as well as

instructions given by their supervisor. The following individuals, offices, and units are responsible for ensuring that this *Fall Protection Plan* is applied appropriately and observed by all employees subject to fall protection regulations. Definitions of commonly used fall protection terms are provided in Appendix A: Definitions.

## **2.1 Environmental Health and Safety Office**

Specific responsibilities of EHS related to this *Fall Protection Plan* are:

- Provide *Fall Protection Training* on a routine basis or as necessary.
- Assist supervisors and employees in implementing this *Fall Protection Plan*.
- Participate in, conduct, or coordinate the identification of fall hazards.
- Assist in the selection of fall protection equipment based on the nature and location of fall hazards.
- Provide assistance with proper use and/or installation of fall protection equipment.
- Assist university employees and supervisors with identifying unique fall hazards and training requirements.
- Approve the use of non-EHS *Qualified Individuals* tasked with providing fall protection training, inspecting fall protection personal protective equipment (PPE), conducting fall protection hazard assessments, or installing fall protection equipment.

## **2.2 Supervisors**

Supervisors that oversee work, activities, and employees that are subject to fall protection regulations are responsible for the following:

- Be thoroughly informed of the contents of this *Fall Protection Plan* and how it applies to the work area(s) under their responsibility and/or authority.
- Coordinate implementation of the fall protection strategies within their work area(s).
- Ensure employees attend required *Fall Protection Training* and are familiar with the proper use and application of fall protection equipment prior to being exposed to fall hazards.
- Understand which employees have been trained and are authorized to use fall protection equipment.
- Ensure that employees comply with all provisions of this *Fall Protection Plan*.
- Ensure that all fall protection equipment issued or used by employees is properly inspected prior to each use and maintained in accordance with manufacture specifications (See Appendix B: Fall Protection Equipment Inspection Log).
- Take prompt corrective actions when unsafe conditions are observed.

In some instances, it may be necessary to obtain the assistance of a *Qualified Individual* to determine appropriate fall protection systems and engineering requirements. Contact EHS if assistance is needed to identify and address fall hazards.



## 2.3 Employees

Employees that are expected to work at elevated heights (i.e., greater than four feet from an adjacent surface) must receive training on appropriate fall protection engineering controls, administrative procedures, and PPE. Employees must:

- Be familiar with this *Fall Protection Plan* and comply with all provisions herein.
- Receive *Fall Protection Training* and additional training as necessary where unique fall hazards exist or specialized fall equipment is required.
- Ensure that all fall protection equipment is inspected and maintained in accordance with manufacture specifications prior to each use (See Appendix B: Fall Protection Equipment Inspection Log).
- Notify their supervisor and EHS if dangerous work conditions are observed, the fall protection plan is not followed, or an accident involving a fall occurs.

## 2.4 Contractors

Contractors performing work on George Mason University buildings must comply with all applicable fall protection standards in order to prevent accidents that may injure themselves or others. Contractors are not authorized to use university fall protection equipment. Existing permanent anchors or pre-erected guard rail systems on university buildings may be used by contract personnel.

If a contractor requires an anchor point to be installed, fall protection systems incorporated into a university building, or designed for their use, all such modifications to buildings must be approved by EHS and Facilities Administration. All fall protection systems installed at the request of a contractor must meet all applicable anchor and fall protection standards to include OSHA 29 CFR 1910 Subpart D *Walking and Working Surfaces*; OSHA 29 CFR 1910 Subpart I *Personal Protective Equipment*; OSHA 29 CFR 1926 Subpart M *Fall Protection*, and this *Fall Protection Plan*.

## 3.0 Fall Protection Systems

Fall protection systems provide protection against fall hazards. George Mason University's preferred order of fall protection control is:

1. Design work areas and rooftops in a manner that eliminates the need for installing temporary fall protection systems.
2. Install guardrails on unprotected sides of a work area.
3. Utilize a fall restraint system to prevent employees from reaching fall hazards.
4. Utilize personal fall arrest systems (PFAS) if the fall hazard cannot be guarded or eliminated.
5. Erect a warning line system around a designated area.

