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1. Purpose

Falls from heights and on the same level (walking-working surfaces) are among the leading causes of serious work-related injuries and deaths. The purpose of this program is to establish the minimum requirements and responsibilities for University of Alaska Anchorage (UAA) employees when on walking-working surfaces, including elevated work platforms, and rooftops. This program is designed to ensure workers are knowledgeable in the hazards of work activities that expose them to falls when working four (4) feet or more above a lower level and employees should use this program in conjunction with the UAA Fall Protection Program.

2. Objective

UAA, in its continuing effort to provide employees with safe, healthful working conditions, and to comply with the Occupational Safety and Health Act is implementing the following program for walking working surfaces to protect people working at the University, by helping employees, student workers, faculty, staff, and outside contractors better understand the importance of safe conditions to prevent falls.

3. Scope

This program applies to UAA employees, students, faculty, staff, and outside who perform any work activities that expose them to slips, trips, or falls through unguarded floors and wall openings, floor holes, and falls from elevated work platforms and roofs.

4. Definitions

Dockboard - a portable or fixed device that spans a gap or compensates for a difference in elevation between a loading platform and a transport vehicle. Dockboards include, but are not limited to, bridge plates, dock plates, and dock levelers.

Egress - exit route, a continuous and unobstructed path of exit travel from any point within a workplace to a place of safety. Consists of three parts, the exit access, the exit, and the exit discharge. The minimum width of a means of egress is 28 inches, or .2 inches multiplied by the building occupancy.

Failure - a load refusal, breakage, or separation of component parts. A load refusal is the point at which the ultimate strength of a component or object is exceeded.

Fall Hazard - any condition on a walking working surface that exposes an employee to a risk of harm from a fall on the same level or to a lower level.

Fall Protection - any equipment, device, or system that prevents an employee from falling from an elevation or mitigates the effect of such a fall.

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Fixed Ladders - a ladder with rails or individual rungs that is permanently attached to a structure, building, or equipment. Fixed ladders include individual-run ladders, but not step bolts or manhole steps.

Guardrail System - a barrier erected along an unprotected or exposed side, edge, or other area of a walking working surface to prevent employees from falling to a lower level.

Handrail - a rail used to provide employees with a handhold for support.

Hole - a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least 2 inches (5cm) in its least dimension.

Lower Level - a surface or area to which an employee could fall. Such surfaces or areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, and other similar surfaces.

Personal Fall Arrest System - a system used to arrest an employee in a fall from a walking-working surface. It consists of a body harness, anchorage, and connector. The means of connection may include a lanyard, deceleration device, lifeline, or a suitable combination of these.

Personal Fall Protection System - a system (including all components) an employer used to provide protection from falling or to safely arrest an employee's fall if one occurs. Example of personal fall protection systems include personal fall arrest systems, positioning systems, and travel restraint systems.

Platform - a walking-working surface that is elevated above the surrounding area.

Portable Ladder - a ladder that can readily be moved or carried, and usually consists of side rails joined at intervals by steps, rungs, or cleat.

Positioning System - a system of equipment and connectors that, when used with a body harness or body belt, allows an employee to be supported on an elevated vertical surface, such as a wall or window sill, and work with both hands free.

Ramp - an inclined walking-working surface used to access another level.

Riser - the upright (vertical) or inclined member of a stair that is located at the back of a stair tread or platform and connects close to the front edge of the next higher tread, platform, or landing.

Rung, Step, or Cleat - the crosspiece of a ladder on which an employee steps to climb up and down.

Runway - an elevated walking\working surface, such as a catwalk, a foot walk along shafting, or an elevated walkway between buildings

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Scaffold - any temporary elevated or suspended platform and its supporting structure, including anchorage points, used to support employees, equipment, materials, and other items.

Stair Rail or Stair Rail System - a barrier erected along the exposed or open side of the stairways to prevent employees from falling to a lower level

Stairway (Stairs) - risers and treads that connect one level with another and includes any landings and platforms in between those levels.

Stepladder - a self-supporting, portable ladder that has a fixed height, flat steps, and a hinged back

Stepstool - a self-supporting, portable ladder that has flat steps and side rails

Supervisor - any UA employee who manages the work of other UA employees

Toeboard - a low protective barrier that is designed to prevent materials, tools, and equipment from falling to a lower level, and protect employees from falling

Tread - a horizontal or vertical surface on or through which an employee walks, works, or gains access to a work area or workplace location

Warning Line - a barrier erected to warn employees that they are approaching an unprotected side or edge, and which designates an area in which work may take place without the use of other means of fall protection

5. Authority and Responsibilities

In addition to the roles and responsibilities outlined in the UAA Training Program, the following apply to the Walking-Working Surfaces Program.

