

STANDARD PRACTICE INSTRUCTION

DATE: April 1, 1999

SUBJECT: Walking/Working Surface Safety Program (Industrial).

REGULATORY STANDARD: OSHA - 29 CFR 1910.21 - 23

BASIS: Thousands of workers are injured every year due to slips, trips, or falls generated by improper walking and working surfaces. The Occupational Safety and Health Administration (OSHA) estimates that most of these accidents can be prevented if proper safety precautions at job sites are initiated. This poses a serious problem for exposed workers and their employer. The OSHA Walking and Working Standards establish uniform requirements to ensure that the associated hazards in U.S. workplaces are evaluated, safety procedures implemented, and that the proper hazard information is transmitted to all affected workers.

GENERAL: Salisbury University will ensure that all walking and working surfaces within our facility(s) are evaluated. This standard practice instruction is intended to address comprehensively the issues of; evaluating and identifying potential deficiencies, evaluating the associated potential hazards, communicating information concerning these hazards, and establishing appropriate procedures, corrective measures, and protective measures for employees.

RESPONSIBILITY: Salisbury University's Safety Manager will be responsible for all facets of this program and has full authority to make necessary decisions to ensure success of the program. Alterations to this program must be approved by the University Safety Manager.

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Salisbury University Walking/Working Surface Safety Program

1. Written program. Salisbury University will review and evaluate this standard practice instruction on an annual basis, or when changes occur to 29 CFR 1910.21 - 23 that prompt revision of this document, or when facility operational changes occur that require a revision of this document. Effective implementation requires a written program for job safety and health, that is endorsed and advocated by the highest level of management within this facility and that outlines our goals and plans. This written program will be communicated to all required personnel. It is designed to establish clear goals, and objectives.

2. General requirements. All facilities owned by the University will be maintained in a safe and healthful manner. Certain environments within the facility(s) of Salisbury University may contain a reasonable probability of injury that can be prevented by proper maintenance and supervision. SU shall do all things possible to ensure the safety of our employees. No employee shall knowingly be subjected to a hazardous condition without all possible protective measures first being implemented. Measures for the control of toxic materials are considered to be outside the scope of this instruction.

3. Housekeeping (General Facility Policy).

3.1 All offices, work stations, work areas, passageways, storerooms, restrooms, and service rooms shall be kept clean, orderly, sanitary, and free of known hazards.

3.2 The floor of every workroom shall be maintained in a clean and, so far as possible, a dry condition. Where wet processes are used, drainage shall be maintained, and false floors, platforms, mats, or other dry standing places will be provided where practicable.

3.3 To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards or other hindrances that would prevent efficient maintenance.

3.4 Sufficient illumination will be provided in all areas at all times. Employees discovering lighting deficiencies will report them to the Maintenance Dept. for correction.

3.5 Work areas. All employees are responsible for maintaining their immediate work areas in a clean and orderly manner, and for notifying maintenance of conditions beyond their control.

3.6 Machines and equipment. Supervisors will ensure that machines and equipment under their control are maintained in a clean and orderly manner. Crowding should be avoided where ever possible.

3.7 Aisles. All employees are responsible to ensure that aisles are kept clean, free of material, finished parts, scrap, or any type of debris.

3.8 Floors. Maintenance will ensure that all floor spaces are maintained in a clean and orderly manner.

3.9 Walls and ceilings. Maintenance will ensure that all wall spaces are properly painted, and maintained in a clean and orderly manner. Postings will be confined to bulletin boards and other appropriate areas.

3.10 Storage facilities. Appropriate procedures will be followed based on the type of storage facility.

3.11 Employee facilities. Lockers will be used to protect personal belongings from theft. Locker areas will be kept clean and orderly. Belongings found insecure will be turned over to management for disposition.

3.12 Emergency exit doors. Will be kept free of any obstacles at all times. Any employee finding an emergency door blocked should immediately report the condition to a supervisor for correction. Exit lights and signs will also be maintained in proper condition at all times, and immediately reported if deficient.

3.13 Spills. Spills of non-hazardous materials will be cleaned up immediately by the employee responsible for such, or reported immediately to Housekeeping. If the spill cannot be removed immediately, then warning signs or barricades sufficient to warn personnel, will be installed.

4. Aisles and passageways.

4.1 Where mechanical handling equipment is used, sufficient safe clearances will be maintained for aisles, at loading docks, through doorways and wherever turns or passage must be made. Aisles and passageways shall be kept clear and in good repairs, with no obstruction across or in aisles that could create a hazard.

