

# California Institute of Technology

## FALL PROTECTION PROGRAM GUIDE

---



Caltech Environment, Health, and Safety Office  
1200 E. California Blvd., M/C 25-6  
Pasadena, CA 91125  
Phone: 626.395.6727  
Fax: 626.577.6028  
Email: [safety@caltech.edu](mailto:safety@caltech.edu)  
Website: [www.safety.caltech.edu](http://www.safety.caltech.edu)

2019

# FALL PROTECTION GUIDE

## Table of Contents

<b>SCOPE</b> .....	<b>4</b>
<b>PURPOSE</b> .....	<b>4</b>
<b>FALL PROTECTION PROGRAM GUIDELINES</b> .....	<b>4</b>
Engineering Controls .....	4
Guardrails.....	4
Personal Fall Protection Systems.....	4
Calculating Total Fall Distance .....	5
Engineered Lifeline .....	5
Rescue Methods/Options of Fallen Personnel .....	5
Storage and Maintenance of Fall Protection Equipment .....	6
Training .....	6
Emergencies .....	6
Contractors .....	6
<b>APPENDIX A – DEFINITIONS</b> .....	<b>7</b>
Authorized Person .....	7
Competent Person.....	7
Qualified Person .....	7
Anchorage Point .....	7
Full Body Harness .....	7
Connector .....	7
Deceleration Device .....	7
Deceleration Distance .....	7
Free Fall .....	7
Free Fall Distance .....	8
Total Fall Distance .....	8
Guardrail System .....	8
Lanyard .....	8
Leading Edge.....	8
Lifeline .....	8
Low-Slope Roof.....	8
Personal Fall Arrest System .....	8
Rope Grab.....	9
Roof Work.....	9
Safety Monitoring System .....	9
Snap Hook.....	9
Steep-Slope Roof .....	9
Toe Board.....	9
Unprotected Sides and Edges .....	9
Warning Line System .....	9

**APPENDIX B – TYPES OF FALL PROTECTION SYSTEMS..... 10**

**APPENDIX C – LOCATIONS REQUIRING FALL PROTECTION SYSTEMS..... 11**

**APPENDIX D - INSPECTION OF FALL PROTECTION SYSTEMS BEFORE EACH USE ..... 12**

Full-Body Harnesses ..... 12

Shock-Absorbing Lanyards ..... 12

Self-Closing and Self-Locking Snap Hooks ..... 12

Self-Retracting Lanyards/Lifelines ..... 13

Tie-Offs/Anchorage Points ..... 13

Articulating Man Lift..... 13

Horizontal Lifelines ..... 13

Guardrails..... 14

**APPENDIX E – FULL-BODY HARNESSSES SEMI-ANNUAL INSPECTION CHECKLIST ..... 15**

**APPENDIX F – SHOCK ABSORBING LANYARDS – SEMI-ANNUAL INSPECTION CHECKLIST ..... 16**

**APPENDIX G – SNAP HOOKS/CARABINERS – SEMI-ANNUAL INSPECTION CHECKLIST..... 17**

**APPENDIX H – SELF-RETRACTING LANYARDS/LIFELINES SEMI-ANNUAL INSPECTION  
CHECKLIST..... 18**

**APPENDIX I - SAFETY TRAINING RECORD..... 19**

**APPENDIX J – FALL PROTECTION WORK PLAN ..... 20**

**APPENDIX K – TIE OFFS AND ANCHORAGE POINTS – SEMI-ANNUAL INSPECTION  
CHECKLIST..... 22**

**APPENDIX L – FALL PROTECTION RESCUE WORK PLAN ..... 23**

## SCOPE

The scope of this Fall Protection Program Guide applies to all Caltech buildings, staff, and contractors. In particular, those persons engaged in work activities which expose them to falls from heights of 6 feet (72") or more.

## PURPOSE

The purpose of this Fall Protection Program Guide is to establish guidelines to protect all employees and contractors engaged in outdoor or indoor work activities that expose them to potential falls from elevated work surfaces.

## FALL PROTECTION PROGRAM GUIDELINES

These Fall Protection Program Guidelines have been prepared to provide required safety measures and best management practices. Definitions used in this document may be found in [Appendix A](#). Types of Fall Protection Systems may be found in [Appendix B](#). Locations requiring Fall Protection Systems are outlined in [Appendix C](#).

