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Policy Subject:	Fall Protection and Prevention	Effective Date:	03 March 2019
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1.0 PURPOSE

This program has been established for the protection of employees, to eliminate, prevent and control fall hazards and to establish a means to analyze elevated work tasks and determine appropriate personal protection against falls in accordance with Occupational Safety and Health Administration (OSHA) regulations:

"Fall Protection," 29 CFR 1926 Subpart M

"Walking and Working Surfaces," 29 CFR 1910 Subpart D

"Powered Platforms, Manlifts, and Vehicle-Mounted Platforms," CFR 1910 Subpart F

"Scaffolds," 29 CFR 1926 Subpart L

2.0 POLICY STATEMENT

It is the policy of Superior Environmental Solutions (SES) to establish programs to protect the safety and health of its workers and to comply with federal and state requirements. This program applies to conditions where employees are working unprotected at a height of 4 feet or greater, including work from ladders and from any level at which a fall may result in injury. Only those employees or contract employees who have been trained on fall protection are permitted at these elevations. Fall hazards must first be controlled through engineering controls if feasible. When engineering controls are not feasible, then personal fall arrest systems, administrative controls and training must be instituted. Fall protection plans are not utilized as alternate methods to this policy.

Violation of this policy could result in disciplinary action up to and including termination.

3.0 DEFINITIONS

Aerial Lift	Mechanical devices such as man-baskets, scissor lifts, and bucket trucks used for access and work at heights.
Anchorage	A secure point of attachment for lifelines, lanyards, or deceleration devices. Anchorages to which personal fall arrest equipment is attached shall be capable of supporting at least 5,000 pounds (22.2kN) per employee attached, or shall be designed, installed and used as part of a complete personal fall arrest system which maintains a safety factor of at least two, under the supervision of a qualified person.
Arresting Force	The amount of force exerted on an employee when a fall protection system stops a fall; usually the highest force experienced during the fall.
Body Harness (full)	A combination of straps that can be secured about the body in a manner that will distribute the fall arrest forces over the thighs, pelvis, waist, shoulders and

buttocks, and that can be secured to other components of a personal fall arrest system.

- Competent Person A person who is capable of recognizing existing and predictable hazards and has the authority to take corrective action. Additionally, a person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof as well as in their application and use with related equipment. To be considered a competent person, an 8-hour training class must be completed for general fall protection and an additional 4-hour training class must be completed for scaffolds. To be considered a competent person for equipment inspections, the manufacturer's training quidelines shall be followed.
- Connector A device which is used to couple (connect) parts of the personal fall arrest system and positioning device system together. It may be an independent component of the system, such as a carabineer, or it may be an integral component or part of the system (such as a buckle, D- ring sewn in to a body harness, or a snap-hook spliced or sewn to a lanyard or self retracting lanyard).
- Deceleration Device Any mechanism, such as a rope grab, rip-stitch, lanyard, specially –woven lanyard, tearing or deforming lanyards, automatic self retracting lifelines/lanyards, etc. that serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limits the energy imposed on an employee during fall arrest.
- Deceleration The additional vertical distance a falling employee travels, excluding lifeline Distance elongation and free fall distance, before stopping, form the point at which the deceleration device beings to operate. It is measured as the distance between the location of the employee's body harness attachment point at the moment of activation (at the onset of fall arrest forces) 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 falling before a personal fall arrest system begins to apply force to arrest the fall.
- Free Fall Distance The vertical displacement of the fall arrest attachment point on the employees body harness between onset of the fall and just before the system begins to apply force to arrest the fall. The distance excludes deceleration distance, the lifeline/lanyard extension before they operate and fall arrest occurs.
- Guardrail System A barrier erected to prevent employees from falling to lower levels.
- Hazardous Area Any area which if fallen into, can cause severe injury or death. This includes, but is not limited to, impalement hazards, molten metal or bath, wastewater tanks or pits, electrical hazards, drowning, or open tanks of toxic chemicals.
- Horizontal Lifeline A rail, rope, wire, or synthetic cable that is installed in a horizontal plane and used for attachment of a worker's lanyard or lifeline device while moving horizontally.
- IndependentA point of attachment that is not part of the working or walking surface or
equipment rigging points.
- Independent A lifeline that is not attached to the work surface-one lifeline per person. Lifeline
- Lanyard A flexible line of webbing, rope, or cable that may be 2, 4, or 6 feet long, and used to secure a body belt or full body harness to a lifeline or anchorage point.
- Leading Edge The edge of a floor, roof or formwork for a floor or other walking/working surface (such as a deck) which changes location as constructed. A leading edge