Appendix C: General Industry Fall Protection Requirements Diagram serves as a visual aid to assist in identifying the appropriate fall protection system and application. Note that there are specific requirements for non-general industry work as outlined in Table 1. Warning Line/

Designated Area Requirements and exceptions to these requirements listed in Section 1.3 Exceptions.

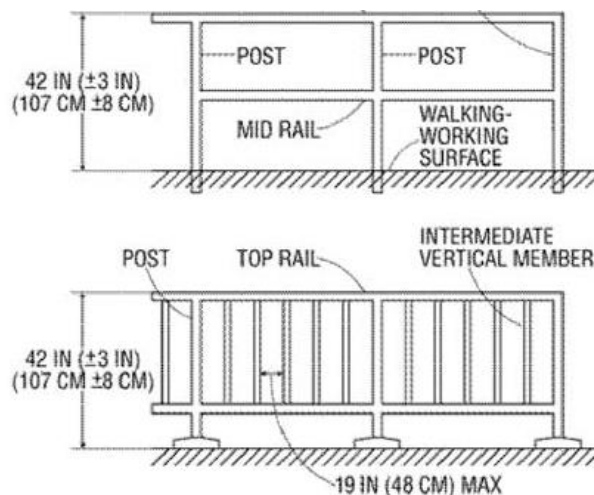
### 3.1 Conventional Fall Protection Systems

The following fall protection systems may be used in general industry activities accordance with OSHA General Industry Standard 29 CFR 1910 and construction activities covered by OSHA Construction Standard 29 CFR 1926.

#### 3.1.1 Guardrail

An acceptable means of fall protection is a guard rail that meets the following conditions:

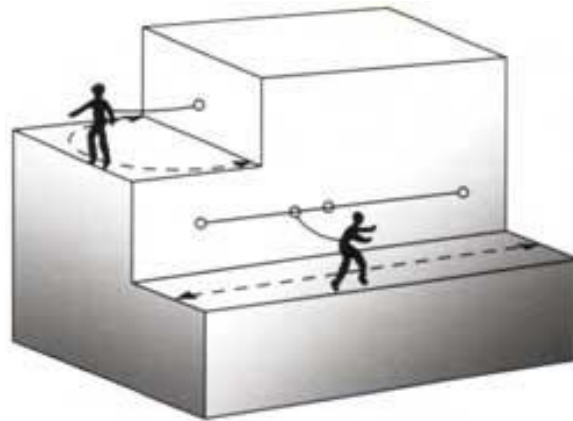
- A top rail 42 inches plus or minus three inches above the walking/working surface;
- Midrails, screens, meshes, or intermediate vertical members must be installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 inches high;
- Midrails must be installed at a height midway between the top edge of the guardrail and the walking-working surface;
- Intermediate vertical members (such as balusters), when used between posts, must not be more than 19 inches apart;
- Guardrail systems must be capable of withstanding a force of at least 200 pounds applied within two inches of the top edge in a downward or outward direction while midrails must be able to withstand a force of 150 pounds in a downward or outward direction.



**Figure 1: Guard Rail Specifications**

### 3.1.2 Fall Restraint System

A fall restraint system utilizes an anchor and restraint line to prevent employees from reaching a location where a fall can occur. The restraint line (i.e., lanyard) must be shorter than the distance between the anchor point or life line to fall hazard.