### Engineering Controls

Engineering controls should always be the first option for fall protection safety measure selection whenever possible and feasible.

### Guardrails

On projects where guardrails are required, only guardrails made from steel, wood, or wire cable will be acceptable. All guardrail systems will comply with the current California Occupational Safety and Health Administration (Cal/OSHA) standards (i.e., 42" – 45" high top rail, midrail halfway between midrail and floor, 4" high toe board, vertical posts, and able to withstand 200 pounds of force applied horizontally and vertically in any direction.)

Guardrails will be placed in the following areas if necessary or feasible based on job location or task requirements:

- 1) On all open-sided floors.
- 2) Around all open excavations or pits.
- 3) On edges of roofs or mezzanines.

### Personal Fall Protection Systems

All personnel on any project who will require personal fall arrest or restraint systems must follow these guidelines:

- 1) A full-body harness will be used at all times.
- 2) Only shock-absorbing lanyards or self-retracting lanyards will be used to keep impact forces on the body at a minimum.
- 3) Only nylon ropes or nylon straps with locking snap hooks will be used for personal fall restraints.
- 4) All lanyards will have self-locking snap hooks.

- 5) The employee or contractor will inspect all personal fall arrest equipment before each use. Any deteriorated, bent, damaged, and/or impacted harness, lanyard, rope, or strap showing excessive wear will be immediately removed from service. [See Appendix D – Inspection of Fall Protection Systems before Each Use.](#)
- 6) A trained Competent Person will complete a formal semi-annual (at six month intervals) inspection of all fall protection systems and documentation will be maintained using the Semi-Annual Inspection Checklists in Appendices E through H: [Full Body Harness](#), [Shock Absorbing Lanyards](#), [Snap Hooks/Carabiners](#), and [Self-Retracting Lanyards](#).

The maximum free fall distance must not exceed 6 feet. Consideration must be given to the total fall distance. The following factors can affect total fall distance:

- 1) Length of connecting means (i.e., lanyard length, use of Carabiners, snap hooks, etc.).
- 2) Position and height of anchorage point relative to work platform/area (always attach to anchorage point above the head whenever possible).
- 3) Position of attachment and D-ring slide on the full body harness.
- 4) Deceleration (stretching) distance of shock absorber (maximum 42”).
- 5) Movement in the lifeline.
- 6) Initial position of worker before free fall occurs (i.e., sitting, standing, etc.).

### **Calculating Total Fall Distance**

Total fall distance is determined by combining the total length of shock absorbing lanyard + height of person + distance of D-ring from work surface or platform.

Always allow a minimum of 6 feet (72”) of clearance above the ground, equipment, etc., at the end of the fall from the fall arrest stopping point.

### **Engineered Lifeline**

Lifeline systems must be designed and approved by a California-Licensed Professional Engineer and/or Qualified Person.

Lifeline systems must be engineered to have appropriate anchorage points, adequate strength of line designed to hold the number of individuals connected to it, line strength to aid in the arrest of a fall, and durability to hold a fallen person(s) suspended until a rescue can occur.

### **Rescue Methods/Options of Fallen Personnel**

In the unlikely event that a fall arrest to an employee or contractor occurs on-site, personnel with the use of an articulating man lift or ladders where feasible, will rescue the employees or contractors. Alternate rescues would be made through local emergency services, such as the Pasadena Fire Department. A Rescue plan be in place for each location that fall protection is being used. [See Appendix L – Fall Protection Rescue Work Plan.](#)

## Storage and Maintenance of Fall Protection Equipment

- 1) Never store personal fall arrest equipment in the bottom of a toolbox, on the ground, or outdoors exposed to the elements (i.e., sun, rain, etc.).
- 2) Hang equipment in a cool, dry location in a manner that retains its shape.
- 3) Always follow the manufacturer's recommendations for storage and inspection.
- 4) Clean equipment with a mild, nonabrasive soap and hang to dry.
- 5) Never force dry equipment or use strong detergents in cleaning.
- 6) Never store equipment near excessive heat, chemicals, moisture, or sunlight.
- 7) Never store in an area with exposure to fumes or corrosive chemicals.
- 8) Avoid dirt or other types of contaminant build-up on equipment.
- 9) Never use equipment for any purpose other than personal fall arrest.
- 10) Once exposed to a fall, remove equipment from service immediately.