	is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.
Lifeline	A vertical line from a fixed anchorage or between two horizontal anchorages, independent of walking or working surfaces, to which a lanyard or device is secured. Part of a fall protection system used as back-up safety for an elevated worker.
Locking Snap Hooks	A connecting snap hook that requires two separate forces to open the gate; one to deactivate the gate keeper, and a second to depress and open the gate which automatically closes when released. The locking snap hook is used to minimize roll-out or accidental disengagement.
Low Slope Roof	A roof having a slope less than or equal to 4 foot vertical rise to every 12 feet of horizontal length.
Lower Levels	Those areas or surfaces to which an employee can fall. Such areas or surfaces include, but not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.
Opening	A gap in the wall or partition that is 30 inches or more high and 18 inches or more wide through which employees can fall to lower levels.
Personal Fall Arrest Systems	Shall, when stopping a fall, limit maximum arresting force on an employee to 1,800 pounds (8kN) when used with a body harness.
Positioning Device System	A body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning backwards.
Oualified person	Someone with a recognized degree or professional certificate and extensive
(knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project or product.
Retracting Lifeline	knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project or product. A fall arrestor whose integral line extends as a worker moves downward and automatically removes slack as the worker moves up toward the unit.
Retracting Lifeline Roll Out	knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project or product. A fall arrestor whose integral line extends as a worker moves downward and automatically removes slack as the worker moves up toward the unit. Unintentional disengagement of a snap hook caused by the gate being depressed under torque or contact with single action snap hooks that do not have a locking gate keeper.
Retracting Lifeline Roll Out Rope Grab	 knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project or product. A fall arrestor whose integral line extends as a worker moves downward and automatically removes slack as the worker moves up toward the unit. Unintentional disengagement of a snap hook caused by the gate being depressed under torque or contact with single action snap hooks that do not have a locking gate keeper. A deceleration device that travels on a lifeline and automatically engages the lifeline and locks so as to stop the fall of an employee.
Retracting Lifeline Roll Out Rope Grab Snap hook	 knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project or product. A fall arrestor whose integral line extends as a worker moves downward and automatically removes slack as the worker moves up toward the unit. Unintentional disengagement of a snap hook caused by the gate being depressed under torque or contact with single action snap hooks that do not have a locking gate keeper. A deceleration device that travels on a lifeline and automatically engages the lifeline and locks so as to stop the fall of an employee. A connector comprised of a hook shaped member with a normally closed keeper that may be opened to permit the hook to receive an object and released to automatically close and retain the object.
Retracting Lifeline Roll Out Rope Grab Snap hook Steep Roof	 knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project or product. A fall arrestor whose integral line extends as a worker moves downward and automatically removes slack as the worker moves up toward the unit. Unintentional disengagement of a snap hook caused by the gate being depressed under torque or contact with single action snap hooks that do not have a locking gate keeper. A deceleration device that travels on a lifeline and automatically engages the lifeline and locks so as to stop the fall of an employee. A connector comprised of a hook shaped member with a normally closed keeper that may be opened to permit the hook to receive an object and released to automatically close and retain the object. A roof having a slope greater than or equal to 4 foot vertical rise to every 12 feet of horizontal length.
Retracting Lifeline Roll Out Rope Grab Snap hook Steep Roof Standard Railing	 knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project or product. A fall arrestor whose integral line extends as a worker moves downward and automatically removes slack as the worker moves up toward the unit. Unintentional disengagement of a snap hook caused by the gate being depressed under torque or contact with single action snap hooks that do not have a locking gate keeper. A deceleration device that travels on a lifeline and automatically engages the lifeline and locks so as to stop the fall of an employee. A connector comprised of a hook shaped member with a normally closed keeper that may be opened to permit the hook to receive an object and released to automatically close and retain the object. A roof having a slope greater than or equal to 4 foot vertical rise to every 12 feet of horizontal length. A railing system comprised of vertical supports and three horizontal components; the top rail, mid rail, and toeboard. The top rail is typically 42 inches nominal from the upper surface of top rail to floor, platform, runway, or ramp level. Nominal height of mid rail is 21 inches.
Retracting Lifeline Roll Out Rope Grab Snap hook Steep Roof Standard Railing Tie Off (Anchorage)	 knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project or product. A fall arrestor whose integral line extends as a worker moves downward and automatically removes slack as the worker moves up toward the unit. Unintentional disengagement of a snap hook caused by the gate being depressed under torque or contact with single action snap hooks that do not have a locking gate keeper. A deceleration device that travels on a lifeline and automatically engages the lifeline and locks so as to stop the fall of an employee. A connector comprised of a hook shaped member with a normally closed keeper that may be opened to permit the hook to receive an object and released to automatically close and retain the object. A roof having a slope greater than or equal to 4 foot vertical rise to every 12 feet of horizontal length. A railing system comprised of vertical supports and three horizontal components; the top rail, mid rail, and toeboard. The top rail is typically 42 inches nominal from the upper surface of top rail to floor, platform, runway, or ramp level. Nominal height of mid rail is 21 inches. The act of a worker securing the end of a lanyard to an anchorage point. The terms tied off, and tying off, are related to tie off. An anchorage point is sometimes referred to as a tie off point.

inches nominal in vertical height, with not more than 1/4 inch clearance above floor level.

Warning LineA barrier on a roof that warns employees that they are approaching an
unprotected roof side or edge, and that designates an area where roofing work
may take place without the use of guardrails, body harness, or safety net.

4.0 PROCEDURES

A. Responsibility

Location Manager:

- 1. Ensure all management personnel are aware of and follow the requirements of the Fall Protection and Prevention Policy.
- 2. Periodically audit the policy's progress and implementation in conjunction with the annual program review.
- 3. Review operations with supervisors to determine what jobs/procedures require fall protection and training.
 - a. Follow-up to ensure supervisors are following the Fall Protection and Prevention Policy.
 - b. Review new installations to ensure that all practical measures have been used to eliminate risks associated with fall protection.

Supervisor:

- 1. Evaluate the need for personal fall arrest equipment and systems as an integral part of preplanning the job.
- 2. Ensure that workers are provided with, and use, the proper equipment for the job
- 3. Ensure that workers are provided with training on the proper use, care and inspection of the equipment
- 4. Make routine audits to ensure that employees are properly utilizing the required fall protection.

Safety Manager:

- 1. The Safety Manager or person designated by the Safety Director is responsible for the development, implementation, and administration of the Fall Protection and Prevention Policy through Facility Managers, Superintendents and Supervisors.
- 2. Guides the management staff in conducting workplace hazard assessments to determine the presence of hazards, which necessitate the use of Fall Prevention equipment.
- 3. Aids in conducting periodic workplace reassessments as requested by supervisors and/or as determined by the addition or change of equipment or duties.
- 4. Provides training and technical assistance on the proper use, care, and cleaning of approved Fall Protection equipment.
- 5. Provides guidance on the selection and purchase of approved fall protection equipment.
- 6. Periodically reevaluates the suitability of previously selected fall protection equipment.
- 7. Reviews, updates and evaluates the overall effectiveness of the site fall protection and prevention program.
- 8. Investigates any incident involving a fall to determine root causes and corrective actions to prevent recurrence.
- 9. Participates in the annual program review.

Employee:

- 1. Evaluates the need for personal fall arrest equipment and systems before beginning work of any kind.
- 2. Considers hazards during the task as well as traveling to and from the elevated work area including the use of temporary scaffolding, handrails, aerial lifts, etc.
- 3. Discusses any potential hazards that may develop during the job with the supervisor prior to starting.
- 4. Utilizes appropriate fall protection equipment when required and inspects personal fall protection equipment prior to use.

B. Program Components

This program covers fall and associated hazards pertaining to the following:

- 1. Fall and Slip Hazards and Prevention
- 2. Engineering Controls
- 3. Fall Protection Personal Protective Equipment
- 4. Equipment Inspections and Maintenance
- 5. Working on Equipment
- 6. Floor Loading
- 7. Roofing
- 8. Scaffolds
- 9. Aerial Lifts
- 10. Portable Ladders
- 11. Fixed Ladders and Stairs
- 12. Walking and Working Surfaces
- 13. Training
- 14. Annual Program Review

Fall and Slip Prevention versus Fall Protection

Note: These Fall prevention definitions are SES terms and for purposes of OSHA fall prevention would be considered fall protection. OSHA considers fall protection to be guardrails/midrails/toeboards, personal fall arrest, & nets.

Fall Prevention is the method used to prevent exposure to elevated fall hazards; such as floors, walls, guardrails, isolating an area, and providing equipment such as aerial lifts. There are three basic methods to accomplish fall prevention:

- 1. Equipment or tool changes: eliminate a hazard through redesign, elimination, relocation, or repair of tools or equipment.
- 2. Procedural changes: changes the way a task is done.
- 3. Physical changes to the work area: eliminate a hazard by redesigning a work area (i.e. guardrails, toeboards, etc).