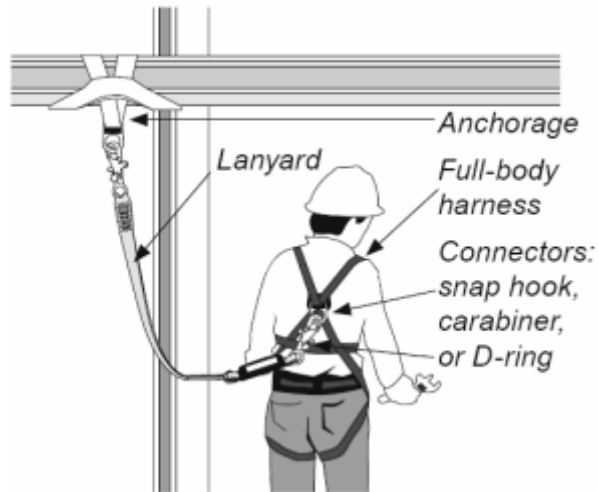


**Figure 2: Fall Restraint System Diagram**

### 3.1.3 Personal Fall Arrest System

PFAS are specialized PPE that is intended to arrest an employee from fall to a lower level by way of a lanyard and body harness. When working on elevated horizontal work surfaces or roofs, PFAS must meet the following conditions:

- All components must be designed and manufactured in accordance with 29 CFR 1910.140 *Personal Fall Protection Systems* and 29 CFR 1926.502 *Fall Protection Systems Criteria and Practices*.
- Installed and utilized in accordance with manufacturer requirements.
- Fall clearances must be calculated in accordance with manufacturer requirements.
- Be rigged in such a manner that an employee cannot free fall more than six feet or contact a lower level. Systems allowing free falls in excess of six feet are permitted provided the manufacture has designed and approved the devices to allow a free fall of more than six feet.
- Anchorages must be located directly above an employee to eliminate swing falls, wherever it is reasonably practical to do so. Where it is not reasonably practical to prevent swing falls, the swing drop distance shall not exceed four feet.
- Anchorages used for attachment of PFAS must be used exclusively for PFAS; PFAS anchorages may not be used to support suspended platforms.
- Components used in a leading edge application must be designed and approved for such application.



**Figure 3: Personal Fall Arrest System**

### **3.1.4 Anchor Points**

Anchorage can be classified as permanent or temporary. Permanent anchor points are engineered during building construction or installed after construction. Permanent and temporary anchor points must be installed by a qualified person and be approved by a Professional Engineer. All manufacturer requirements must be adhered to during installation and EHS and Facilities Management must be notified before temporary or permanent anchors are installed. All anchor points must be capable of supporting 5,000 pounds per employee attached.

## **3.2 Alternative Fall Protection Systems**

Alternative fall protection systems may only be used on flat or low-sloped roofs and should only be used when conventional fall protection strategies are not feasible due to the design of the working surface or equipment limitations.

### **3.2.1 Warning Line Systems/ Designated Areas – General Industry Work**

A warning line is a series of stanchions and high visibility lines, chains, wires, or ropes that provide a visual and pseudo-physical barrier that can prevent employees from approaching a fall hazard. The area marked by a warning line system constitutes a *designated area*. Warning line systems may only be used on flat or low-slope roofs (i.e., 18.43% grade or slope of 4/12 or less). The perimeter of the designated area must be delineated with a line consisting of a rope, wire, or chain and be in accordance with the following criteria:

- Stanchions must be erected as close to the work area as is permitted by the task.
- Access to the designated area must be by a clear path, formed by two lines, from the attached to stanchions that meet the strength, height, and visibility requirements.
- Access paths from the working surface to a lower level must be guarded when not in use.
- The minimum distance warning lines must be placed from fall hazards is based on the work activity and outlined in Table 1.

- When mobile mechanical equipment is being used to perform work that is both temporary and infrequent, the line must be erected not less than six feet from the unprotected side or edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet from the unprotected side or edge which is perpendicular to the direction of mechanical equipment operation.
- The line must be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.
- The line must be equipped with high visibility flag every six feet.
- The line must be installed in such a manner that its lowest point (including sag) is no less than 34 inches or more than 39 inches from the walking-working surface.
- The line forming the designated area must be clearly visible from any unobstructed location within the designated area up to 25 feet away, or at the maximum distance a worker may be positioned away from the line, whichever is less.
- Warning lines and stanchions must be designed and manufactured by qualified persons to meet the requirements in 29 CFR 1910.29 *Fall Protection Systems and Falling Object Protection – Criteria and Practices* and 29 CFR 1926.502 *Fall Protection Systems Criteria and Practices*.
- Warning lines and stanchions must be installed in accordance with manufacturer's instructions and requirements.

