



## ADMINISTRATIVE PRACTICES MANUAL

### SAFETY MANUAL – FALL PROTECTION:

#### 1.0 Scope and Application

This policy contains safety requirements to protect employees from falls of six (6) feet or more when performing elevated work except on ladders and scaffolding (See Ladders and Scaffolding Policy). This includes all construction work and activities that subject employees to elevated heights, including, but not limited to: changing light bulbs, trimming trees, all hi-lo truck work, painting, etc. This policy complies with Chapter SPS 332 (Public Employee Safety and Health) of the Wisconsin Administrative code as promulgated by the Wisconsin Department of Safety and Professional Services and 29 CFR Subpart M (Fall Protection) as promulgated by the U.S. Occupational Safety and Health Administration.

#### 2.0 Responsibilities

**Risk Management:** Support and management of this policy.

**Department Heads:** Implementation of policy. Designated qualified person.

**Supervisors:** Ensure policy is adhered to by all employees.

**Employees:** Follow requirements contained in this policy.

All employees are responsible for complying with the requirements contained in this policy. Failure to abide by these requirements may subject the employee to disciplinary action, up to and including discharge.

#### 3.0 Departmental Policies and Requirements

This policy represents minimum fall protection requirements. Department Heads may develop more specific procedures to be followed in their respective departments.

#### 4.0 Definitions

**Qualified Person:** A person, typically a Supervisor that has been trained in all of the following areas:

- The nature of fall hazards in the work area;
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
- 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;
- The role of each employee in the safety monitoring system when this system is used;
- The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs;
- The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection; and
- The role of employees in a Fall Protection Plan and the OSHA standard.



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### 5.0 Training

Employees engaged in activities that expose them to fall hazards at heights of six (6) feet or more will receive training in the requirements of this policy at their time of initial assignment. Additionally, the employee will receive training in fall protection to be provided by a qualified person. Retraining will be provided whenever conditions or work practices and/or equipment changes or when an employee demonstrates a lack of understanding for the requirements associated with fall protection.

### 6.0 Documentation Requirements

Written documentation of training records.

### 7.0 General Requirements

- a) Supervisors will ensure that all fall protection systems selected for each application will be installed before an employee is allowed to go to work in an area that necessitates the protection. When selecting and purchasing fall protection equipment and supplies, they must be approved for the purpose for which they are intended. Such fall protection equipment is required to bear appropriate labels clearly indicating that the equipment meets or exceeds applicable ANSI and ASTM requirements.
- b) All elevated work above six (6) feet requires that employees utilize some type of personal fall arrest system such as lanyards, lifelines or other protections as provided in this policy.
- c) Where lanyards and vertical fall arrest systems are used, a body harness shall be worn with lanyards and vertical fall arrestors being anchored to a suitable point sufficient to withstand above and beyond the force of impact as specified in 29 CFR 1926.503 and 1916 Subpart M Appendices A through E.
- d) Supervisors will determine if the walking / working surfaces on which its employees are to work have the strength and structural integrity to support employees safely. Employees will be allowed to work on those surfaces only when the surfaces have the requisite strength and structural integrity.
- e) If the situation calls for use of fall protection devices such as harnesses or lanyards and belts because the fall hazard cannot be reduced to a safe level, then the employee must don such protective equipment before beginning the work and use it as intended throughout the duration of the work.
- f) Only employees trained in such work are expected to perform it.
- g) All worksites shall be kept clean and orderly and in a sanitary condition.
- h) All walking/working surfaces must be kept in a clean and, so far as possible, dry condition. Where wet processes are used, drainage shall be maintained, and false floors, platforms, mats, or other dry standing places should be provided where practicable.

### 8.0 Personal Fall Arrest Systems

- a) Personnel requiring the use of personal fall protection equipment shall employ the "Buddy System" or have an observer to render assistance when and if required.
- b) There are three main components to the personal fall arrest system. This includes the personal protective equipment the employee wears, the connecting devices and the anchorage point. Prior to tying off to perform the work, a means of rescue in the event of a fall must be immediately available. The system needs to meet the following criteria for each component:



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### 1. Personal Protective Equipment

- Full body harnesses are required. The use of body belts is prohibited.
- The attachment point of the body harness is the center D-ring on the back.
- Employees must always tie off at or above the D ring of the harness except when using lanyards 3 feet or less in length.
- Harnesses or lanyards that have been subjected to an impact load shall be destroyed unless involved in an accident in which case it shall be turned over to the Supervisor.
- Load testing shall not be performed on fall protection equipment.