Fall Protection is a system of components designed to function together to arrest a free fall and minimize the potential for compounding injury. Fall protection should only be used when other options have been exhausted.

NOTE: The overall goal of fall prevention and protection is to ensure the safety of workers during the entire course of the job. This includes access to and from the job site, as well as the actual job site itself.

1. Fall and Slip Hazards and Prevention

Each SES location is responsible to inspect for potential fall hazards and to have each potential fall hazard evaluated by a competent person.

Falls may be classified into three general categories:

- A. Slips, trips and falls on the same level;
- B. Falls on stairs; and
- C. Falls from elevations.

Slips and trips are generally caused by a lack of good housekeeping and inadequate maintenance of walking and working surfaces. Employees should keep their area clean and orderly. If they are not equipped to eliminate a hazard, the appropriate maintenance personnel should be contacted to correct the problem. These hazards may include icy sidewalks, wet floors, torn floor coverings and stair treads, and missing or broken hand rails and guard rails.

Fall hazards from elevations include, but are not limited to, unprotected sides and edges of roofs, excavations, skylights, floor holes, wall openings, and all other walking or working surfaces where employees can possibly fall four feet or more to a lower level.

Employees should alert their supervisors to potential fall hazards not already identified and controlled. The following are fall hazards which require protection.

- A. Open sided floors, platforms, and runways four feet or more in height.
- B. Open sided floors, ramps, walkways etc. that are adjacent to or above dangerous operations must be guarded regardless of height.
- C. Wall openings from where there is a drop of more than 4 feet.
- D. Open windows from which there is a drop of more than 4 feet and the bottom of the window is less than 3 feet above the floor or platform.
- E. Hatchways and chutes floor openings.
- F. Any opening more than 4 feet in elevation where a significant portion of the body is leaning over or through to perform work.
- G. Skylights that are even with the roof surface or that may otherwise serve as a walking/working surface.
- H. Scaffolds over 6 feet.
- I. Aerial lift devices.

Protection from overhead falling hazards must be provided.

- A. Placement of toeboards is required.
- B. Equipment shall not be stored within four feet of an unprotected edge.
- C. Canopy structures may be required in high traffic areas.
- D. The area to which objects could fall must be barricaded and individuals not equipped with hard hats prohibited from entering.

2. Engineering Controls

A competent person shall determine if engineering controls can eliminate or lessen the hazard of the work area or job site. Engineering controls shall be provided where possible to minimize fall hazards. Engineering controls of fall hazards consist of the following:

- **A. Guardrails and Toeboards:** These requirements apply to temporary controls on job sites as well as permanent fixtures in general work areas. Local code may carry requirements that may be more stringent for permanent guardrails.
 - 1. A standard railing consists of a top rail, mid rail, and posts and is 42 inches high from the top of the rail to the floor, platform, runway or ramp. Nominal height of the mid rail is 21 inches;
 - 2. Standard toeboards must be a minimum of 4 inches high (3 << inches for construction), no more than 1/4 inch clearance to the floor. If a mesh material is used, the opening must be less that 1 inch;
 - 3. The anchoring of posts and framing of members for railings of all types must be of such construction that the completed structure is capable of withstanding a load of 200 pounds applied in any direction at any point on the top rail;
 - 4. Guardrail systems have a surface that prevents injuries such as punctures and lacerations and prevents snagging of clothing; and
 - 5. When guardrail systems are in hoisting areas, a chain gate or removable guardrail section shall be in place when not being used.

B. Stationary Work Platforms

1. Every ladderway floor opening or platform shall be guarded by a standard railing with standard toeboard on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening.

C. Skylights

- 1. The Skylights that may be used as a walking or working surface must be protected by a standard railing, standard skylight screen, grill work with 4 by 4 inch openings or slatwork with 2-inch openings; and
- Standard skylight screens must be capable of withstanding minimum load of 200 pounds applied perpendicular to any point on the screen and will not deflect under ordinary loads and impacts and break glass.

D. Covers

- 1. Hole per OSHA is defined as having a minimum dimension of >1'' but <12''.
- 2. Covers for holes, including grates, shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time;
- 3. Covers located on roadways and vehicular aisles shall be capable of supporting, without failure, at least twice the maximum axle load of the largest vehicle expected to cross over it;
- 4. All covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees;
- 5. Covers shall be marked with the word "Hole" or "Cover" to provide warning of the hazard when it is not readily apparent; and
- 6. While a cover is not in place, the pit or trap opening shall be constantly attended by someone or shall be protected on all exposed sides by removable standard railings.

3. Fall Protection Personal Protective Equipment

Personal protective equipment shall be used to minimize fall hazards where engineering controls do not eliminate the hazard or in conjunction with engineering controls. Fall protection equipment is divided into five functional categories: 1. Fall Arrest, 2. Positioning, 3. Suspension, 4. Retrieval and 5. Restraint.

A. Fall Arrest

The use of a personal fall arrest system is the required personal protective equipment for fall hazards. A personal fall arrest system consists of a full-body harness, lanyard (or fall limiter), and anchor point OR a full-body harness, lanyard, lifeline, anchor point, and deceleration/grabbing device. All fall protection equipment shall meet or exceed appropriate American National Standards Institute (ANSI) standards. SES employees shall use only commercially manufactured equipment specifically designed for fall protection and certified by a nationally recognized testing laboratory. All fall protection equipment must bear the marking of the manufacturer and approvals for specified use. Requirements for a personal fall arrest system include but are not limited to the following:

1. Body Harness - Only full-body harnesses shall be used. The use of a body belt is prohibited.

- a. As a best practice, to prevent "suspension trauma" a safety device (such as Miller's Relief Step) should be attached to the harness
- 2. Connecting Device Shock-absorbing lanyards, fall limiters, and lifelines
 - a. Lanyards and lifelines shall have a minimum breaking strength of 5000 pounds;
 - b. Lanyards shall not exceed six feet in length and shall have shock absorbers and be made of webbing, can only be used at heights above 18.5 feet.
 - c. Fall Limiters must be used on aerial lift devices and at any height below 18.5 feet, but can also be used on heights above 18.5 feet.
 - d. Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body harnesses shall be made from synthetic fibers;
 - e. Connecting assemblies shall have a minimum tensile strength of 5,000 pounds;
 - f. Self-retracting lifelines and lanyards shall have a tensile strength of at least 3000 pounds and limit free fall to two feet or less (5,000 pounds for ripstitch lanyards, and tearing and deforming lanyards);
 - g. Personal fall arrest systems shall limit the maximum arresting forces to 1800 pounds with a full body harness;
 - h. The maximum free fall distance is six feet for all systems;
 - i. The maximum deceleration distance is 3.5 feet;
 - j. Personal fall arrest systems shall have sufficient strength to withstand twice the potential impact energy of the falling employee;
 - k. Lifelines shall be protected against cutting and abrasions;
 - Horizontal lifelines shall be designed, installed and used under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of two. On suspended scaffolds or similar work platforms with horizontal lifelines which may become vertical lifelines, the devices used to connect to a horizontal lifeline shall be capable of locking in both directions on the lifeline; and
 - m. Each employee shall be attached to a separate lifeline when vertical lifelines are used. On suspended scaffolds or similar work platforms with horizontal lifelines which may become vertical lifelines, the devices used to connect to a horizontal lifeline shall be capable of locking in both directions on the lifeline.