Table 1. Warning Lines/ Designated Area Requirements provides information when warning lines may be used as an acceptable means of alternative fall protection while working on low-slope roofs.

**Table 1. Warning Line/ Designated Area Requirements for General Industry Work**

<b>Distance from the edge</b>	<b>Lengthy or routine work</b>	<b>Infrequent and temporary work</b>
<6'	Guardrail, Restraint, or PFAS	Guardrail, Restraint, or PFAS
≥6' to <15'	Guardrail, Restraint, or PFAS	Warning Line
≥15'	Warning Line	No fall protection required

### **3.2.2 Warning Line Systems – Construction Work**

Warning lines and designated areas used in construction must be erected and established whenever work is conducted 15 feet or more from a roofs edge. Warning lines must be erected no closer than 15 feet from the roof edge. Employees conducting construction work less than 15 feet from the roof edge or fall hazard must utilize guardrails, restraint systems, or personal fall arrest systems.

If employees are protected by a guardrail, restraint system, or personal fall arrest system a warning line and designated area is not required. The perimeter of construction work designated area must be delineated with a line consisting of a rope, wire, or chain and be in accordance with the following criteria:

- Stanchions must be erected as close to the work area as is permitted by the task.
- Access to the designated area must be by a clear path, formed by two lines, from the attached to stanchions that meet the strength, height, and visibility requirements.
- Access paths from the working surface to a lower level must be guarded when not in use.
- The line must be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.
- The line must be equipped with high visibility flag every six feet.
- The line must be installed in such a manner that its lowest point (including sag) is no less than 34 inches or more than 39 inches from the walking-working surface.
- The line forming the designated area must be clearly visible from any unobstructed location within the designated area up to 25 feet away, or at the maximum distance a worker may be positioned away from the line, whichever is less.
- Warning lines and stanchions must be designed and manufactured by qualified persons to meet the requirements in 29 CFR 1910.29 *Fall Protection Systems and Falling Object Protection – Criteria and Practices* and 29 CFR 1926.502 *Fall Protection Systems Criteria and Practices*.
- Warning lines and stanchions must be installed in accordance with manufacturer's instructions and requirements.

## **4.0 Fall Hazard Identification and Control Measures**

The following sections address potential fall hazards and applicable control measures.

### **4.1 Walking and Working Surfaces**

Walking and working surface must meet the following requirements:

- Kept in a clean, orderly, and to the extent feasible, in a dry condition.
- Free of hazards such as sharp or protruding object, loose boards, corrosion, leaks, spills, snow, and ice.
- Capable of supporting the maximum intended load.
- A safe means of access and egress.

### **4.2 Holes**

A *hole* means a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least two inches in its least dimension. Protection from holes must be protected in the following ways:

- Protection from falling through any hole (including skylights) that is four feet or more above a lower level must be provided by one or more of the following:
  - Covers
  - Guardrail Systems
  - Travel Restraint Systems
  - Personal Fall Arrest Systems
- Protection from tripping into or stepping into or through any hole that is less than four feet above a lower level must be provided by one or more of the following:
  - Covers
  - Guardrail Systems
- A ladderway floor hole or platform must be guarded by a standard railing with a standard toeboard on all exposed sides except at the entrance which shall be provided with a swinging gate or offset to prevent direct access.
- Manholes must be guarded by a standard manhole cover and be attended by someone or protected by removable standard railings when the cover is not in place.

### **4.3 Openings**

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

- Protection from falling through openings on a walking-working surface where the inside bottom edge of the opening is less than 39 inches above the walking-working surface and the outside bottom edge of the opening is four feet or more above a lower level must be provided by the use of one or more of the following fall protection systems:
  - Guardrail system
  - Travel restraint system
  - Personal fall arrest system

### **5.0 Additional Hazards**

In addition to the potential hazard of falling from an elevated work area, fall protection is also critical in preventing injury due to hazards below the work surface or falling objects that may injure persons below the work surface.