## Training

Document the attendance of all trainees ([See Appendix I – Safety Training Record](#)).

All employees engaged in fall protection will be trained and have the knowledge to:

- 1) Understand and follow all components of this Fall Protection Program Guide.
- 2) Recognize the fall hazards on their job sites.
- 3) Understand the risks associated with working near fall hazards.
- 4) Work safely in hazardous areas by utilizing appropriate fall protection measures.
- 5) Identify and understand the enforceable Cal/OSHA standards that pertain to fall protection.

## Emergencies

In the event of a fall, the following people will be notified as soon as possible:

- 1) The Campus emergency number extension 5000 or direct dial (626) 395-5000 who will coordinate Fire Department and Emergency Medical Services if necessary.
- 2) Rescue personnel (i.e., maintenance employees).
- 3) Manager/Supervisor.
- 4) Safety Officer/Coordinator.
- 5) Fire Department and Emergency Medical Services if necessary.

At the beginning of any work activity where fall protection is needed, a Fall Protection Work Plan must be developed and discussed with all personnel involved in the work. A trained Competent Person will develop the plan ([See Appendix J – Fall Protection Work Plan](#)).

## Contractors

All outside contractors working in or on the premises of Caltech will be required to follow the guidelines set forth in this Fall Protection Program Guide. Contractors in the pre-job meeting will be informed about these requirements, as well as the on-site construction rules that apply. For more details, see the [Caltech Construction Safety Policy](#).

## Appendix A – Definitions

**Authorized Person:** A person approved or assigned by the employer to perform a specific type of duty or duties, or to be present at a specific work location or job site (i.e., building maintenance, roof repair, etc.).

**Competent Person:** A person who is capable of identifying existing and predictable hazards in the surroundings or working conditions, which are hazardous or dangerous to employees. A person who has the authority to take prompt corrective actions to eliminate these hazards.

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

**Anchorage Point:** A secure point of attachment for lifelines, lanyards, or deceleration devices. An anchorage point must be capable of supporting at least 5000 pounds (3600 pounds if engineered/certified by a Qualified Person) per person and must be independent of any anchorage point being used to support or suspend work platforms.

**Full Body Harness:** Webbing/straps which are secured around an employee's body in a manner that will distribute the fall arrest forces over the thighs, pelvis, waist, chest and shoulders. This harness must have a means for attaching it to other components of a personal fall arrest system, preferably in the middle of the back.

**Connector:** A device which is used to connect parts of the personal fall arrest system together.

**Deceleration Device:** Any mechanism, such as a rope grab, rip-stitch lanyard, a specially woven lanyard, tearing or deforming shock-absorbing lanyard, or automatic self-retracting lifeline/lanyard which serves to dissipate a substantial amount of energy during a fall arrest.

**Deceleration Distance:** The additional vertical distance that a falling employee travels excluding lifeline/lanyard elongation and free fall distance, before stopping, from the point at which the deceleration device activates and begins to operate. It is measured as the distance between the location of an employee's full-body harness attachment point at the moment of activation of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

**Free Fall:** The act of free falling due to gravity before a personal fall arrest system begins to apply force to arrest or decelerate and eventually stop the fall.

**Free Fall Distance:** The vertical displacement of the fall arrest attachment point on the employee's full-body harness between the onset of the fall and just before the system begins to apply force to arrest or decelerate and eventually stop the fall. Free fall distance must not exceed 6 feet. ***This distance excludes deceleration distance and lifeline/lanyard elongation distance.***

**Total Fall Distance:** The maximum vertical change in distance from the bottom of an individual's feet at the onset of a fall, to the position of the feet after the fall is arrested or stopped. This includes the free fall distance and the deceleration distance.

**Guardrail System:** A barrier erected to prevent employees and contractors from falling to lower levels. This system includes a toe board, midrail, top rail, and vertical posts able to withstand 200 pounds of force applied horizontally and vertically in any direction.