Best Management Practice: Fall Arrest systems can include a combination of equipment including connectors, full body harnesses, lanyards, energy absorbers, anchorage connectors, fall arresters, vertical lifelines, and self retracting lanyards. Manufacturers' ratings for arresting force are based upon the system designed; therefore equipment should be from the same manufacturer when possible.

- 3. Anchorage Anchorage point and anchorage connector
 - a. Consideration must be given to the strength, location, and accessibility of anchorage points and pre-job planning is critical.
 - b. Anchorage points should be located above shoulder height and placed to limit the potentials for a swing fall.
 - c. The placement of the anchorage point must limit the total-free fall distance to less than six feet.
 - d. Anchorages used for personal fall arrest systems shall be independent of any anchorage being used to support or suspend platforms and be capable of supporting at least 5000 pounds per employee attached, or shall be designed, installed (temporarily or permanently), and used as part of a complete fall arrest system which maintains a factor of two and under the supervision of a qualified engineer;
 - e. A qualified engineer shall determine all anchor points, both temporary and permanent. Permanent anchor points shall be properly marked;
 - f. Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists.
 - g. Anchorage point strength should be evaluated for minimum requirements considering the following variables: depending on the type of fall protection equipment being used, the number of people involved the potential free-fall distance, and other factors.
 - h. Below is a listing of those parts of building steel that have already been identified as being acceptable for anchorage points based upon good engineering design and if they have been maintained in good condition:
 - Building and crane columns
 - Roof beams, and rafters
 - Roof trusses
 - Floor support beams
 - Large section sway bracing between columns (back to back angles or channels)
 - Engineered fall protection systems and other engineer-approved anchorage points

NOTES:

- If vertical beams are used, the anchor point must be directly above a horizontal member to prevent slippage.
- Column wraps must be used to protect when the anchorage has sharp edges that may cut a standard lanyard when exposed to the forces generated in a fall.
- i. The following are not to be used for anchorage points:
 - Conduit and supports
 - Pipe and pipe supports and hangers
 - Cable trays and supports
 - Electrical conductors

B. Positioning

A positioning device is not a substitute for a personal arrest system and is limited to use as system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

Where positioning device is used, it shall comply with the following:

- 1. Only a full-body harness shall be worn as part of a positioning device system. Bodybelts are not acceptable;
- 2. Positioning devices shall be rigged such that a free fall cannot be more than 2 feet; and
- Positioning devices shall be secured to an anchorage point capable of supporting at least twice the potential impact load of an employee's fall or 3,000 lbs, whichever is greater.

C. Suspension

Personal suspension systems are used for window washing and painting and are designed to lower and support a worker to perform tasks. The components of a suspension system are:

- 1. Full-Body Harness;
- 2. Workline;
- 3. Anchorage; and

4. Positioning device such as a boatwains chair.

A boatswain's chair system is considered a single-point adjustable suspended scaffold. Since the suspension system components are not designed to arrest a free fall, a back-up fall arrest system should be used in conjunction with the personal suspension system that would activate only if the worker were to experience a free fall.

D. Retrieval

Personal retrieval systems are used for confined space entry and non-entry rescue. Personal retrieval systems consist of the following:

- 1. Full body hardness;
- 2. Retractable lifeline/rescue unit; and
- 3. Tripod.

E. Restraint

A restraint line is a device which is attached between the employee and an anchorage point to prevent the employee from walking or falling off an elevated surface. It does not support an employee at an elevated surface, but rather, prevents the employee from leaving the elevated surface or work position.

F. Rescue

Prompt rescue shall be provided for personnel who have fallen by contacting 9-1-1 and summoning for help. No work shall be performed where an emergency cannot be immediately observed and prompt rescue assistance summoned.

G. Other PPE

Any other personal protective equipment deemed necessary for the task must be worn. This may include but is not limited to hard hats, gloves, safety glasses, and steel toed boots. Hard hats shall be worn within an area beneath elevated work where objects could fall from a height and strike a worker.

4. Equipment Inspections and Maintenance

A. Impact Loading

Any fall arrest system or component that has been used to arrest a fall (impact loading) shall be immediately removed from service.

B. Inspection

1. Visual equipment inspections shall be conducted by personnel prior to each use. If, upon inspection, a piece of equipment shows any signs of wear it must immediately be removed from service and the supervisor notified.

Visual Inspection prior to use shall include the following:

- a. Examine the fabric for cut/tears, abrasion, enlarged eye holes, loose or damaged stitching burns, metal splatter or any other conditions that may indicate weakening.
- Examine all hardware (snap hooks, buckles, D rings, etc.) for cracks, dents, corrosion, loose anchorage, or any other condition that may indicate weakening. The D-ring should pivot freely. D-ring back pads should also be inspected for damage
- c. Attachment of buckles. Attachments of buckles and D-rings should be given special attention. Note any unusual wear, frayed or cut fibers, or distortion of the buckles.
- d. Tongue/grommets. The tongue receives heavy wear from repeated buckling and unbuckling. Inspect for loose, distorted or broken grommets. Webbing should not have additional punched holes
- e. Check retracting web lanyards and lifelines for proper functioning by pulling sharply away from the device. The unit should lock up within a couple of inches.
- f. Check all snap hooks for proper functioning by opening and then releasing the hook. When released, the snap should lock in the closed position.
- 2. An annual documented inspection (or more frequently if required by the equipment manufacturer) must be completed by a competent person (management personnel that are familiar with the use and design of the equipment) for wear, damage or corrosion.
- 3. Documented periodic inspection of retractable lanyards and lifelines may require that the unit be inspected by the manufacturer. Refer to the manufacturer's product information and instructions for guidelines. If required, documentation of the inspection should be requested from the manufacturer.

C. Maintenance

When needed, fall protection devices should be washed in warm water using a mild detergent, rinsed thoroughly in clean warm water and allowed to dry at room temperature. Stow equipment in clean area away from strong sunlight and extreme temperatures which could degrade materials. Check the manufacturer's recommendations for cleaning, maintenance and storage information.