#### **5.1 Dangerous Equipment**

In some situations, it is necessary to perform work above or next to dangerous equipment that contains moving parts that can lead to entanglement, burn injuries, or other undesirable hazardous exposures. Regardless of distance, employees above or in the vicinity of dangerous equipment shall be protected from falling into or onto the equipment by guardrail systems.

#### **5.2 Protection from Falling Objects**

When there is a potential for falling objects, protection must be provided by one of the following measures:

- Erect toe boards or screens to prevent objects from falling from higher levels.
- Erect a canopy structure to provide protection from falling objects.
- Barricade the area to which objects could fall and prohibit persons from entering the area.
- In addition to the aforementioned requirements, employees authorized in work areas must be provided with hard hats if there is a risk of falling objects.

## 6.0 Fall Protection Procedures

Prior to beginning work at a location where there is a risk of falling four feet or more onto an adjacent surface:

1. Review the location where work will be performed.
2. If work can be performed in that location, determine whether the type of work falls is regulated by OSHA General Industry regulations 29 CFR 1910 or OSHA Construction regulation 29 CFR 1926.
3. If fall hazards exist, determine the appropriate fall protection strategy using the tables below.

**Table 2. General Industry Acceptable Fall Protection Strategy**

Distance from the edge	Low-slope roof		Steep-slope roof
	Lengthy or routine work	Infrequent and temporary work	
< 6'	G, P	G, P	P
≥ 6' to < 15'	G, P	G, P, W	P
≥ 15'	G, P, W	G, P, W, None	P

*G: Guardrail, P: Personal Fall Arrest/Restraint System, W: Warning Line*

**Table 3. Construction Acceptable Fall Protection Strategy**

Distance from edge	Low-Slope Roof	Steep-Slope Roof
< 15'	G, P	P
≥ 15'	G, P, W	P

*G: Guardrail, P: Personal Fall Arrest/Restraint System, W: Warning Line*

4. Set up all applicable fall protection equipment. If equipment is damaged or compromised, it may not be used and taken out of service.
5. If anchor points are required, work may not begin until anchor points are installed by a Qualified Individual and certified by a Professional Engineer.
6. When using PFAS, ensure that fall clearance requirements have been calculated in accordance with the manufacturer's requirements.
7. Ensure that safe methods to retrieve fallen workers have been planned and communicated to all applicable parties.



## **6.1 Fall Protection Equipment Request Process**

In instances where fall protection equipment is needed but not available, complete a Fall Protection Equipment Request Form (See Appendix D). Do not transport base plates, guardrails, or weighted anchor points up or down ladders. Contact EHS for relocation of these types of fall protection equipment when stair or elevator access is not available.

## **6.2 Unique Fall Hazards**

Where fall hazards exist and fall protection is not possible, contact EHS for additional guidance. EHS may approve the use of modified work procedures to conduct work. Any modified work procedures that deviate from this Plan will be permitted only for the specific instance in which EHS was contacted. Any future tasks will require subsequent approvals from EHS for the use of modified work procedures.

## **7.0 Equipment Inspection and Maintenance**

Employees are responsible for inspecting fall protection equipment before use and reporting wear, tear, or damages that compromise the integrity of fall protection equipment to their supervisor. Fall protection equipment may not be used if it is damaged or compromised until it is repaired or replaced. Employees must observe the following practices:

- Inspect life lines, lanyards, body belts and harnesses, snap hooks, D-rings, etc. prior to each use in accordance with the manufactures' requirements.
- Defective equipment shall be taken out of service and marked as such.
- Guardrail systems or parapets should be visually inspected prior to work on an elevated surface.
- Any deterioration or deficiencies noted which may cause the fall protection system to fail should be addressed prior to work commencing.

If an employee is involved in an accident where a fall from an elevated work surface occurs, the fall protection equipment must be inspected by a competent person to determine if it is suitable for reuse or must be discarded. Harnesses and lanyards involved in a fall incident may not be placed back into service.