**Lanyard:** A flexible line of rope or strap that has self-locking snap hook connectors at each end for connecting full-body harnesses, deceleration devices (e.g., shock-absorbing lanyards), and anchorage points.

**Leading Edge:** The edge of a floor, roof, or other walking/working surface, which changes location as additional floor, or roof is placed or constructed. A leading edge is considered an unprotected side or edge when not under active construction.

**Lifeline:** A component consisting of a flexible line or wire cable for connection to an anchorage point at one end to hang vertically (vertical lifeline), or for connection to anchorage points at both ends to stretch horizontally (horizontal lifeline). This serves as a means for connecting other components of a personal fall arrest system to the anchorage lifeline.

**Low-Slope Roof:** A roof having a slope of less than or equal to 4 in 12 (4:12 vertical rise to horizontal run). For example, it is a roof with approximately a 19.5 degree slope or less.

**Personal Fall Arrest System:** A system used to arrest (i.e., catch, decelerate, slow down, and eventually stop) an employee in a fall from an elevated working level. The system consists of an anchorage point location, connectors, and a full-body harness, and it may include a lanyard, deceleration device, lifeline, or any combination of these components.

**Program Administrator:** Responsible for the development, implementation, monitoring and evaluation of the Fall Protection Program. This includes applying current regulations, assigning duties, and ensuring that a procedure for implementation are in place. These procedures include identifying and mitigating fall hazards, establishing fall protection and rescue procedures for work areas, and ensuring that training curricula are in place for all personnel involved in this program.



**Rope Grab:** A deceleration device, which travels on a vertical lifeline and automatically, by friction, engages the lifeline and locks to arrest the fall of an employee or contractor.

**Roof Work:** The hoisting, storage, installation, repair, and removal of materials or equipment on and off the roof.

**Safety Monitoring System:** A safety system in which a Competent Person is responsible for recognizing and warning employees about fall hazards. All other fall protection systems must be deemed “infeasible” (through a documented feasibility study/review) to select/use a safety monitoring system.

**Snap Hook:** A connector comprised of a hook-shaped member with a closed keeper which may be opened to permit the hook to receive an object and when released, automatically closes to retain the object. Snap hooks must be self-closing with a self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection, thus preventing the opportunity for the object to “roll out” of the snap hook.

**Steep-Slope Roof:** A roof having a slope greater than 4 in 12 (4:12 vertical rise to horizontal run). For example, it is a roof with a slope greater than 19.5 degrees.

**Toe Board:** A low protective barrier along the bottom edge of an elevated work surface that will prevent the fall of materials and equipment to lower levels. It is usually 4 inches or greater in height.

**Unprotected Sides and Edges:** Any side or edge of a walking or working surface (e.g., floor, roof, ramp, or runway) where there is no guardrail system or parapet wall of at least 42 inches high.

**Warning Line System:** A painted line or barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area inside of which work can be conducted without the use of guardrails, personal fall arrest systems, or safety nets to protect employees in the area. This system will be utilized on any roof greater than 50 feet wide and in conjunction with a Safety Monitoring System only where the other forms of fall protection have been deemed infeasible to use.

## **Appendix B – Types of Fall Protection Systems**

Workers must be trained thoroughly in the safe use and limitations of personal fall protection equipment. Types of Fall Protection Systems include:

- 1) An articulating man lift provided with a fall restraint system and full-body harness connected to an anchorage point below the waist (preferably at floor level).
- 2) Guardrail provided with a toe board, midrail, top rail, and vertical posts.
- 3) Personal fall arrest systems consisting of the following components:
  - Anchorage points (rated at 5000 pounds per person, and approved by a California-Licensed Professional Engineer).
  - Full-body harnesses.
  - Restraint lines or lanyards.
  - Shock-absorbing lanyard or self-retracting lanyards.
  - Rope grabs.
  - Connectors (e.g., self-closing and self-locking snap hooks).
- 4) Engineered lifelines (i.e., vertical or horizontal).
- 5) Warning line system.
- 6) Safety nets.
- 7) Safety monitoring systems.

Appropriate fall protection systems will be determined by the work location and task (job) to be performed.