5. Working on Equipment

- A. Employees working on top (over 4 feet off ground) of a smokehouse, machinery or equipment, must be tied off unless the edge is protected by a standard railing or other obstruction (this is preferred), which would preclude a fall.
- B. Employees' working over hazardous area such as tanks containing liquids, impalement hazards, etc., must use fall protection equipment, regardless of the potential fall distance, unless protected by a standard railing or other obstruction (at least 42 inches in height) that would preclude a fall
- C. Employees are restricted from performing the following:

- 1. Climbing or walking on equipment or over guard railings to access equipment
- 2. Climbing on mixer grating to access equipment or cleaning.
- 3. Standing on toeboard, midrail or top rail of the standard guard railing.

6. Floor Loading Protection

- A. Load rating limits shall be marked on plated and conspicuously posted on top of mezzanines, storage areas and similar surfaces.
- B. No load greater than the rating limit shall be placed on top of mezzanines, storage areas or similar structures.

7. Roofing

The hazards associated with work on roofs include falling through openings and falling off edges. The protection of openings is discussed in the engineering controls section of this program.

Effective roof work fall protection techniques are intended to protect workers while providing the mobility and comfort necessary to perform work tasks. Several techniques are available and are described below.

A. Low-slope or Flat Roofs

Each employee engaged in roofing activities on low-slope roofs, with unprotected sides and edges 6 feet (1.8 m) or more above lower levels 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 (15.25 m) or less in width the use of a safety monitoring system alone [i.e. without the warning line system] is permitted.

B. Steep roofs

Each employee on a steep roof with unprotected sides and edges 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems with toeboards, safety net systems, or personal fall arrest systems.

- C. Personal Fall Arrest System
 - 1. The system of choice for fall protection on roofs is the personal fall arrest system;
 - 2. Requirements for personal fall arrest systems are found in the Fall Protection Personal Protection Equipment section of this program; and
 - 3. Personal fall arrest systems for roof work must be designed by a qualified engineer.
- D. Designated Areas

As an alternative to installing guardrails, a designated area may be established. The following condition and requirements must be met in order to use designated areas in lieu of other fall protection measures:

- 1. The work must be of a temporary nature, such as maintenance on roof top equipment;
- 2. Designated areas shall be established only on surfaces that have a slope from horizontal of 10 degrees or less; and
- 3. The designated area shall consist of an area surrounded by a rope, wire, or chain and supporting stanchions.
- 4. After being erected with the line attached, stanchions shall be capable or resisting, without tipping over, a force of at least 16 pounds applied horizontally against the stanchion;
- 5. The line shall have a minimum breaking or tensile strength or 500 pounds;

- The line shall 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;
- 7. The line shall be installed in such a manner that its lowest point is no less that 34 inches nor more than 39 inches from the work surface;
- 8. The line forming the designated area shall be clearly visible from any unobstructed location within the designated area up to 25 feet away;
- 9. The stanchions shall be erected as close to the work area as is permitted by the task;
- 10. The perimeter of the designated area shall be erected no less than 9 feet from the unprotected side or edge; and
- 11. Access to the designated area shall be by a clear path formed by two lines attached to stanchions.

8. Scaffolds

- A. Use of Scaffolds
 - 1. Selection
 - 2. The proper scaffold selected for the task by the competent person is based upon the type of work to be conducted and the working load to be supported.
 - a. Light duty scaffolds are intended for workers and tools only. The design load should be that it will support a working load of 25 pounds per square foot;
 - Medium duty scaffolds are intended for workers, tools and construction materials. The design load should be that it will support a working load of 50 pounds per square foot; and
 - c. Heavy duty scaffolds are intended for workers, tools, stored materials, and construction materials. The design load of the scaffold should be that it will support a working load of 75 pounds per square foot.
 - 3. All scaffolds must be capable of supporting at least four times the design load.
 - 4. General Requirements
 - a. Fall protection is required for all scaffold use 6 feet above a lower level.
 - b. All scaffolds, where work is conducted in excess of 6 feet in height, shall have 4 inch toeboards;
 - c. A scaffold shall not be moved while personnel are on it;
 - d. Follow all manufacturer's guidelines and special warnings if the scaffold is commercially produced;
 - e. The maximum work level height shall not exceed 4 times the least base dimension of the scaffold. Example: a four foot by six foot scaffold cannot exceed sixteen feet in height at the work platform level;
 - f. The minimum working platform width is two feet;
 - g. The supporting structure for the scaffold must be rigidly braced, using adequate cross bracing or diagonal bracing with rigid platforms at each work level;
 - h. Working platforms should have a nonslip surface;
 - i. Scaffolds should be used only on an even surface;
 - j. The platform surface should be kept clear of extraneous tools and materials;
 - k. The work level platform shall be wood, aluminum, plywood planking, steel or expanded metal for the full width of the scaffold, except for necessary protected openings
 - I. Work platforms shall be secured in position;
 - M. All work platform planking shall be in compliance with OSHA 1926.453(a)(3)(v).
 Wood shall be compliance grade lumber. Planks shall be overlapped a minimum of 12 inches and extended over supports 6 12 inches;

- n. Follow all manufacturer guidelines in the assembly of the scaffold. Do not use or assemble the scaffold, if unsure of the correct assembly procedure;
- o. Hard hats must be worn within an area beneath elevated work where objects could fall from a height and strike a worker; and
- p. Mobile scaffolds shall not be moved unless the surface of travel is within 3 degrees of level and free of pits, holes and obstructions, and the employee on the scaffold has advanced knowledge of the movement.
- B. Inspection of Scaffolds
 - 1. Prior to the use of any scaffold, an inspection must be conducted by a Competent Person, and then daily during usage of the scaffold.
 - 2. Carefully examine the scaffold for broken or missing cross bracing, broken supporting structure, working platform, and other damaged parts. In addition, all walking and working surfaces must be free of grease, oil, paint, or other slippery substances;
 - The scaffold should be equipped with positive wheel lock casters that are secured in place;
 - 4. The joint between working platform and supporting structure must be tight, and all hardware and fittings should be attached firmly. Movable parts should operate freely without binding or undue play;
 - All wood parts must be free of sharp edges and splinters. Visually inspect the scaffold to be free of shakes, warpage, decay or other irregularities. Metal parts must be free of sharp edges, burrs and corrosion. Inspect for dents or bends in supporting structure, cross braces and walking/working surfaces;
 - 6. Check all working platform to support structure connections, hardware connections and rivets. If a scaffold tips over, inspect the scaffold for damage before continuing work; and
 - 7. Damaged scaffolds must be withdrawn from service and either repaired or destroyed. When a defect or unsafe condition is found, the employee shall tag or mark the scaffold so that it will not be used until corrective action is taken. Defective or unsafe situations shall be reported to the supervisor. Field repairs and the fabrication of improvised scaffolds are prohibited.
 - 8. Unsafe conditions must be tagged out by the Competent Person, and must be complied with.
- C. Maintenance of Scaffolds
 - 1. All scaffold repairs must be done by a qualified person.
- D. Storage of Scaffolds
 - 1. Scaffolds should be disassembled prior to storage. Scaffolds should be stored where they can be inspected easily and can be reached without causing accidents. The storage area should be well ventilated and away from sources of heat and moisture.