## **8.0 Rescue Operations**

The risk of suspension trauma starts immediately upon arrest from a fall and can occur within minutes. OSHA 29 CFR Subpart M, 1926.502(d) (20) requires prompt rescue of a victim. In the event of fall where a fall protection system is utilized that requires rescue of personnel:

- Emergency services should be notified immediately by calling University Police at (703) 993-2810 or by dialing 911.
- Self-rescue, if possible, should be undertaken by the worker.
- Assisted rescue by co-workers should be attempted. Examples of assisted rescue are utilizing a ladder or other suitable means to retrieve the individual while being protected by a fall protection system.

- Employees utilizing personal fall protection systems as a fall protection method shall be provided with at least one other designated employee to monitor ongoing operations and have sufficient means to communicate in the event of a fall.

## 9.0 Training Program

Fall protection training is a collaborative effort between EHS, supervisors, and employees. Below are specific responsibilities regarding training and that each organization or individual must observe.

### 9.1 Environmental Health and Safety Office

Responsibilities of George Mason University EHS include:

- Provide fall protection training on a routine basis or as necessary.
- *Fall Protection Training* must include:
  - The nature of the fall hazards in the work area and how to recognize them.
  - Procedures to be followed to minimize fall hazards.
  - Procedures for installing, inspecting, operating, maintaining, and disassembling the fall protection systems used.
  - The use of fall protection systems and equipment, proper hook-up, anchoring, and tie-off techniques, and equipment inspection and storage, as specified by the manufacturer.
- Document training to include:
  - Name of the employee
  - Date of training
  - Name of the qualified person who conducted the training

### 9.2 Supervisors

Responsibilities of George Mason University Supervisors include:

- Ensure employees have attended EHS-sponsored *Fall Protection Training* prior to exposure of fall hazards.
- Coordinate with EHS for assistance with unique fall protection hazards and training requirements not typically covered in EHS-provided *Fall Protection Training*.
- Ensure EHS coordination for non-EHS provided training to ensure trainers are considered *Qualified Individuals*.
- Forward EHS all documents for training conducted by *Qualified Individuals* other than EHS. Documentation must include a completed Environmental Health and Safety Training Sign-in Sheet.

### 9.3 Employees

Responsibilities of George Mason University Employees include:

- Attend EHS-sponsored training.

- Communicate to supervisors instances where prior training has not covered a task requiring fall protection.

#### **9.4 Retraining**

If George Mason University has any reason to believe that any employee who has already been trained does not have the understanding and skill required by this plan, then that employee shall be retrained. Other circumstances where retraining is required include, but are not limited to, situations where:

- Changes in the workplace render previous training obsolete.
- Changes in the type of fall protection systems or equipment to be used render previous training obsolete.
- Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate the employee has not retained the requisite understanding or skill.
- In the event of an incident that has the potential to cause, or did cause, injury.

## Appendix A: Definitions

**Construction:** Means installation, upgrade, building, replacing, or erecting new or existing equipment or facilities.

**Designated Area/Warning Line System:** Refers to a series of stanchions and high visibility lines, chains, wires, or ropes that provide a visual and pseudo-physical barrier that demarcates an area and serves as a visual warning to prevent employees from approaching a fall hazard. The area marked by a warning line system constitutes a 'Designated Area'

**General Industry:** Means making or keeping a structure, equipment, fixture or foundation (substrates) in proper condition in a routine, scheduled, or anticipated fashion. Keeping equipment working in its existing state, i.e., preventing its failure or decline. Under this Plan, roofing repairs fall under this type of work.

**Hole:** Means a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least two inches in its least dimension.

**Infrequent and Temporary Work:** Tasks that generally take less than one to two hours to complete. Examples include monthly, quarterly, or annual preventative maintenance of equipment, responding to equipment outage or breakdown, caulking or resealing flashing, or clearing or unclogging roof drains.

**Lengthy or Routine Work:** Tasks that involve extensive or frequent exposure to fall hazards. This type of work can require the worker to repeatedly climb up or return to the roof, more than one work shift to complete, or significant equipment, personnel, or other resources. Examples include major equipment repair.