## **Appendix C – Locations Requiring Fall Protection Systems**

Fall protection is required wherever the potential to fall 6 feet or more exists. Cal/OSHA standards identify the following locations or tasks requiring fall protection:

- 1)** All flat and low sloped roof locations, when the employee is within 6 feet of the roof edge during roof repair/maintenance activities (slope of 4:12 pitch or less).
- 2)** All exterior and interior equipment platforms, catwalks, and antennas/towers.
- 3)** All exterior and interior fixed ladders above 20 feet (a ladder cage is required).
- 4)** All unprotected mezzanine and balcony edges.
- 5)** All open excavations or pits.
- 6)** All tasks requiring use of the articulating man lifts.
- 7)** All tasks requiring employees to lean outside of the vertical side rails of ladders (i.e., painting, stairwell light bulb replacement).
- 8)** Scaffolding erection – 10 feet in height or greater.
- 9)** Tuck-pointing – chimney repair.
- 10)** Gym - mezzanine/catwalk areas – whenever an employee must step outside the catwalk (additional fall protection, such as lanyard attached to full-body harness, self-retracting lanyard, or rope grab system shall be used).

Fall protection is not required if personnel are on a low-slope roof for inspection or observation only.

## Appendix D - Inspection of Fall Protection Systems before Each Use

### Full-Body Harnesses

- 1) Inspect on a semi-annual basis or before each use, whichever is more frequent:
  - a. Closely examine all of the nylon webbing to ensure there are no burn marks, which could weaken the material.
  - b. Verify there are no torn, frayed or broken fibers, pulled stitches, or frayed edges anywhere on the harness' nylon webbing.
  - c. Examine the metal D-ring for excessive wear, pits, deterioration, or cracks.
  - d. Verify that metal buckles are not deformed, and/or cracked, and that they operate correctly.
  - e. Check to see that each grommet (if present) is secure and not deformed from abuse or a prior fall event.
  - f. Ensure that the harness does not have additional punched holes.
- 2) Ensure that all rivets are tight and not deformed.
- 3) Check tongue/straps for excessive wear from repeated buckling.
- 4) Storage will consist of hanging in an enclosed cabinet, to protect from damage.
- 5) All harnesses that are involved in a fall event will be destroyed.
- 6) A Competent Person will complete a semi-annual inspection of all full-body harnesses, and documentation will be maintained (see [Appendix E – Full-Body Harness Semi-Annual Inspection Checklist](#)).

### Shock-Absorbing Lanyards

- 1) Inspect on a semi-annual basis or before each use, whichever is more frequent:
  - a. Check lanyard material for cuts, burns, abrasions, kinks, knots, broken stitches and excessive wear.
  - b. Inspect the snap hooks for distortions in the hook, locks, and eye.
  - c. Check carabiner for excessive wear, distortion, and lock operation.
  - d. Ensure that all locking mechanisms seat and lock properly.
  - e. Once locked, locking mechanism should prevent hook from opening.
  - f. Visually inspect shock absorber for any signs of damage, paying close attention to where the shock absorber attaches to the lanyard.
  - g. Verify that points where the lanyard attaches to the snap hooks are free of defects.
- 2) A Competent Person will complete a semi-annual inspection of all lanyards, and documentation will be maintained (see [Appendix F](#)).
- 3) Storage will consist of hanging in an enclosed cabinet to protect from damage.
- 4) All lanyards that are involved in a fall event will be destroyed.

### Self-Closing and Self-Locking Snap Hooks

- 1) Inspect on a semi-annual basis or before each use, whichever is more frequent:
  - a. Inspect snap hook for any hook and/or eye distortions.
  - b. Verify that there are no cracks or pitted surfaces.
  - c. The keeper latch should not be bent, distorted, or obstructed.

- d. Verify that the keeper latch seats into the nose without binding.
  - e. Verify that the keeper spring securely closes the keeper latch.
  - f. Test the locking mechanism to verify that the keeper latch locks properly.
- 2) A Competent Person will complete a semi-annual inspection of all snap hooks and documentation will be maintained (see [Appendix G – Snap Hooks/Carabiners – Semi-Annual Inspection Checklist](#)).
  - 3) All snap hooks involved in a fall event will be destroyed.