EHS/RM

- Inspect walking-working surfaces for appropriate guarding and conditions as needed or upon request, and reporting any hazardous conditions to the appropriate department
- Assist departments with the selection of proper walking-working surface guarding upon request

Supervisors

- Ensure employees are aware of walking-working surface hazards appropriate to their assigned tasks
- Provide specific personnel protective equipment (PPE) if needed for working on specific or irregular working surfaces
- Perform or provide training for employees

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Department Safety Coordinator

- Assist with the identification and implementation of specific walking-working surfaces and guarding where required
- Inspect walking-working surfaces for appropriate guarding, conditions and housekeeping as needed or upon request

Employees

- Understand and identify when fall hazards are present
- Maintain housekeeping in assigned areas to prevent falls
- Ensure aisleways are always kept clean and clear for egress

Outside Contractors

- Perform all work in compliance with the company's walking-working surfaces program, which will be reviewed and approved by the EHS/RM department.
- If the company does not have a program, it must comply with this program

6. Hazards Associated with Walking-Working Surfaces

Walking and working surface falls cause the majority of injuries in general industry. The following hazards, among others, can lead to personal injury or death:

- Falls from an elevated level
- Falls from an unprotected edge
- Falls through unprotected floor openings
- Falls as a result of slips and trips
- Injuries from falling objects
- Improperly designed platforms, ladders, walkways etc.

7. Engineering Controls

Engineering controls are design plans or changes to the working environment to prevent or reduce employee exposure to potential fall hazards. The following example engineering controls should be considered in area design to reduce the risk of falls.

- Proper construction of elevated locations
- Use of hand, knee and toe rails where required
- Proper design of fixed ladders and stairs

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- Adequate lighting in areas
- Adequate storage space to reduce clutter in walkways

8. Administrative Controls

Administrative controls are safe work practices and procedures designed to reduce the risk of fall. Example administrative controls include the following:

- Training for employees covering walking working surfaces
- Routine inspections of walking and working surfaces
- Routine inspections for good housekeeping practices
- Immediate cleanup of material spills that may create slip hazards
- Regular plowing of parking lots and ice removal of outdoor walkways

9. Procedures

General Requirements

Each department is responsible for maintaining safe walking-working surfaces. The following guidelines apply to all departments:

- Walking-working surfaces shall be kept clean, dry (where possible), and orderly.
- Every floor, workplace, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.
- Walking-working surfaces must have the strength and integrity to support employees safely.
- Covers and/or guardrails shall be provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc.
- The floor or roof of a building shall not be overloaded with materials and/or equipment over the approved load limits. Elevated storage and other platforms shall be marked with the load bearing weight.
- Permanent aisles and passageways shall be clearly marked, have adequate space for passage of both moving equipment and employees, have safe clearances at turns, doors, and passageways, and shall not be obstructed by physical barriers or stored materials.

Floor Openings, Wall Openings, and Holes

Any openings or holes shall meet the following requirements:

- Every floor opening, or platform shall be guarded by a standard railing.

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- Toeboards must be installed around floor and wall openings and where the potential exists for tools and other materials to fall on personnel working below.
- Floor and wall openings, including manholes, trapdoors, pits, ladderway floor openings, and chute openings, must be safely covered or blocked from access.
- When an opening is not covered or blocked from access, a person must be assigned for constant attendance to the opening until the cover is replaced.
- Covers must be sound, solid, not easily opened, and cannot project more than one inch above the floor or surface level. Hinges, handles, bolts, or other parts must set flush with the floor or cover surface.
- All covers shall be secured when installed to prevent accidental displacement by the wind, equipment, or employees.
- All temporary covers shall be color coded or they shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.
- Barricades that are designed to prevent someone from falling into the opening must be visually noticeable and cannot have additional openings that create additional fall hazards.
- Floor surfaces surrounding the opening shall be free of clutter and slippery material.

Fixed Industrial Stairs

The following applies to fixed stairway installations:

- Standard stair railings and handrails shall be provided on stairs with four (4) or more risers.
- Standard railings, including top rails, mid-rails, and toeboards shall be provided on the open sides of exposed stairways and stair platforms.
- Handrails shall be provided on at least one side of closed stairways, preferably on the right-side descending.
- Fixed stairways must be designed and constructed to carry a load of five (5) times the normal live load anticipated at any one time and be able to safely carry a moving concentrated load of 1000 pounds.
- Fixed stairways shall have a minimum width of twenty-two (22) inches.
- Fixed stairs shall be installed at angles to the horizontal of between thirty (30) and fifty (50) degrees.
- Stairway platforms shall not be less than the width of a stairway and must be a minimum of thirty (30) inches in length measured in the direction of travel.
- Adequate headroom of seven (7) ft. must be maintained above stair tread.