**Low-Slope Roof:** A roof is considered low-slope when the pitch is less than or equal to 4:12 (less than four inch rise every 12 inches) or 18.43 degrees pitch from the horizontal.

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

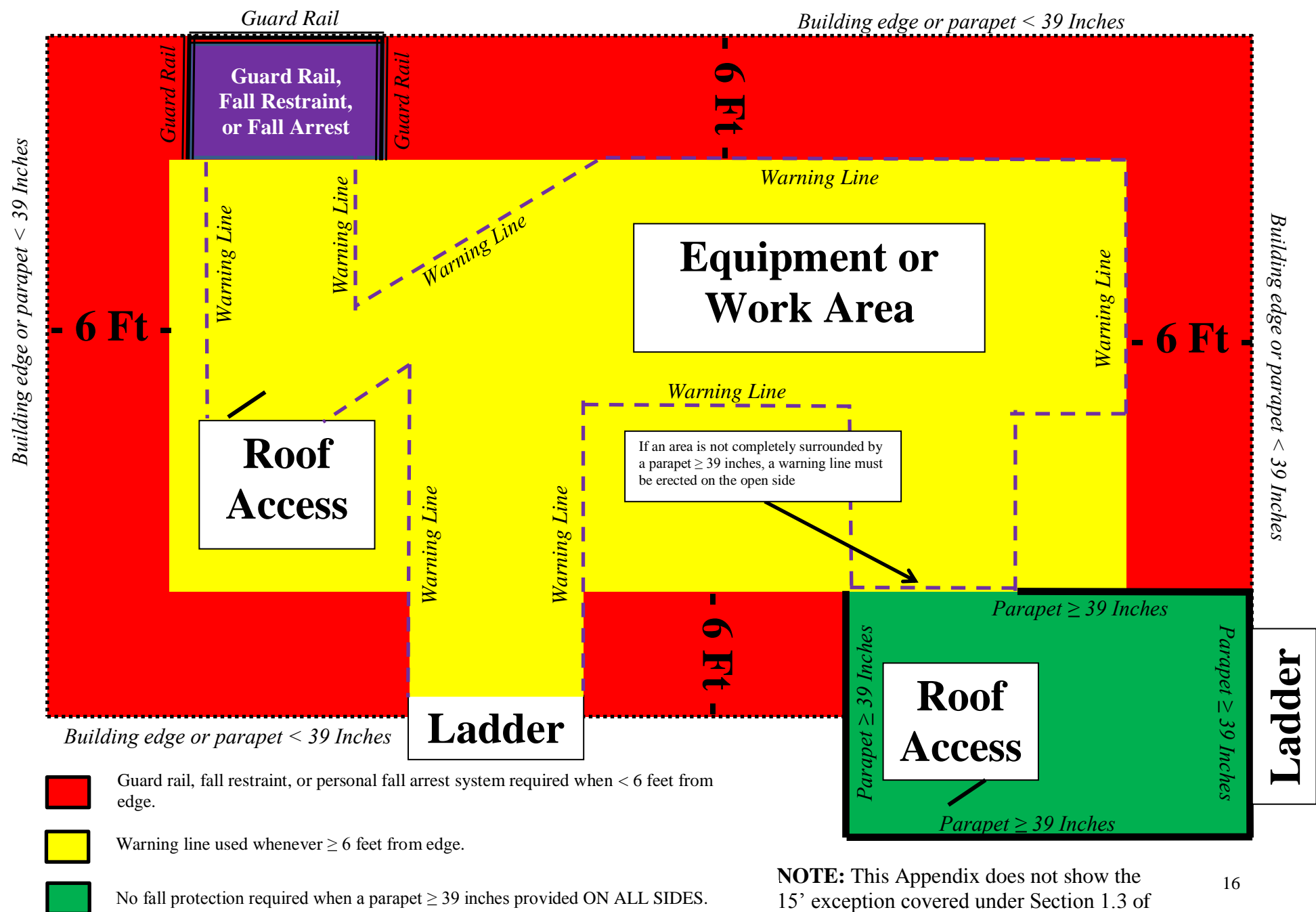
**Steep-Slope Roof:** A roof is considered a steep roof when the pitch is greater than 4:12 (greater than four-inch rise every 12 inches) or greater than 18.43 degrees pitch from the horizontal.