### Self-Retracting Lanyards/Lifelines

- 1) Inspect on a semi-annual basis or before each use, whichever is more frequent:
  - a. Visually inspect the body to ensure there is no physical damage.
  - b. Make sure all nuts and rivets are tight.
  - c. Make sure the entire length of the nylon strap/wire rope is free from any cuts, burns, abrasions, kinks, knots, broken stitches/strands, or excessive wear and that it retracts freely.
  - d. Test the unit by pulling sharply on the lanyard/lifeline to verify that the locking mechanism is operating correctly.
  - e. If the manufacturer requires, make certain the retractable lanyard is returned to the manufacturer for scheduled periodic (e.g., annual) inspections.
- 2) A Competent Person will complete a semi-annual inspection of all self-retracting lanyards/lifelines and documentation will be maintained (see [Appendix H – Self-Retracting Lanyards/Lifelines – Semi-Annual Inspection Checklist](#)).
- 3) Service per manufacturer’s specifications (every 1-2 years).
- 4) Inspect for proper function after every fall event.

### Tie-Offs/Anchorage Points

- 1) Inspect on a semi-annual basis or before each use, whichever is more frequent, for integrity and attachment to solid surfaces.
- 2) A Competent Person will complete a semi-annual inspection of all tie offs and anchorage points, and documentation will be maintained (see [Appendix K](#)). Any potential deficiencies will be brought to the attention of a Qualified Person (i.e., California-Licensed Professional Engineer).
- 3) All tie-offs and anchorage points will be destroyed or removed after a fall event.

### Articulating Man Lift

- 1) Inspect on an annual basis or before each use whichever is more frequent.
- 2) Inspect/service per manufacturer’s guidelines. Forklift baskets, scissors lifts, and boom lifts will be inspected at the beginning of each shift that they are in use.

### Horizontal Lifelines

- 1) Inspect on a semi-annual or before each use, whichever is more frequent, for structural integrity of horizontal lifelines and anchorage points.
- 2) A Competent Person will complete an annual inspection.

## Guardrails

- 1) Temporary systems – Daily visual inspections will be completed by a Competent Person.
- 2) Temporary systems – Weekly structural inspections will be completed by a Competent Person.
- 3) Permanent systems – Structural inspections will be performed on an ongoing basis. Any deficiencies will be reported immediately for corrective action.

## Appendix E – Full-Body Harnesses Semi-Annual Inspection Checklist

Harness Model/Name: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Lot Number: \_\_\_\_\_

Date of Manufacture: \_\_\_\_\_ Date of Purchase: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

General Factors	Accepted or Rejected	Supportive Details/Comments
<b>1) Hardware:</b> Inspect D-rings, buckles, keepers and back pads. Inspect for damage, distortion, sharp edges, burrs, cracks, and corrosion.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>2) Webbing:</b> Inspect for cuts, burns, tears, abrasions, frays, excessive soiling, and discoloration.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>3) Stitching:</b> Inspect for pulled or cut stitches.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>4) Labels:</b> Inspect, making certain all labels are securely held in place and are legible.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>5) Other:</b>	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>6) Other:</b>	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>7) Overall Disposition:</b>	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	<b>Inspected By:</b>  <b>Date Inspected:</b>

## Appendix F – Shock Absorbing Lanyards – Semi-Annual Inspection Checklist

Lanyard Model/Name: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Lot Number: \_\_\_\_\_

Date of Manufacture: \_\_\_\_\_ Date of Purchase: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

General Factors	Accepted or Rejected	Supportive Details/Comments
<b>1) Hardware:</b> Inspect snap hooks, carabiners, adjusters, keepers, thimbles, and D-rings. Inspect for damage, distortion, sharp edges, burrs, cracks, corrosion and proper operation.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>2) Webbing:</b> Inspect for cuts, burns, tears, abrasions, frays, excessive soiling and/or discoloration.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>3) Stitching:</b> Inspect for pulled or cut stitches	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>4) Synthetic Rope:</b> Inspect for pulled or cut yarns, burns, abrasions, knots, excessive soiling and/or discoloration.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>5) Energy Absorbing Component:</b> Inspect for elongation, tears and/or excessive soiling.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>6) Labels:</b> Inspect, making certain all labels are securely held in place and are legible.	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	
<b>7) Overall Disposition:</b>	<input type="checkbox"/> Accepted  <input type="checkbox"/> Rejected	<b>Inspected By:</b>  <b>Date Inspected:</b>



