



IWU PHYSICAL PLANT SAFETY PROGRAM

Revision: 1

FALL PROTECTION PLAN

Section: 8

STANDARDS

Fall Protection, Title 29 Code of Federal Regulations (CFR) Part 45, Subpart M, Fall Protection, 1926.500, 1926.501, 1926.502, and 1926.503

1.0 Purpose

This document meets the requirements outlined in OSHA Standard Part 45, *Fall Protection* for the development, implementation, and maintenance of a written fall protection program (FPP). The purpose of the program is to provide information and training to designated employees of Illinois Wesleyan University regarding fall protection hazards and preventative measures.

2.0 Scope

The fall protection program applies to designated employees who may reasonably expect to engage in activities presenting fall hazards in the course of their work, including but not limited to work on rooftops, scaffolding, aerial lifts, and ladders higher than 6-feet.

3.0 Program Components

- 3.1. Program Administrator.** Physical Plant Managers will be the fall protection program administrator, and be considered the Competent Person with regards to the OSHA fall protection standard.
- 3.2. Designated Employees.** Employees who can reasonably be expected to engage in tasks that would require fall protection in the normal course of their work will be issued, and receive training in the proper use of, appropriate fall protection equipment.
- 3.3. Hazard Determination.** The Managers are responsible for reviewing their operations and job requirements to determine where fall protection is necessary. Upon determination of a fall hazard, the Manager will provide the employee with appropriate equipment, PPE, written work practices specific to the task and location, and conduct work area surveillance during the performance of the task.



IWU PHYSICAL PLANT SAFETY PROGRAM

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FALL PROTECTION PLAN

Section: 8

WORK MAY NOT PROCEED UNTIL FALL PROTECTION PROCEDURES HAVE BEEN TAKEN – OBSERVED INSTANCES TO THE CONTRARY WILL BE REPORTED IMMEDIATELY TO THE EMPLOYEE’S SUPERVISOR.

3.4. Lifts, Ladders and Scaffolding. The following procedures will be employed in the use of powered aerial lifts, portable ladders, or scaffolding greater than 6-feet in height:

3.4.1 Lifts:

- **Powered Manlifts** will be operated only by personnel trained to do so pursuant to 29 CFR 1910.68
- **5-STEP APPROACH:** Pre-Start Inspection, Function and Controls Test, Worksite Hazard Assessment, Operations, and Shutdown.
- **NEVER:** Override safety devices, move the lift with someone aboard, exceed the load limit, allow unauthorized use.
- **Lifts** may not be transported with the basket or platform raised and the controls will be tested before each use.
- **FALL PROTECTION:** Workers must stand firmly on the floor of the lift basket or platform, and must wear PFA equipment (body belt with a 2-ft lanyard at a minimum) tied-off to the lift; tying-off to adjacent structures outside the lift is prohibited, unless the lift is specifically being used to access a separate elevated work area outside the basket. Lifts completely surrounded by rails are EXEMPT from fall protection equipment requirements, so long as they are being used according to the manufacturer’s recommendations and OSHA specifications.

3.4.2 Portable ladders will be checked for condition, capacity, and placement before work commences, and maintained and used according to 29 CFR 1910.25-26.

- **CONDITION:** Inspect ladder, jacks, levelers, hooks, and other equipment, and clear slippery materials from rungs, steps, and feet before use.
- **CAPACITY:** Do not exceed the listed load rating of the equipment, or use it for unintended purposes.

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Edited By: JJB

Page 2 of 6



IWU PHYSICAL PLANT SAFETY PROGRAM

Revision: 1

FALL PROTECTION PLAN

Section: 8

- **PLACEMENT:** Place the ladder on a stable surface, avoid electrical hazards, secure it if it might be displaced, and check all locks. Default distance the foot of ladder should be placed from the adjacent wall is $\frac{1}{4}$ the height being accessed. Stepladders may not be placed against a vertical surface while folded, an extension ladder should be used instead.
- **CANNOT:** stand on the top platform of a stepladder, or the top rung of an extension ladder; tie multiple ladders together to extend their reach or length, or to create a scaffold (see below); move a ladder while a person is on it; or use a stepladder in a closed position.
- **3X3 RULE:** Ladders used to reach an elevated work surface must extend at least 3-feet above that surface, and be secured by another worker or with tie-downs; and workers must maintain at least three points of body contact on the ladder at all times.
- **FALL PROTECTION:** Ladders are exempt from fall protection equipment requirements, so long as they are being used according to the manufacturer's recommendations and the OSHA specifications.

3.4.3 **Scaffolding** may only be erected, used and dismantled by personnel trained to do pursuant to 29 CFR 1910.28, or 1926.450 et seq (Subpart L, *Scaffolds*) – Bowdoin personnel may only access scaffolding so managed by a certified contractor. Fall protection measures on scaffolding may include guardrails, PFA equipment, or a combination of hazard reduction measures appropriate to the work being performed.