### 2. Connecting devices

- This device can be a rope or web lanyard, rope grab or retractable lifeline.
- Only locking snap hooks may be used.
- Horizontal lifelines will be designed by a qualified person and installed in accordance with the design requirements.
- Lanyards and vertical lifelines need a minimum breaking strength of 5,000 pounds.
- Lanyards may not be clipped back to itself (e.g. around an anchor point) unless specifically designed to do so.
- If vertical lifelines are used, each employee will be attached to a separate lifeline.
- Lifelines need to be protected against being cut or abraded

### 3. Anchorage

a) Secure anchor points are the most critical component when employees must use fall arrest equipment. Buildings may have existing structures (e.g., steel beams that may meet the criteria for a secure anchor point). Other work locations and assignments may require the installation of a temporary or permanent anchor. As a minimum, the following criteria must be considered for each type of anchor point:

- Structure must be sound and capable of withstanding a 5000 lb. static load/person attached.
- Structure/anchor must be easily accessible to avoid fall hazards during hook up. Direct tying off around sharp edged structures can reduce breaking strength by 70% therefore; chafing pads or abrasion resistant straps must be used around sharp edged structures to prevent cutting action against safety lanyards or lifelines.
- Structures used as anchor points must be at the worker's shoulder level or higher to limit free fall to 6 feet or less and prevent contact with any lower level (exception – when self retracting lifelines and or 3 foot lanyards are used)
- Choose structures for anchor points that will prevent swing fall hazards. Potentially dangerous "pendulum" like swing falls can result when a worker moves horizontally away from a fixed anchor point and falls. The arc of the swing produces as much energy as a vertical free fall and the hazard of swinging into an obstruction becomes a major factor. Raising the height of the anchor point can reduce the angle of the arc and the force of the swing. Horizontal lifelines can help maintain the attachment point overhead and limit the fall vertically. A qualified person must design a horizontal lifeline.

b) Permanent Anchor Requirements:

In addition to all the criteria listed above, the following points must be considered:

- Environmental factors and dissimilarity of materials can degrade exposed anchors.
- Compatibility of permanent anchors with employee's fall arrest equipment.
- Inclusion of permanent anchors into a Preventive Maintenance Program with scheduled annual re-certification.
- Visibly label permanent anchors.
- Anchors must be immediately removed from service if subjected to fall arrest forces.



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c) Reusable Temporary Anchors:

- Reusable temporary roof anchors must be installed and used following the manufacturer's installation guidelines.
- Roof anchors must be compatible with employee's fall arrest equipment.
- Roof anchors must be removed from service at the completion of the job and inspected prior to reuse following the manufacturer's inspection guidelines.
- Roof anchors must be immediately removed from service and disposed of if subjected to fall arrest forces.

d) Complete System:

If a fall occurs, the employee should not be able to free fall more than 6 feet nor contact a lower level. To ensure this, add the height of the worker, the lanyard length and an elongation length of 3.5 feet. Using this formula, a six-foot worker with a six-foot lanyard would require a tie-off point at least 15.5 feet above the next lower level.

- A personal fall arrest system that was subjected to an impact needs to be removed from service immediately.
- Personal fall arrest systems need to be inspected prior to each use and damaged or deteriorated components removed from service.
- Personal fall arrest systems should not be attached to guardrails nor hoists.

e) Inspection:

The employee will inspect the entire personal fall arrest system prior to every use. The competent person will inspect the entire system in use at the initial installation and weekly thereafter. The visual inspection of a personal fall arrest system periodically will follow the manufacturer's recommendations.