**Qualified Individual:** A qualified individual is a person with the specialized expertise or knowledge of fall protection systems, engineering, construction, or safety procedures. Qualified individuals may be employees, external agencies, or contractors. Qualified individuals may be necessary to assess hazards, install or inspect anchor points, and recommend fall protection systems.

## Appendix B: Fall Protection Equipment Inspection Log

Inspection Date:	Inspector:	Phone Number:
Equipment Inspected:	<input type="checkbox"/> full body harness <input type="checkbox"/> lanyard <input type="checkbox"/> vertical life line <input type="checkbox"/> rope grab <input type="checkbox"/> stanchion <input type="checkbox"/> warning line <input type="checkbox"/> anchor point <input type="checkbox"/> guard rail <input type="checkbox"/> other: _____	
Equipment Issued to:	Date of Issue:	
<b>Damaged or equipment used to arrest a fall must be removed from service.</b>		
Manufactures Information		
Make:		
Model:		
Serial #:	<input type="checkbox"/> NA	Identification # <input type="checkbox"/> NA
Manufacture Date:		
Lot Number:		
<b>Inspect the Following</b>	<b>Equipment</b>	
	✓	✗
<u>Hardware:</u> Includes snap hooks, carabineers, keepers, and D-rings.  Look for distortion, sharp edges, burrs, cracks, corrosion, and proper operation.	<input type="checkbox"/> Pass	<input type="checkbox"/> Fail <input type="checkbox"/> NA
	Notes:	
<u>Webbing:</u> Inspect for cuts, burns, tears, abrasion, excessive soiling, written on, and discolorations.  Note any writing on webbing, unauthorized modification, partial deployment of shock absorber	<input type="checkbox"/> Pass	<input type="checkbox"/> Fail <input type="checkbox"/> NA
	Notes:	
<u>Stitching:</u>  Inspect for pulled or cut stitches.	<input type="checkbox"/> Pass	<input type="checkbox"/> Fail <input type="checkbox"/> NA
	Notes:	
<u>Labels/Equipment Information:</u> Inspect to ensure all labels are present and held securely in place, all text is legible, directional indicator is visible.	<input type="checkbox"/> Pass	<input type="checkbox"/> Fail <input type="checkbox"/> NA
	Notes:	
<u>Mechanical Components:</u> Locking mechanism functioning, all connectors present and working, gates open/close, system operates as designed.	<input type="checkbox"/> Pass	<input type="checkbox"/> Fail <input type="checkbox"/> NA
	Notes:	

Appendix C: General Industry Fall Protection Requirements Diagram



**NOTE:** This Appendix does not show the 15' exception covered under Section 1.3 of this plan.

## Appendix D: Fall Protection Equipment Request Form

If work is required in an area that is not equipped with fall protection and guardrail or warning lines are acceptable fall protection strategies (see Table 2. And Table 3. of the *Fall Protection Plan*) equipment may requested from the Environmental Health and Safety Office (EHS). Use this form to identify the location and type of fall protection required. Send requests to EHS by email at [safety@gmu.edu](mailto:safety@gmu.edu), or fax at 703.993.8996.

For questions regarding the status of a request, contact EHS at 703.993.8448.

<b>Date:</b>			
<b>Building/Location:</b>			
<b>Department/Shop:</b>			
<b>Contact Person:</b>		<b>Mobile Number:</b>	
<b>Reason Access Needed:</b>			
<b>Associated Work order:</b>			
<b>Type and Quantity of Fall Protection Needed:</b>			
<b>Expected Length of Job:</b>			
<b>Special Instructions</b>			

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### FOR EHS USE ONLY

**Request Number:**

**Date Request Received:**

**Date Equipment Delivered:**

**Date Equipment Removed:**

**Notes:**