4.2 Permanent aisles and passageways shall be appropriately marked.

5. Covers and guardrails. Covers and/or guardrails shall be provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc.

5.1 Supervisory responsibilities. Work areas under their control will be properly guarded, covered, cordoned off, or marked to prevent injury. Supervisors will ensure the following are properly secured and reported to maintenance:

5.1.1 Stairways unguarded/containing holes.

- 5.1.2 Ladderway floor openings unguarded.
- 5.1.3 Hatchway and chute floor opening unguarded.
- 5.1.4 Skylight floor openings unguarded.
- 5.1.5 Pit and trapdoor floor openings unguarded.
- 5.1.6 Manhole floor openings unguarded.
- 5.1.7 Temporary floor openings unguarded.
- 5.1.8 Floor holes/openings unguarded.
- 5.1.9 Chute wall openings unprotected.
- 5.1.10 Window wall openings unprotected.
- 5.1.11 Temporary wall openings unprotected.
- 5.1.12 Open-sided floor or platforms unguarded.
- 5.1.13 Runways unprotected.
- 5.1.14 Stairways unprotected.

6. Floor loading protection.

6.1 When ever loads or single items exceeding 350lbs are to be placed on floor areas or roofing structures, employees will determine the safe load capacity before taking this action.

6.2 Safe floor loading capacities will be marked on plates of approved design which shall be supplied and securely affixed in a conspicuous place in each space to which they relate.

6.3 Such plates will not be removed or defaced. If lost, removed, or defaced, they will be reported to the Maintenance Dept. and replaced immediately.

6.4 All employees must note that it is unlawful to place, or cause, or permit to be placed, on any floor or roof of a building or other structure a load greater than that for which such floor or roof is approved by the building official.

7. Guarding floor and wall openings, and holes.

7.1 Protection for floor openings.

7.1.1 Stairway floor openings. Stairway floor openings shall be guarded by a standard railing constructed in accordance with 29 CFR 1910.23, paragraph (e). The railing shall be provided on all exposed sides (except at entrances to stairways). For infrequently used stairways where traffic across the opening prevents the use of a fixed standard railing (as when located in aisle spaces, etc.), the guard shall consist of a hinged floor opening cover of standard strength and construction and removable standard railings on all exposed sides (except at entrance to stairway).

7.1.2 Ladderway floor openings. Ladderway floor openings or platforms 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.

7.1.3 Hatchway and chute floor openings. Hatchway and chute floor opening shall be guarded by one of the following:

7.1.3.1 Hinged floor opening cover of standard strength and construction equipped with standard railings or permanently attached thereto so as to leave only one exposed side. When the opening is not in use, the cover shall be closed or the exposed side shall be guarded at both top and intermediate positions by removable standard railings.

7.1.3.2 A removable railing with toeboard on not more than two sides of the opening and fixed standard railings with toeboards on all other exposed sides. The removable railings shall be kept in place when the opening is not in use. Where operating conditions necessitate the feeding of material into any hatchway or chute opening, protection shall be provided to prevent a person from falling through the opening.

7.1.4 Skylight floor openings. Skylight floor openings and holes shall be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.

7.1.4.1 Skylight screens shall be of such construction and mounting that they are capable of withstanding a load of at least 200 pounds applied perpendicularly at any one area on the screen. They shall also be of such construction and mounting that under ordinary loads or impacts, they will not deflect downward sufficiently to break the glass below them. The construction shall be of

grillwork with openings not more than 4 inches long or of slatwork with openings not more than 2 inches wide with length unrestricted.

7.1.5 Pit and trapdoor floor openings. Pit and trapdoor floor openings, infrequently used, shall be guarded by a floor opening cover of standard strength and construction. While the 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.

7.1.6 Manhole floor openings. Manhole floor openings shall be guarded by a standard manhole cover which need not be hinged in place. While the cover is not in place, the manhole opening shall be constantly attended by someone or shall be protected by removable standard railings.

7.1.7 Temporary floor openings. Temporary floor openings shall have standard railings, or shall be constantly attended by someone.

7.1.8 Floor holes. Floor holes into which persons can accidentally walk shall be guarded by either:

7.1.8.1 A standard railing with standard toeboard on all exposed sides, or

7.1.8.2 A floor hole cover of standard strength and construction. While the cover is not in place, the floor hole shall be constantly attended by someone or shall be protected by a removable standard railing.