### 9.0 Work From Aerial Lifts And Self Powered Work Platforms

- a) Body harnesses must be worn with a shock-absorbing lanyard and must be worn when working from an elevated work platform. The point of attachment must be the lift's boom or work platform.
- b) Personnel cannot attach lanyards to adjacent poles, structures or equipment while they are working from the aerial lift.
- c) Certain aerial lifts that may not be designed for driving operations while the boom is in an elevated position must be lowered prior to moving while the operator is inside of the lift platform. (See manufacturer's guidelines for specific lifts operations)

### 10.0 Guardrail Systems

- a) Guardrails are needed at the edge of work areas 6 feet or more in height to protect employees from falling. This includes the edge of excavations greater than six feet in depth. Guardrail systems need to meet the following criteria:
  - Top rail is 42 inches, +/- 3 inches above the walking/working level
  - Mid rail is located midway between the top rail and the walking/working level
- 1) It is important to remember that the working level is that level where the work is being done. Someone working on a stepladder next to an edge may raise his/her working surface well above the walking surface.



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- 2) Both top and mid rails should be constructed of materials at least one-quarter inch in thickness or diameter. If wire rope is used for top rails, it needs to be flagged with a high-visibility material at least every 6 feet and can have no more than 3" of deflection.
- 3) The top rail needs to withstand a force of 200 pounds when applied in any downward or outward direction.
- 4) The mid rail needs to withstand a force of 150 pounds applied in any downward or outward direction.
- 5) The system should be smooth to prevent punctures, lacerations or snagging of clothing.
- 6) The ends of the top rail should not overhang the terminal posts, except when such overhang does not present a projection hazard.
- 7) When a hoisting area is needed, a chain, gate or removable guardrail section must be placed across the access opening when hoisting operations are not taking place.

### 11.0 Unprotected Sides And Edges

- a) Each employee on a walking / working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.

### 12.0 Leading Edges

- a) Each employee who is constructing a leading edge 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems. Exception: If a Supervisor can demonstrate that it is infeasible or creates a greater hazard to use these systems, a fall protection plan shall be developed that meets the requirements of paragraph (k) of 29 CFR 1926.502.

Note: There is a presumption that it is feasible and will not create a greater hazard to implement at least one of the above-listed fall protection systems. Accordingly, the Supervisor has the burden of establishing that it is appropriate to implement a fall protection plan which complies with 1926.502(k) for a particular workplace situation, in lieu of implementing any of those systems.

- b) Each employee on a walking/working surface 6 feet (1.8 m) or more above a lower level where leading edges are under construction, but who is not engaged in the leading edge work, shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system.
- c) If a guardrail system is chosen to provide the fall protection, and a controlled access zone has already been established for leading edge work, the control line may be used in lieu of a guardrail along the edge that parallels the leading edge.
- d) A "Fall Protection Plan" option is available only to employees engaged in leading edge work who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment. The fall protection plan must conform to the specifications of 29 CFR Part 1926.502.

### 13.0 Hoist Areas

- a) Each employee in a hoist area shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems or personal fall arrest systems. If guardrail systems, [or chain, gate, or guardrail] or portions thereof, are removed to facilitate the hoisting operation (e.g., during landing of materials), and an employee must lean through the access opening or out over the edge of the access opening (to receive or guide equipment and materials,



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for example), that employee shall be protected from fall hazards by a personal fall arrest system.

### 14.0 Holes

- a) Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes.
- b) Each employee on a walking/working surface shall be protected from tripping in or stepping into or through holes (including skylights) by covers.
- c) Each employee on a walking/working surface shall be protected from objects falling through holes (including skylights) by covers.

### 15.0 Ramps, Runways, And Other Walkways

- a) Each employee on ramps, runways, and other walkways shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems.

### 16.0 Excavations

- a) Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barrier
- b) Each employee at the edge of a well, pit, shaft, and similar excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers.

### 17.0 Dangerous Equipment

- a) Each employee less than 6 feet (1.8 m) above dangerous equipment shall be protected from falling into or onto the dangerous equipment by guardrail systems or by equipment guards.
- b) Each employee 6 feet (1.8 m) or more above dangerous equipment shall be protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems.

### 18.0 Wall Openings

- a) Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet (1.8 m) or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches (1.0 m) above the walking/working surface, shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.



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### 19.0 Protection From Falling Objects

a) When an employee is exposed to falling objects, each employee is required to wear an ANSI (American National Standards Institute) hard hat and comply with one of the following measures:

- Erect toeboards, screens, or guardrail systems to prevent objects from falling from higher levels; or,
- Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced; or,
- Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.

**End Policy**