## Appendix G – Snap Hooks/Carabiners – Semi-Annual Inspection Checklist

Hook/Carabiner Model/Name: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Lot Number: \_\_\_\_\_

Date of Manufacture: \_\_\_\_\_ Date of Purchase: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

General Factors	Accepted or Rejected	Supportive Details/Comments
1) <b>Physical Damage:</b> Inspect for cracks, sharp edges, burrs, deformities and proper locking operations.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
2) <b>Excessive Corrosion:</b> Inspect for corrosion, which affects the operation and/or strength.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
3) <b>Markings:</b> Inspect and make certain marking(s) are legible.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
4) Other:	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
5) Other:	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
6) Other:	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
<b>Overall Disposition:</b>	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<b>Inspected By:</b>  <b>Date Inspected:</b>

## Appendix H – Self-Retracting Lanyards/Lifelines Semi-Annual Inspection Checklist

Lanyard Model/Name: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Lot Number: \_\_\_\_\_

Date of Manufacture: \_\_\_\_\_ Date of Purchase: \_\_\_\_\_

Comments: \_\_\_\_\_

General Factors	Accepted or Rejected	Supportive Details/Comments
1) <b>Impact Indicator:</b> Inspect indicator for activation (rupture of red stitching, elongated indicator, etc.).	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
2) <b>Screws/Fasteners:</b> Inspect for damage and make certain all screws and fasteners are tight.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
3) <b>Housing:</b> Inspect for distortion, cracks and other damage. Inspect anchoring loop for distortion or damage.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
4) <b>Lanyard/Lifeline:</b> Inspect for cuts, burns, tears, abrasion, frays, excessive soiling and discoloration. (See impact indicator section.)	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
5) <b>Locking Action:</b> Inspect for proper lock-up of brake mechanism.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
6) <b>Retraction/Extension:</b> Inspect spring tension by pulling lanyard out fully and allowing to retract fully (lifeline must be taut with no slack).	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
7) <b>Hooks/Carabiners:</b> Inspect for physical damage, corrosion, proper orientation and markings.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
8) <b>Labels:</b> Inspect, making certain all labels are securely held in place and are legible.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
<b>Overall Disposition:</b>	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<b>Inspected By:</b>  <b>Date Inspected:</b>

## Appendix I - Safety Training Record

Training Topic: \_\_\_\_\_

Instructor Name: \_\_\_\_\_ Date of Training: \_\_\_\_\_

Employee Name (print)	Bureau/Location

# Appendix J – Fall Protection Work Plan

Site Location \_\_\_\_\_ Date \_\_\_\_\_

*(If additional space is needed, use the back of this sheet)*

Identify all fall hazards 6' or more above the ground or lower level (check all that apply)

- Open-sided walking/working surfaces (i.e., roofs, open-sided floors)
- Open-sided ramps, runways, platforms
- Floor openings
- Wall openings
- Skylight openings
- Trenches
- Surfaces that do not meet the definition of a walking/working surface (i.e. top plate)

**\*\*Walking/working surface** = any area whose dimensions are 45 inches or greater in all directions, through which workers pass or conduct work.

Methods of fall protection to be used: **LSO = Low Slopes Only (low slopes = 4:12 or less)**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Guardrail System (LSO)              | <input type="checkbox"/> Personal Fall Arrest System    | <input type="checkbox"/> Vertical Lifeline & Rope Grab  |
| <input type="checkbox"/> Warning Line (LSO)                  | <input type="checkbox"/> Personal Fall Restraint System | <input type="checkbox"/> Safety Watch System (LSO)      |
| <input type="checkbox"/> Warning Line w/Safety Monitor (LSO) | <input type="checkbox"/> Positioning Device System      | <input type="checkbox"/> Appropriate Anchors for System |
| <input type="checkbox"/> Catch Platform                      | <input type="checkbox"/> Covers                         |   |
| <input type="checkbox"/> Safety Net                          | <input type="checkbox"/> Horizontal Lifelines           |   |

Name of Safety Watch or Monitor, if used: \_\_\_\_\_

Other methods of fall protection selected:

- Boom Lift
- Scaffold w/Guardrail
- Forklift w/Man Basket
- Scissor Lift
- Other: \_\_\_\_\_

Describe procedures for assembly, maintenance, inspection, and disassembly of fall protection system to be used.