7.1.8.3 Every floor hole into which persons cannot accidentally walk (on account of fixed machinery, equipment, or walls) shall be protected by a cover that leaves no openings more than 1 inch wide. The cover shall be securely held in place to prevent tools or materials from falling through.

7.1.9 Floor hole covers. Floor opening covers may be of any material that meets the following strength requirements:

7.1.9.1 Trench or conduit covers and their supports, when located in roadways, shall be designed to carry a truck rear-axle load of at least 20,000 pounds.

7.1.9.2 Manhole covers and their supports, when located in roadways, shall comply with local standard highway requirements if any; otherwise, they shall be designed to carry a truck rear-axle load of at least 20,000 pounds.

7.1.9.3 The construction of floor opening covers may be of any material that meets the strength requirements. Covers projecting not more than 1 inch above the floor level may be used providing all edges are chamfered to an angle with the horizontal of not over 30 degrees. All hinges, handles, bolts, or other parts shall set flush with the floor or cover surface.

7.1.9 Stairway doors. Where doors or gates open directly on a stairway, a platform shall be provided, and the swing of the door shall not reduce the effective width to less than 20 inches.

7.2 Protection for wall openings and holes.

7.2.1 Wall openings. Wall openings from which there is a drop of more than 4 feet shall be guarded by one of the following:

7.2.1.1 Rail, roller, picket fence, half door, or equivalent barriers. Where there is exposure below to falling materials, a removable toe board or the equivalent shall also be provided. When the opening is not in use for handling materials, the guard shall be kept in position regardless of a door on the opening. In addition, a grab handle shall be provided on each side of the opening with its center approximately 4 feet above floor level and of standard strength and mounting.

7.2.1.2 Extension platforms onto which materials can be hoisted for handling, will have side rails or equivalent guards of standard specifications.

7.2.1.3 Wall opening barriers (rails, rollers, picket fences, and half doors) shall be of such construction and mounting that, when in place at the opening, the barrier is capable of withstanding a load of at least 200 pounds applied in any direction (except upward) at any point on the top rail or corresponding member.

7.2.1.4 Wall opening grab handles shall be not less than 12 inches in length and shall be so mounted as to give 3 inches clearance from the side framing of the wall opening. The size, material, and anchoring of the grab handle shall be such that the completed structure is capable of withstanding a load of at least 200 pounds applied in any direction at any point of the handle.

7.2.1.5 Wall opening screens shall be of such construction and mounting that they are capable of withstanding a load of at least 200 pounds applied horizontally at any point on the near side of the

screen. They may be of solid construction, of grillwork with openings not more than 8 inches long, or of slatwork with openings not more than 4 inches wide with length unrestricted.

7.2.2 Chute wall openings. Chute wall openings from which there is a drop of more than 4 feet shall be guarded by one or more of the barriers specified in paragraph 7.2.1.1 or as required by the conditions.

7.2.3 Window wall openings. Window wall openings at a stairway landing, floor, platform, or balcony, from which there is a drop of more than 4 feet, and where the bottom of the opening is less than 3 feet above the platform or landing, shall be guarded by standard slats, standard grill work, or standard railing. Where the window opening is below the landing, or platform, a standard toe board shall be provided.

7.2.4 Temporary wall openings. Temporary wall openings shall have adequate guards but these need not be of standard construction.

7.2.5 Where there is a hazard of materials falling through a wall hole, and the lower edge of the near side of the hole is less than 4 inches above the floor, and the far side of the hole more than 5 feet above the next lower level, the hole shall be protected by a standard toeboard, or an enclosing screen either of solid construction.

8. Protection of open-sided floors, platforms, and runways.

8.1 Open-sided floors or platforms. Open-sided floors or platforms 4 feet or more above adjacent floor or ground level shall be guarded by a standard railing on all open sides except where there is entrance to a ramp, stairway, or fixed ladder. The railing shall be provided with a toeboard, beneath the open sides where:

8.1.1 Persons can pass.

8.1.2 There is moving machinery.

8.1.3 There is equipment with which falling materials could create a hazard.

8.2 Runways. Runways shall be guarded by a standard railing on all open sides 4 feet or more above floor or ground level. Wherever tools, machine parts, or materials are likely to be used on the runway, a toeboard shall also be provided on each exposed side. Runways used exclusively for special purposes (such as oiling, shafting, or filling tank cars) may have the railing on one side omitted where operating conditions necessitate such omission, providing the falling hazard is minimized by using a runway of not less than 18 inches wide.