3.5. **PPE Selection.** Fall arrest and positioning equipment are classified as follows:

- **Personal fall arrest (PFA) equipment** consists of a Body Harness, Connectors, Deceleration Device (DeDe) and Lanyard, Lifeline, and Anchor Point(s). The harness must have a D-ring on the back (for the lanyard and/or DeDe), and may have positioning D-rings on the sides as well (see below). The DeDe is designed to uncoil during a fall, limiting drop distance to 6-feet and an arresting force to 1,800-pounds, and must have a breaking strength of 3,600-pounds (safety factor of 2x). The lifeline may be attached directly to the harness for retrieval purposes, or strung between two anchor points to allow mobile tie-off of the lanyard and/or DeDe along its length (static line).



IWU PHYSICAL PLANT SAFETY PROGRAM

Revision: 1

FALL PROTECTION PLAN

Section: 8

- **Positioning equipment** consists of a Body Belt (possibly integrated into a harness), Connectors, Lifeline, and Anchor Point(s). The lifeline must limit drop distance to 2-feet and an arresting force to 900-pounds, allow vertical or horizontal travel appropriate to the work being performed, and is NOT designed to be used for fall arrest.
- **Anchor points** must be able to withstand 5,000-pounds of force, and may consist of location-specific fixtures, temporary installations, and/or static lines of sufficient strength (i.e., coated steel cable) and properly anchored.
- **Connectors** (carabiners, gated clips, etc.) must have a tensile load strength of 3,600-pounds, and be made of corrosion-resistant steel.

3.6. Fall Protection Procedures. The following procedures will be employed where fall protection has been deemed necessary for safe operations:

3.6.1 Hazard Recognition

- Unprotected Sides and Edges
- Holes, Excavations, and Wall Openings
- Rooftops and Leading Edges
- Formwork, Pre-cast Concrete, and Overhand Bricklaying
- Ramps and Runways
- Hoists and Lifts
- Dangerous Equipment

3.6.2 Hazard Reduction

- Safety Monitoring System – Having a Competent Person continuously supervise the work area, partially mitigating the need for more comprehensive fall protection measures designed to address less technically trained workers or visitors.
- Controlled Access Zones – A work area secured from access except by authorized workers, partially mitigating the need for more comprehensive fall protection measures designed to address transient workers or visitors. Motion-stopping barriers and supervision will restrict access.
- Guard and Toe boards – Fixed motion-stopping barriers of construction-grade materials (wood, metal, or plastic). Guardrails consist of a top rail 42-inches in height, a mid rail 21-inches in height, and posts spaced no more than 6-feet



IWU PHYSICAL PLANT SAFETY PROGRAM

Revision: 1

FALL PROTECTION PLAN

Section: 8

apart. Toe boards are nominally 4-inches in height, with no more than ¼-inch floor clearance.

- Warning Lines – A temporary motion-stopping barrier, usually a rope or line with a tensile strength of at least 500-pounds, strung 34-39 inches above the walking surface, and flagged with high-visibility material (i.e., survey tape) at least every 6-feet.
- Lifts, Ladders, and Scaffolds – May be used to provide access to an elevated work area, partially mitigating the need for more comprehensive fall protection measures.
- Fall Arrest and Positioning Equipment – Last resort, when other reduction measures will not completely mitigate the identified fall hazards.

3.6.3 Fall Protection Plan

Before work commences, the job-specific fall hazards and reduction measures to be applied will be relayed to the workers by their Supervisor, and all fall protection equipment will be issued and inspected.

3.7. Employee Training. The Maintenance Managers will coordinate and/or provide annual training for designated employees. The Physical Plant will keep records of training for the duration of employment. Training shall include (at a minimum) the following components:

- Nature of fall hazards at the facility, and the options for addressing them;
- The use, operation, limitations, and maintenance of fall protection equipment;
- The employee's role in safety monitoring and fall protection planning; and
- General requirements of the OSHA standard (29 CFR 1926 Subpart M) and ANSI 92.3-1990 Section 8 (statement attached).

3.8. Exemptions. The following situations are exempt from fall protection requirements:

- Use of portable stepladders with a working height of 6-feet or less; and
- Work on elevated surfaces 6-feet or less above the next walking surface below.

3.9. Inspections and Maintenance. Personal fall arrest equipment will be stored and managed by the Supervisor, inspected and re-certified at least annually by a qualified contractor, and replaced as needed in compliance with ANSI Standards. PFA equipment subjected to impact loading (i.e., a spent deceleration device) will



IWU PHYSICAL PLANT SAFETY PROGRAM

Revision: 1

FALL PROTECTION PLAN

Section: 8

be disposed and not returned to service. Aerial lifts and similar equipment will be inspected at least annually and maintained according to the manufacturer's specifications.

4.0 Program Review

The program will be audited by the Supervisors at least annually in coordination with training of designated employees, and the periodic inspection of the fall protection procedures in practice at the facility.