---

---

---

Describe procedures for handling, storage, and securing tools, equipment, and materials.

---

---

---

Describe methods of overhead protection for workers who may be in, or pass through, the work area.

---

---

---

Describe methods to be implemented for the prompt, safe removal of injured worker(s).

---

---

---

Employees who received fall protection training on the above site specific Fall Protection Work Plan.

**Name (print)**

**Date**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Name and title of person who provided training:

\_\_\_\_\_

\* \* \*

## Appendix K – Tie Offs and Anchorage Points – Semi-Annual Inspection Checklist

Location \_\_\_\_\_

Type of Tie off or Anchorage Point:

Horizontal lifeline, Vertical Lifeline, Anchor System, Work Platform Other \_\_\_\_\_

Date installed (if known): \_\_\_\_\_

Comments: \_\_\_\_\_

General Factors	Accepted or Rejected	Supportive Details/Comments
1) <b>Physical Damage:</b> Inspect for cracks, sharp edges, burrs, and deformities	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
2) <b>Excessive Corrosion:</b> Inspect for corrosion, which affects the operation and/or strength.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
3) <b>Horizontal Lifeline:</b> Min 1/2" steel wire, < 30 ft. between posts, < 15" sag in a 30 ft. span,	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
4) <b>Vertical Lifeline :</b> Min 1/2" steel wire or 5/8" Polypropylene rope. Lifeline column adequately secured with rope grab that extends form the top to the base.	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
5) <b>U Bolt clamps:</b> Attached correctly	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
6) Other:	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	
<b>Overall Disposition:</b>	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<b>Inspected By:</b>  <b>Date Inspected:</b>

# Appendix L – Fall Protection Rescue Work Plan

Important: This Document is intended to provide guidance only for developing site-specific working heights rescue plans.

Date; \_\_\_\_\_ Job Description: \_\_\_\_\_

Location: \_\_\_\_\_

<b>Contacts</b>  Rescuers: _____ _____ Competent Person: _____ Emergency Contact: _____ Method of Contact: <input type="checkbox"/> Verbal / Face to face <input type="checkbox"/> Radio Channel _____ <input type="checkbox"/> Phone Number _____ <input type="checkbox"/> Other _____	<b>Rescue Equipment</b>  <input type="checkbox"/> Ladder <input type="checkbox"/> Anchor Point <input type="checkbox"/> Rescue Pole <input type="checkbox"/> First Aid Kit <input type="checkbox"/> Rescue Rope <input type="checkbox"/> Life Ring <input type="checkbox"/> Crane <input type="checkbox"/> Scaffold <input type="checkbox"/> Aerial Lift <input type="checkbox"/> Alternative Lifting & Lowering Device  <b>Location of Equipment</b> <input type="checkbox"/> Job Site <input type="checkbox"/> Gang Box <input type="checkbox"/> Shop <input type="checkbox"/> _____ _____	<b>Critical Rescue Factors;</b>  _____ _____ _____ _____ Landing Area _____ _____  <b>Rescue Obstruction / Hazards</b> _____ _____ _____ _____ _____
---	--	---

Check for Yes  <input type="checkbox"/> Have alternatives to using fall arrest equipment been considered? <input type="checkbox"/> Has rescue equipment been inspected and found in good shape? <input type="checkbox"/> Is equipment adequate for the rescue plan? <input type="checkbox"/> Have communication devices been identified, located, & tested? <input type="checkbox"/> Are all rescuers' familiar with the use of the rescue equipment?	_____ _____ _____ _____ _____	<b>Comments</b>  _____ _____ _____ _____ _____
---	---	--

Describe the tasks that will be done prior to work to prevent a fall and the step by step process that will be followed in the event of a fall.

Pre Work Tasks:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

Response Procedure:

1. Notify Emergency Contact.
2. Make medical assessment of person
3. If possible have employee perform self-rescue
4. \_\_\_\_\_
5. \_\_\_\_\_