8.3 Open-sided access ways. Regardless of height, open-sided floors, walkways, platforms, or runways above or adjacent to dangerous equipment, pickling or galvanizing tanks, degreasing units, and similar hazards shall be guarded with a standard railing and toe board.

9. Stairs, railings and guards.

9.1 Stairs. Flights of stairs having four or more risers shall be equipped with standard stair railings or standard handrails. The width to be measured clear of all obstructions except handrails:

9.1.1 On stairways less than 44 inches wide having both sides enclosed, at least one handrail, preferably on the right side descending.

9.1.2 On stairways less than 44 inches wide having one side open, at least one stair railing on open side.

9.1.3 On stairways less than 44 inches wide having both sides open, one stair railing on each side.

9.1.4 On stairways more than 44 inches wide but less than 88 inches wide, one handrail on each enclosed side and one stair railing on each open side.

9.1.5 On stairways 88 or more inches wide, one handrail on each enclosed side, one stair railing on each open side, and one intermediate stair railing located approximately midway of the width.

9.2 Winding stairs. Winding stairs shall be equipped with a handrail offset to prevent walking on all portions of the treads having width less than 6 inches.

9.3 Railings.

9.3.1 Standard railings. A standard railing shall consist of top rail, intermediate rail, and posts, and shall have a vertical height of 42 inches nominal from upper surface of top rail to floor, platform, runway, or ramp level. The top rail shall be smooth-surfaced throughout the length of the railing. The intermediate rail shall be approximately halfway between the top rail and the floor, platform, runway, or ramp. The ends of the rails shall not overhang the terminal posts except where such overhang does not constitute a projection hazard.

9.3.2 Stair railings. A stair railing shall be of construction similar to a standard railing but the vertical height shall be not more than 34 inches

nor less than 30 inches from upper surface of top rail to surface of tread in line with face of riser at forward edge of tread.

9.3.3 Wood railings. Wood railings, the posts shall be of at least 2 inch by 4 inch stock spaced not to exceed 6 feet; the top and intermediate rails shall be of at least 2 inch by 4 inch stock. If top rail is made of two right-angle pieces of 1 inch by 4 inch stock, posts may be spaced on 8 foot centers, with 2 inch by 4 inch intermediate rail.

9.3.4 Pipe railings. Pipe railings, posts and top and intermediate railings shall be at least 1 1/2 inches nominal diameter with posts spaced not more than 8 feet on centers.

9.3.5 Structural steel railings. Structural steel railings, posts and top and intermediate rails shall be of 2 inch by 2 inch by 3/8 inch angles or other metal shapes of equivalent bending strength with posts spaced not more than 8 feet on centers.

10. Definitions.

Floor hole. An opening measuring less than 12 inches but more than 1 inch in its least dimension, in any floor, platform, pavement, or yard, through which materials but not persons may fall; such as a belt hole, pipe opening, or slot opening.

Floor opening. An opening measuring 12 inches or more in its least dimension, in any floor, platform, pavement, or yard through which persons may fall; such as a hatchway, stair or ladder opening, pit, or large manhole. Floor openings occupied by elevators, dumb waiters, conveyors, machinery, or containers are excluded.

Handrail. A single bar or pipe supported on brackets from a wall or partition, as on a stairway or ramp, to furnish persons with a handhold in case of tripping.

Platform. A working space for persons, elevated above the surrounding floor or ground; such as a balcony or platform for the operation of machinery and equipment.

Runway. A passageway for persons, elevated above the surrounding floor or ground level, such as a footwalk along shafting or a walkway between buildings.

Standard railing. A vertical barrier erected along exposed edges of a floor opening, wall opening, ramp, platform, or runway to prevent falls of persons.

Standard strength and construction. Any construction of railings, covers, or other guards that meets the requirements of 29 CFR 1910.23.

Stair railing. A vertical barrier erected along exposed sides of a stairway to prevent falls of persons.

Toeboard. A vertical barrier at floor level erected along exposed edges of a floor opening, wall opening, platform, runway, or ramp to prevent falls of materials.

Wall hole. An opening less than 30 inches but more than 1 inch high, of unrestricted width, in any wall or partition; such as a ventilation hole or drainage scupper.

Wall opening. An opening at least 30 inches high and 18 inches wide, in any wall or partition, through which persons may fall; such as a yard-arm doorway or chute opening.