9. Aerial Lifts

Aerial lifts include the following types of vehicle mounted aerial devices used to elevate personnel to job sites above ground:

- Articulating boom platforms are designed to reach up and over obstacles.
- Extensible or telescoping boom platforms may extend over one hundred feet.
- Vehicle mounted bucket lifts are used to repair utility lines.
- Scissor lifts extend into the air via a series of crisscross supports.
- Personal man lifts are lightweight and designed for one person to use indoor.
- A. Specific requirements
 - 1. Aerial ladders shall be secured in the lower traveling position before the truck is moved for travel;

- 2. Lift controls shall be tested each day prior to use;
- 3. Personnel authorized to operate an aerial lift must be trained on fall protection by a fall protection competent person and a certified aerial lift instructor (been through a train the trainer course):
- Employees shall always stand firmly on the floor of the basket and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position;
- 5. Operators must have an effective procedure for leaving the platform when elevated.
- A full-body harness shall be worn and a fall limiter attached to the manufacturer's provided anchor point when working or traveling in an aerial lift, whether elevated or not;
- 7. The anchor point should be at the same height as the operator's harness D-ring, where possible.
- 8. Only fall limiters should be used.
- 9. Anchor points should be capable of withstanding twice the maximum arrest force of the fall arrest device to avoid the possibility of tip-over. Unauthorized anchor points must not be used.
- 10. The midrail must never be used as a step.
- 11. A lanyard may never be looped around or attached to the railing.
- 12. The use of external anchorage points by aerial lift users should only be used as needed
- 13. Tying off to an adjacent pole structure, or equipment while working from an aerial lift shall not be permitted;
- 14. Boom and basket load limits specified by the manufacturer shall not be exceeded;
- 15. The brakes shall be set and when outriggers are used, they shall be positioned on pads or other solid surface. Wheel chocks shall be installed when using an aerial lift on an incline;
- 16. An aerial lift truck shall not be moved when the boom is elevated in a working position, except for equipment which is specifically designed for this type of operation;
- 17. Falling must be avoided by proper use of outriggers and proper leveling before use.
- 18. Articulating and extensible boom platforms shall have both platform and ground controls; and
- 19. Before moving an aerial lift for travel, the boom shall be inspected to ensure that it is properly cradled and outriggers are in the stowed position.
- B. Minimum Safe Approach Distances (M.S.A.D)

The minimum safe approach distances to energized power lines and parts must be maintained.

Voltage Range (phase to phase)	Minimum Safe Approach Distance (Feet)		
0 to 300 V	Avoid Contact		
Over 300V to 50 kV	10		

10. Portable Ladders

- A. Use of Portable Ladders
- B. The proper ladder must be selected for the task. Sanitation cleaning should not be performed while standing on portable ladders. Platforms or aerial lifts should be utilized.
- C. General rules include the following:

- 1. The ladder chosen must be long enough to provide access to the work area without necessitating standing on the top two steps of a stepladder or the top three rungs of a straight ladder;
- 2. The ladder selected must be sufficient for the weight of the employee plus the weight of any tools and materials:
 - a. Type 1A-Extra-heavy industrial ladder will support 300 lbs.
 - b. Type 1-Heavy-duty industrial ladder will support 250 lbs.
 - c. Type 2-Medium-duty commercial ladder will support 225 lbs.
 - d. Type 3-Light-duty household ladder will support 200 lbs.;
- 3. When a straight ladder is used to gain access to an elevation, the side rails should extend at least three feet above the support point at the eave, gutter, or roof line;
- 4. Never splice together short ladders to form a longer ladder;
- 5. Never place ladders on boxes, barrels, or other unstable bases for additional height;
- 6. Ladders must be placed on level surfaces. Although ladder feet or shoes provide an important measure of safety, they cannot compensate for uneven ground unless they are designed with adjustable feet;
- 7. Be alert to slippery surfaces. Nonslip bases are not a substitute for safety in placing, lashing, or holding a ladder on oily, metal, concrete, or other slippery surfaces;
- 8. Do not use ladders for unintended purposes;
- 9. Do not use a metal ladder when working on or near electrical equipment;
- 10. The distance from the bottom of a straight ladder to its support wall shall be onequarter the working length of the ladder;
- 11. Where possible, straight ladders should be secured with a rope or wire at the top and blocked at the bottom;
- 12. The top two steps and platform of a stepladder shall not be used, and the top three rungs of a straight ladder shall not be used;
- 13. Do not over-reach, jump or slide a ladder while on it. Ladders shall not be moved, shifted, or extended while occupied;
- 14. Always face the ladder and use both hands while ascending or descending.
- 15. Tools or materials should be raised by means of a rope after the climber has reached the working position. Carrying heavy loads up or down ladders is prohibited;
- 16. Barricades and warning signs should be posted when ladders are placed near doors or other locations where they could be struck;
- 17. Two workers shall handle and set up all extension ladders;
- 18. Ladders should not be used by more than one person at a time unless they are designed for such use;
- 19. The bracing on the back side rails of stepladders is designed only for increasing stability, not for climbing;
- 20. Ladders shall not be used horizontally as platforms, runways, or scaffolds. Extension ladders must have proper overlap.
 - a. Three foot overlap for 32 foot ladder;
 - b. Four foot overlap for 32 to 36 foot ladder;
 - c. Five foot overlap for 36 to 48 foot ladder; and
 - d. Six foot overlap for 48 foot ladder.;
- 21. Make certain that both automatic locks of the extension ladder are in proper position before ascending the ladder;
- 22. Straight ladders and stepladders that exceed 10 feet may be held by another person for steadying;
- 23. The area around the top and bottom of the ladder shall be kept clear; and

24. Hard hats must be worn within an area beneath elevated work where objects could fall from a height and strike a worker.

Proper use of ladders is essential in preventing accidents. Even a good ladder can be a serious safety hazard when used by workers in a dangerous way. Climbing ladders should be done with the free use of both hands and feet, to allow three point control at all times, including access and exit. This helps to emphasize that most ladders are for access only and not for working on.