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- Stairs shall be free of clutter, and treads must be reasonably slip resistant.

Dockboards (Bridge Plates)

UAA will ensure that each dockboard meets the requirements of this section:

- Portable and powered dockboards must be of sufficient strength to carry the load imposed on them.
- Portable dockboards must be secured in position by being anchored or equipped with devices that prevent slippage during use.
- Handholds, or other effective means, shall be provided on portable dockboards to permit safe handling.
- Powered dockboards must be designed and constructed in accordance with the U.S. Department of Commerce publication, Commercial Standard CS202-56 (1961) "Industrial Lifts and Hinged Loading Ramps".

Guardrail Systems

Guardrail systems must meet the following requirements:

- The top edge height of top rails must be 39-42 inches above the walking/working level.
- Mid-rails must be installed at a height midway between the top edge of the guardrail system and the walking/working level.
- In areas open to the public, open guards shall have balusters or ornamental patterns such that a 4-inch diameter sphere cannot pass through any opening up to a height of 34 inches. From 34 inches to 42 inches above the walking surface, a sphere 8 inches in diameter shall not pass.
- Guardrail systems must be capable of withstanding a force of at least 200 pounds.
- Guardrail systems must be surfaced to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
- Guardrail systems used on ramps and runways must be erected along each unprotected side or edge.
- Toeboards must be three and one half (3.5) inches in height from its top edge to the level of the walking/ working surface.
- Toeboards must be securely fastened in place and with not more than ¼ - inch clearance above the walking/ working surface level.
- Where material is piled to such height that a standard toeboard does not provide protection, paneling from floor to intermediate rail, or to top rail must be provided.

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Designated Areas

Designated areas must be established for work of a temporary nature, such as maintenance of rooftop equipment.

- Designated areas must only be established on surfaces that have a slope from the horizontal of 10 degrees or less.
- Designated areas must consist of an area surrounded by a rope, wire, or chain and supporting stanchions.
- After being erected with the line attached, stanchions must be capable of resisting, without tipping over, a force of at least 16 pounds applied horizontally against the stanchion.
- The line must have a minimum breaking or tensile strength of 500 pounds.
- The line must be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.
- The line must be installed in such a manner that its lowest point is no less than 34 inches nor more than 39 inches from the work surface.
- The line forming the designated area must be clearly visible from any unobstructed location within the designated area up to 25 feet away.
- The stanchions must be erected as close to the work area as is permitted by the task.
- The perimeter of the designated area must be erected no less than six (6) feet from the unprotected side or edge; and access to the designated area shall be by a clear path formed by two lines attached to stanchions.

Falling Objects

When employees are exposed to falling objects, UAA will ensure that each employee wears adequate head protection and employees are protected from falling object by one of the following:

- Erection of toeboards, screens, or guardrail systems to prevent objects from falling to a lower level.
- Erection of a canopy structure and keeping potential falling objects far enough from an edge, hole, or opening to prevent them from falling to a lower level.
- Barricading the area into which objects could fall, prohibiting employees from entering the barricade area, and keeping objects far enough from an edge or opening to prevent them from falling to a lower level.

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Fall Protection

UAA will ensure fall protection is available and instituted per the UAA Fall Protection Program, which should be used in conjunction with this program.

10. Training

Departments must provide training to their personnel on walking-working surfaces and ensure the following:

- Training will be provided upon initial assignment and annually thereafter; or in the event of a near loss, or incident.
- Training will cover the material in this program.

Retraining will be provided when the following occur:

- Change in workplace operations or equipment
- Change in fall protection equipment provided
- Near loss investigation identifies inadequate training
- Worker demonstrates a lack of knowledge or skill

11. Program Evaluation

The Walking-Working Surfaces Program shall be evaluated on an annual basis utilizing the protocols set forth by EHS/RM. The evaluation team will consist of a department safety coordinator and a designee from EHS/RM. EHS/RM will define the scope of the evaluation. The final report will be developed by the EHS/RM utilizing the information received during the evaluation. The deficiencies determined in the report will be documented and corrective action plans will be developed.

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12. References

The following reference was used in the development of this Program:

- OSHA Standards on Walking-Working Surfaces, Subpart D; 29 CFR 1910.21 – 30

13. Revision History

Revision Number	Date Revised	Description of Change	Revised By	Approved By
0	10/08/2018	Initial Issue		VC Shuford
1				
2				
3				