- D. Working on Ladders Best Practices
 - 1. Limit the climb to allow for a secure hold while working from ladders
 - 2. If it is necessary to work from a ladder, do not climb higher than a position where the worker's shoulders are level with the top of the stiles. This allows for a secure hold to be maintained while working.
 - 3. Only use a ladder as a place of work if the worker can grasp the ladder near waist height, and only for tasks which allow the worker to hold the ladder with one hand. Ladders should be placed in a manner that permits the worker to face towards both the ladder and the task without leaning over the side of the ladder. When working from a ladder, always work within easy arm's reach from the ladder. This minimizes the possibility of overbalancing and falling off. The employee must tie off at heights over six feet.
 - 4. Extra care should be taken when painting eaves and fascia boards, as the ladder is usually below the work height.
- E. Inspection of Ladders

Prior to use of any ladder, an inspection must be performed:

- 1. Carefully examine the ladder for broken or missing rungs or cleats, broken side rails, and other damaged parts;
- 2. All cleats, rungs, and side rails must be free of grease, oil, paint, or other slippery substances;
- 3. The ladder should be equipped with feet that are secured in place;
- The joint between steps and side rails must be tight, and all hardware and fittings should be attached firmly. Movable parts should operate freely without binding or undue play;
- 5. All wood parts must be free of sharp edges and splinters;
- 6. Visually inspect the ladder to be free of shakes, warpage, decay or other irregularities;
- 7. Metal ladders must be free of sharp edges, burrs and corrosion;
- 8. Inspect for dents or bends in side rails, rungs or cleats;
- 9. Check step to side rail connections, hardware connections and rivets; and
- 10. If a ladder tips over, inspect the ladder for damage before continuing work.
- F. Maintenance of Ladders
 - 1. Damaged ladders must be withdrawn from service and either repaired or destroyed. When a defect or unsafe condition is found, the employee should tag or mark the ladder so that it will not be used until the corrective action is taken.
 - 2. Defective or unsafe conditions must be reported to the supervisor.
 - 3. Field repairs and the fabrication of improvised ladders are prohibited.
 - 4. Never try to straighten a bent or bowed ladder. Remove it from service immediately.

- 5. Do not paint wooden ladders with solid color paints. This may mask cracks in the wood and make them hard to see. Clear wood preservative can be used to protect bare wood.
- 6. If exposed to greases, oils or other slippery substances, the ladder must be cleaned of the substance with solvents or steam. If the slippery substance is not completely removed, the ladder must be removed from service.
- G. Storage of Ladders
 - 1. Ladders should be stored where they can be inspected easily and can be safely reached.
 - 2. Ladders should be stored upright and chained to prevent falling, hung on a ladder hook, or flat on the ground (ground level only).

11. Fixed Ladders and Stairs

- A. Fixed Ladders
 - Fixed ladders should be designed to withstand a single concentrated load of at least 200 lbs;
 - 2. Rungs of metal ladders must have minimal diameter of three quarters inch. Rungs must be at least 16 inches wide, be spaced 12 inches apart;
 - 3. Fixed Ladders, when their location so demands, must be painted or treated with a preservative to resist deterioration;
 - 4. The preferred pitch for a safe descent is 75 to 90 degrees. Ladders with 90 degree pitch must have two and one half feet of clearance on the climbing side. There must be a three foot clearance on ladders with a 75 degree pitch;
 - 5. There must be at least a seven inch clearance in back of the ladder to provide adequate toe space;
 - 6. There must be a clear width of 15 inches on each side of the center line of the ladder, unless the ladder is equipped with a cage or well;
 - Fixed ladders must have cages if they are longer than 20 feet. Landing platforms must be provided on ladders greater than 20 feet long. A platform is required every 30 feet for caged ladders and every 20 feet for unprotected ladders; and
 - 8. Side rails must extend at least 42 inches above the landing.
- B. Fixed industrial stairs
 - 1. Fixed Industrial Stairs shall be provided:
 - a. For access to and from places of work where operations necessitate regular travel between levels, and for access to operating platforms at any equipment which requires attention routinely during operations.
 - b. Where access to elevations is daily or at each shift for such purposes as gauging, inspection, regular maintenance, etc.
 - 2. Requirements include:
 - a. Fixed industrial stairs shall be strong enough to carry five times the normal anticipated live load. At the very minimum, any fixed stairway shall be able to carry safely a moving concentrated load of 1000 pounds.
 - b. Riser height and tread width of fixed industrial stairs should be uniform throughout any flight of stairs. All treads must be reasonably slip resistant;
 - c. The minimum permissible width of a stairway is 22 inches;
 - d. The angle to the horizontal made by the stairs must be between 30 and 50 degrees;
 - e. All stairs should be adequately lighted; and
 - f. If the tread is less than 9 inches wide the risers should be open.

- g. Vertical clearance above any stair tread to an overhead obstruction shall be at least 7 feet measured from the leading edge of the tread.
- 3. Flights of stairs having four or more risers:
 - a. A stair railing is required on each opened side;
 - b. If the stairway is less than 44 inches wide and both sides are enclosed, at least one handrail is required, preferably on the right side descending;
 - c. If the stairway is greater than 44 inches wide a handrail is required on each enclosed side;
 - d. If the stairway is greater than 88 inches wide an intermediate stair railing located midway is required;
 - e. The vertical height of a stair railing must be 30 to 34 inches, and it must be of construction similar to the standard guard railing; and
 - f. Spiral stairways are not permitted except for special limited usage and secondary access situations where it is not practical to provide a conventional stairway.
- 4. Embedded Stairs
 - a. Individual steps used for access or egress, embedded in the walls of risers or the conical top sections of manholes must be safe, well constructed, and installed in accordance with good engineering practices;
 - b. Individual rungs or steps must be uniformly spaced from 12 to 16.5 inches; and
 - c. The use of steps in personal access holes should be designed to prevent the foot from sliding off the end.

12. Walking and Working Surfaces

In general, all areas of the workplace should be kept clean, orderly sanitary and as dry as possible. These guidelines apply to work areas, passageways, store rooms, and service rooms:

- A. All spills should be cleaned promptly. Floors in work areas must be kept free of scraps, oil and other spills, and other debris;
- B. Boxes, chairs, buckets, desks or any other device not specifically intended for use in extending reach shall not be used;
- C. Areas which are constantly wet should have non-slip surfaces or mats where employees may walk or work. Where wet processes are used good drainage must be maintained;
- D. Every floor, working place, and passageway must be maintained free from protruding nails, splinters, holes, and loose boards;
- E. Where mechanical handling equipment is used, such as lift trucks, sufficient safe clearance must be provided for foot and vehicular traffic;
- F. No obstructions that could create a hazard are permitted in aisles. All permanent aisles must be easily recognizable; and
- G. As a general condition, a standard toeboard and guard rail are required where ever people walk near or beneath the open sides of a platform or similar structures; where things could fall from a structure; or where things could fall from a structure into machinery below.
- H. Administrative controls shall be implemented to control common slip, trip hazards such as but not limited to:
 - 1. Addressing meat, grease, oil, water and other materials on the floor.
 - 2. Appropriate foot protection.
 - 3. Moving too fast (running).
 - 4. Steps or ladder treading.
 - 5. Unsafe practices with ladders, platforms or work stands.
 - 6. Carrying a load that obstructs vision.

- 7. Ice build up in coolers.
- 8. Electrical cords, wiring, hoses and box straps on the floor.
- 9. Uneven floor surfaces or holes in floor.
- 10. Employees not using hand rails.
- 11. Drain covers not in place.

13. <u>Training</u>

- A. Slip, Trip and Fall Prevention Training associated with responsibilities should occur annually.
- B. SES Employees who work on Ladders with a working height of six feet or more shall be knowledgeable of the following:
 - 1. How to inspect ladders for visible defects; and
 - 2. How to use ladders properly.
- C. SES Employees who use Fall Protection Personal Protective Equipment to control fall hazards in their work area shall be knowledgeable of the following:
 - 1. The application limits of the equipment:
 - 2. The proper hook-up, anchoring and tie-off techniques including determination of elongation and deceleration distance;
 - 3. Methods of use; and
 - 4. Inspection and storage of equipment.
- D. SES Employees who use Aerial Lifts shall be knowledgeable of the following:
 - 1. The manufacturer's operating instructions;
 - 2. Pre-start inspection of the lift;
 - 3. Inspection of the work area for dangerous conditions such as uneven surfaces, overhead obstructions such as power lines, and severe weather;
 - 4. Load capacities of the equipment;
 - 5. How to safely move the equipment;
 - 6. How to prevent falls and use appropriate fall protection personal protective equipment; and
 - 7. Minimum safe approach distances to energized power lines.
- E. SES Employees who work on Scaffolds require specific training in the following:
 - 1. The nature of any electrical hazards, fall hazards and falling object hazards in the work area;
 - The correct procedures for dealing with electrical hazards and for erecting, maintaining, and dissembling the fall protection systems and falling object protection systems being used;
 - 3. The proper use of the scaffold, and the proper handling of materials on the scaffold; and
 - 4. The maximum intended load and the load carrying capacities of the scaffolds.
- F. SES Employees Assigned as Fall Protection Competent Persons shall be trained and certified through a qualified fall protection training program (8 hours) to be qualified and knowledgeable of the following:
 - 1. The nature of falls in the work area;
 - 2. The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems used;
 - 3. The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection to be used;

- 4. The role of each employee in the safety monitoring system when this system is used;
- 5. The limitations on the use of mechanical equipment during the performance of roofing work on low sloped roofs;
- 6. The correct procedures for the handling and storage of equipment and material, and the erection of overhead protection;
- 7. The role of employees in fall protection plans; and
- 8. The appropriate OSHA standards.
- G. SES Employees will not be Assigned as Scaffold Competent Persons. A contract scaffold competent person shall be additionally trained and certified through a scaffold competent person training program (4 hours) to be qualified and knowledgeable of the following:
 - 1. The proper selection of scaffold for the task based upon the type of work to be conducted and the working load to be supported;
 - The correct procedures for the erection, dismantling, moving and altering of scaffolds; and
 - 3. The OSHA standards.
- H. SES Employees Assigned as Qualified Climbers who routinely climb fixed ladders, step bolts or similar climbing devices on towers and poles where ladder safety devices are not provided shall meet the following requirements:
 - 1. Shall be physically capable;
 - 2. Shall have successfully completed a training or apprenticeship program that covers hands-on training for the safe climbing of ladders or step bolts; and
 - 3. Shall be protected by a fall protection system when reaching their work position.
- I. Retraining shall be conducted under the following conditions:
 - 1. When changes to the work place render previous training obsolete.
 - 2. Changes are made to the types of fall protection equipment used.
 - 3. Incidents or observations indicate that an employee has not retained the necessary knowledge or skills to safely use fall protection equipment.
 - 4. When three years have passed since the employee's last training.
- J. Each location shall maintain a written training certification record containing the name of the employee trained, the name of the person who conducted the training, and the date of the training.

14. Annual Program Review

To ensure that all key elements of the Fall Protection and Prevention Program are being followed, an annual review of work areas will be conducted. See the *Fall Protection Program Review Checklist – Appendix A*. The written program will be reviewed annually at a minimum and signed by the site/ plant manager. Changes are to be communicated to all appropriate personnel.

Sources for More Information

29 CFR 1910.66 Subpart F Powered Platforms, Man lifts, and Vehicle Mounted Platforms 29 CFR 1910 Subpart D, Walking – Working Surfaces 29 CFR 1926 Subpart M, Floor and Wall Openings 29 CFR 1926 Subpart X, Stairways and Ladders 29 CFR 1926.104 Safety Belts, Lifelines and Lanyards 29 CFR 1926.105 Safety Nets 29 CFR 1926.451 Scaffolding ANSI A10.14 1991 Standard for Construction and Demolition Operations ANSI/ASSE Z359.2-2007 Minimum Requirements for a Comprehensive Managed Fall Protection Program ANSI/ASSE Z359.0-2007 Fall Protection Code ANSI/ASSE Z359.3-2007 Safety Requirements for Positioning and Travel Restraint Systems ANSI/ASSE Z359.4-2007 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components ANSI/ASSE Z359.1-1992 (R1999) Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

The use of this policy is authorized by: ______(Plant Manager) _____Date

_____Oafety Director.) _____Date

Fall Protection Program Review Checklist

Audit Performed by Date				
	Υ	Ν	NA	COMMENTS
A. Fall Protection Program				
Is the most current fall protection policy being used and is the training material/program current and up to date?				
Is the program reviewed on an annual basis?				
Are fall injuries tracked for program improvement?				
Have individual control procedures been developed for each known hazard?				
Has a fall hazard protection inventory of the facility been conducted?				
Are the individual fall hazard procedures reviewed on an annual basis?				
Do authorized employees inspect fall protection equipment?				
Do the procedures outline techniques to be used for fall protection?				
Is training conducted as specified in the Fall Protection Program?				
Employees instructed in the purpose & use of the fall protection procedure?				
Does training include recognition of fall hazards and communication of the rescue plan?				
 Have any of the following taken place? Was retraining provided? a change in job assignments? A change in fall protection requirements? A change in the fall protection procedures? When employee proficiency is in doubt? When accidents or near misses occur? 				
Are fall procedures shared between host and contractor?				
Are contractor safety considerations discussed during training?				
Do contractors notify affected employees of the hazards involved in work?				
Manager Signature: Safety Manager Signature:			Date:_ Date	e: