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**PART J-1**  
**WORKING SURFACES, GUARDING FLOORS AND WALL OPENINGS**

**Note:** Requirements relating to portable ladders and fixed ladders have been moved to chapter 296-876 WAC, Ladders, portable and fixed.

WAC

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**WAC 296-24-735 Walking-working surfaces.**

[Order 73-5, § 296-24-735, filed 5/9/73 and Order 73-4, § 296-24-735, filed 5/7/73.]

**WAC 296-24-73501 General requirements.** This section applies to all permanent places of employment, except where domestic, mining, or agricultural work only is performed. Construction work isn't to be deemed as a permanent place of employment. Measures for the control of toxic materials are considered to be outside the scope of this section.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 95-22-015, § 296-24-73501, filed 10/20/95, effective 1/16/96. Statutory Authority: Chapter 49.17 RCW. 94-06-068 (Order 93-17), § 296-24-73501, filed 3/2/94, effective 3/1/95; Order 73-5, § 296-24-73501, filed 5/9/73 and Order 73-4, § 296-24-73501, filed 5/7/73.]

**WAC 296-24-73505 Aisles and passageways.**

- (1) Where mechanical handling equipment is used, sufficient safe clearances shall be allowed 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.
- (2) Permanent aisles and passageways shall be appropriately marked. Appropriate doesn't limit the marking to printed lines on the floor only. Other appropriate methods may be marked pillars, powder stripping, flags, traffic cones, or barrels, provided they are maintained in good repair and the recognition of such markings are included in the training programs for vehicle operators and employees.
- (3) All trestles in connection with industrial plants on which cars run, which are also used as walkways for workers, shall be equipped with a walkway on the outer edge, so located as to give safe minimum clearance of 3 feet to cars. Such walkways shall be equipped with standard rails. Where a trestle crosses a driveway or passageway the trestle over such points shall be solidly boarded over.

[Statutory Authority: Chapter 49.17 RCW. 94-15-096 (Order 94-07), § 296-24-73505, filed 7/20/94, effective 9/20/94; 89-11-035 (Order 89-03), § 296-24-73505, filed 5/15/89, effective 6/30/89; Order 73-5, § 296-24-73505, filed 5/9/73 and Order 73-4, § 296-24-73505, filed 5/7/73.]

**WAC 296-24-73507 Covers and guardrails.**

- (1) All open vats and tanks into which workers may fall shall be guarded with railings or screen guards.
- (2) All open vats and tanks where workers are employed shall have a platform or walkway 36 to 42 inches below the top of vat or tank or where walkway is flush with top of vat or tank, a standard safeguard of 36 to 42 inches high shall be constructed.
- (3) Every tank over 5 feet deep, excepting where agitators are used or where products may be damaged by ladders, shall have a ladder fixed on the inside so placed as to connect with means of access from the outside. Rungs shall have a clearance of at least 6 inches measured between the rung and the side of the tank.

[Statutory Authority: RCW 49.17.040, 49.17.150, and 49.17.240. 79-08-115 (Order 79-9), § 296-24-73507, filed 7/31/79; Order 74-27, § 296-24-73507, filed 5/7/74; Order 73-5, § 296-24-73507, filed 5/9/73 and Order 73-4, § 296-24-73507, filed 5/7/73.]

**WAC 296-24-73511 Steam pipes.**

- (1) All steam pipes or pipes heated by any other means to a sufficient temperature to burn a person (other than coil pipes, radiators, for heating rooms or buildings, or pipes on portable steam engines and boilers) and which are within 7 feet of a floor or platform, if exposed to contact, shall be guarded with a standard safeguard.
- (2) Protection from hot pipes. All exposed hot pipes within 7 feet of the floor or working platform, or within 15 inches measured horizontally from stairways, ramps or fixed ladders, shall be covered with an insulating material or be guarded in such a manner as to prevent contact.

[Order 74-27, § 296-24-73511, filed 5/7/74.]

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## WAC 296-24-750 Guarding floor and wall openings and holes.

[Order 73-5, § 296-24-750, filed 5/9/73 and Order 73-4, § 296-24-750, filed 5/7/73.]

**WAC 296-24-75001 Terms.** The following terms shall have the meaning ascribed in this section, when referred to in WAC 296-24-75003 through 296-24-75011, unless the context requires otherwise.

- (1) **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.
- (2) **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 from this part.
- (3) **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.
- (4) **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.
- (5) **Runway.** A passageway for persons, elevated above the surrounding floor or ground level, such as a footwalk along shafting or a walkway between buildings.
- (6) **Standard railing.** A vertical barrier erected along exposed edges of a floor opening, wall opening, ramp, platform, or runway to prevent falls of person.
- (7) **Standard strength and construction.** Any construction of railings, covers, or other guards that meets the requirements of WAC 296-24-750 through 296-24-75011.
- (8) **Stair railing.** A vertical barrier erected along exposed sides of a stairway to prevent falls of persons.
- (9) **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.
- (10) **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.
- (11) **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.

[Statutory Authority: Chapter 49.17 RCW. 94-15-096 (Order 94-07), § 296-24-75001, filed 7/20/94, effective 9/20/94; Order 73-5, § 296-24-75001, filed 5/9/73 and Order 73-4, § 296-24-75001, filed 5/7/73.]

## WAC 296-24-75003 Protection for floor openings.

- (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 can't walk directly into the opening.
- (2) Every hatchway and chute floor opening shall be guarded by one of the following:
  - (a) 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 isn't in use, the cover shall be closed or the exposed side shall be guarded at both top and intermediate positions by removable standard railings.

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**WAC 296-24-75003 (Cont.)**

- (b) A removable railing with toeboard on not more than 2 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 isn't in use and should preferably be hinged or otherwise mounted so as to be conveniently replaceable.

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.

- (c) The area under floor openings shall, where practical, be fenced off. When this isn't practical, the areas shall be plainly marked with yellow lines and telltales shall be installed to hang within 5 and one-half feet of ground or floor level.
- (d) Where floor openings are used to drop materials from one level to another, audible warning systems shall be installed and used to indicate to employees on the lower level that material is to be dropped.
- (3) Every skylight opening and hole shall be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.
- (4) Every pit and trapdoor floor opening, infrequently used, shall be guarded by a floor opening cover of standard strength and construction which should be hinged in place. While the cover isn't 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.
- (5) Every manhole floor opening shall be guarded by a standard manhole cover which need not be hinged in place. While the cover isn't in place, the manhole opening shall be constantly attended by someone or shall be protected by removable standard railings.

[Order 74-27, § 296-24-75003, filed 5/7/74; Order 73-5, § 296-24-75003, filed 5/9/73 and Order 73-4, § 296-24-75003, filed 5/7/73.]

**WAC 296-24-75005 Protection for wall openings and holes.**

- (1) Every wall opening from which there is a drop of more than 4 feet shall be guarded by one of the following:
- (a) Rail, roller, picket fence, half door, or equivalent barrier.
- The guard may be removable but should preferably be hinged or otherwise mounted so as to be conveniently replaceable. Where there is exposure below to falling materials, a removable toeboard or the equivalent shall also be provided. When the opening isn't 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.
- (b) Extension platform onto which materials can be hoisted for handling, and which shall have side rails or equivalent guards of standard specifications.
- (2) Every chute wall opening from which there is a drop of more than 4 feet shall be guarded by one or more of the barriers specified in WAC 296-24-75005 (1)(a) and (b), or as required by the conditions.
- (3) Every window wall opening 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 (as specified in WAC 296-24-75011(11)), or standard railing.

Where the window opening is below the landing, or platform, a standard toeboard shall be provided.

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**WAC 296-24-75005 (Cont.)**

- (4) Every temporary wall opening shall have adequate guards but these need not be of standard construction.
- (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 sold construction, or as specified in WAC 296-24-75011(11).

[Order 73-5, § 296-24-75005, filed 5/9/73 and Order 73-4, § 296-24-75005, filed 5/7/73.]

**WAC 296-24-75007 Protection of open-sided runways.**

- (1) Railings must be provided with a toeboard wherever, beneath the open sides,
  - (a) Persons can pass,
  - (b) There is moving machinery, or
  - (c) There is equipment with which falling materials could create a hazard.
- (2) Every runway shall be guarded by a standard railing (or the equivalent as specified in WAC 296-24-75011(3)) 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. Where persons entering upon runways become thereby exposed to machinery, electrical equipment, or other danger not a falling hazard, additional guarding than is here specified may be essential for protection.

- (3) Regardless of height, runways above or adjacent to dangerous equipment, pickling or galvanizing tanks, degreasing units, and similar hazards shall be guarded with a standard railing and toeboard.

[Order 76-6, § 296-24-75007, filed 3/1/76; Order 73-5, § 296-24-75007, filed 5/9/73 and Order 73-4, § 296-24-75007, filed 5/7/73.]

**WAC 296-24-75011 Railing, toeboards, and cover specifications.**

- (1) A standard railing shall consist of top rail, intermediate rail, and posts, and shall have a vertical height of 42 inches, plus or minus 3 inches, from upper surface of top rail to floor, platform, runway, or ramp level and:
  - (a) The top rail shall be smooth-surfaced throughout the length of the railing.
  - (b) The intermediate rail shall be approximately halfway between the top rail and the floor, platform, runway, or ramp.
  - (c) The ends of the rails shall not overhang the terminal posts except where such overhang doesn't constitute a projection hazard.
  - (d) Guardrails with heights greater than 42 inches are permissible provided the extra height doesn't create a dangerous situation for employees and that additional mid-rails were installed so that openings beneath the top rail wouldn't permit the passage of a 19-inch or larger spherical object.
- (2) 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.

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**WAC 296-24-75011 (Cont.)**

- (3) Minimum requirements for standard railings under various types of construction are specified in this subsection. Dimensions specified are based on the U.S. Department of Agriculture Wood Handbook, No. 72, 1955 (No. 1 (S4S) Southern Yellow Pine (Modulus of Rupture 7,400 p.s.i.)) for wood; ANSI G 41.5-1970, American National Standard Specifications for Structural Steel, for structural steel; and ANSI B 125.1-1970, American National Standard Specifications for Welded and Steamless Steel Pipe, for pipe.
- (a) For wood railings, the posts shall be of at least 2-inch by 4-inch nominal stock spaced not to exceed 6 feet; the top and intermediate rails shall be of at least 2-inch by 4-inch nominal stock. If top rail is made of 2 right-angle pieces of one-inch by 4-inch stock, posts may be spaced on 8-foot centers, with 2-inch by 4-inch intermediate rail.
  - (b) For pipe railings, posts and top and intermediate railings shall be at least one and one-half inches nominal diameter (outside diameter) with posts spaced not more than 8 feet on centers.
  - (c) For structural steel railings, posts and top and intermediate rails shall be of 2-inch by 2-inch by three-eighths-inch angles or other metal shapes of equivalent bending strength with posts spaced not more than 8 feet on centers.
  - (d) The anchoring of posts and framing of members for railings of all types shall be of such construction that the completed structure shall be capable of withstanding a load of at least 200 pounds applied in any direction at any point on the top rail.
  - (e) Other types, sizes, and arrangements of railing construction are acceptable provided they meet the following conditions:
    - (i) A smooth-surfaced top rail at a height above floor, platform, runway, or ramp level of from 36 to 42 inches nominal;
    - (ii) A strength to withstand at least the minimum requirement of 200 pounds top rail pressure;
    - (iii) Protection between top rail and floor, platform, runway, ramp, or stair treads, equivalent at least to that afforded by a standard intermediate rail;
    - (iv) Elimination of overhang of rail ends unless such overhang doesn't constitute a hazard; such as, baluster railings, scrollwork railings, paneled railings.
- (4) A standard toeboard shall be a minimum of 4 inches nominal in vertical height from its top edge to the level of the floor, platform, runway, or ramp. It shall be securely fastened in place and with not more than one-quarter-inch clearance above floor level. It may be made of any substantial material either solid or with openings not over one inch in greatest dimension.

Where material is piled to such height that a standard toeboard doesn't provide protection, paneling from floor to intermediate rail, or to top rail shall be provided.

- (5) A handrail shall consist of a lengthwise member mounted directly on a wall or partition by means of brackets attached to the lower side of the handrail so as to offer no obstruction to a smooth surface along the top and both sides of the handrail. The handrail shall be of rounded or other section that will furnish an adequate handhold for anyone grasping it to avoid falling. The ends of the handrail should be turned in to the supporting wall or otherwise arranged so as not to constitute a projection hazard.

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**WAC 296-24-75011 (Cont.)**

- (a) The height of handrails shall be not more than 34 inches nor less than 30 inches from upper surface of handrail to surface of tread in line with face of riser or to surface of ramp.
  - (b) The size of handrails shall be: When of hardwood, at least 2 inches in diameter; when of metal pipe, at least one and one-half inches in diameter. The length of brackets shall be such as will give a clearance between handrail and wall or any projection thereon of at least one and one-half inches. The spacing of brackets shall not exceed 8 feet.
  - (c) The mounting of handrails 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 on the rail.
- (6) All handrails and railings shall be provided with a clearance of not less than one and one-half inches between the handrail or railing and any other object.
- (7) Floor opening covers may be of any material that meets the following strength requirements:
- (a) Trench or conduit covers and their supports, when located in plant roadways, shall be designed to carry a truck rear-axle load of at least 20 thousand pounds.
  - (b) Manhole covers and their supports, when located in plant roadways, shall comply with local standard highway requirements if any; otherwise, they shall be designed to carry a truck rear-axle of at least 20 thousand pounds.
  - (c) The construction of floor opening covers may be of any material that meets the strength requirements. Covers projecting not more than one 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.
- (8) 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 won't 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.
- (9) 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.
- (10) Wall opening grab handles shall be not less than 12 inches in length and shall be so mounted as to give one and one-half 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.
- (11) 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.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 04-07-161 (Order 03-35), § 296-24-75011, filed 03/23/04, effective 05/01/04. Statutory Authority: Chapter 49.17 RCW. 91-03-044 (Order 90-18), § 296-24-75011, filed 1/10/91, effective 2/12/91; 89-11-035 (Order 89-03), § 296-24-75011, filed 5/15/89, effective 6/30/89. Statutory Authority: RCW 49.17.040, 49.17.150, and 49.17.240. 79-08-115 (Order 79-9), § 296-24-75011, filed 7/31/79; Order 73-5, § 296-24-75011, filed 5/9/73 and Order 73-4, § 296-24-75011, filed 5/7/73.]

**WAC 296-24-765 Fixed industrial stairs.**

[Order 73-5, § 296-24-765, filed 5/9/73 and Order 73-4, § 296-24-765, filed 5/7/73.]

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**WAC 296-24-76501 Terms.** The following terms shall have the meaning ascribed in this section when referred to in WAC 296-24-76503 through 296-24-76523 unless the context requires otherwise.

- (1) **Handrail.** A single bar or pipe supported on brackets from a wall or partition to provide a continuous handhold for persons using a stair.
- (2) **Nose, nosing.** That portion of a tread projecting beyond the face of the riser immediately below.
- (3) **Open riser.** The air space between the treads of stairways without upright members (risers).
- (4) **Platform.** An extended step or landing breaking a continuous run of stairs.
- (5) **Railing.** A vertical barrier erected along exposed sides of stairways and platforms to prevent falls of persons. The top member of railing usually serves as a handrail.
- (6) **Rise.** The vertical distance from the top of a tread to the top of the next higher tread.
- (7) **Riser.** The upright member of a step situated at the back of a lower tread and near the leading edge of the next higher tread.
- (8) **Stairs, stairway.** A series of steps leading from one level or floor to another, or leading to platforms, pits, boiler rooms, crossovers, or around machinery, tanks, and other equipment that are used more or less continuously or routinely by employees, or only occasionally by specific individuals. A series of steps and landings having 3 or more risers constitutes stairs or stairway.
- (9) **Tread.** The horizontal member of a step.
- (10) **Tread run.** The horizontal distance from the leading edge of a tread to the leading edge of an adjacent tread.
- (11) **Tread width.** The horizontal distance from front to back of tread including nosing when used.  
[Order 73-5, § 296-24-76501, filed 5/9/73 and Order 73-4, § 296-24-76501, filed 5/7/73.]

**WAC 296-24-76503 Application of requirements.** This section contains specifications for the safe design and construction of fixed general industrial stairs. This classification includes interior and exterior stairs around machinery, tanks, and other equipment, and stairs leading to or from floors, platforms, or pits. This section doesn't apply to stairs used for fire exit purposes, to construction operations, to private buildings or residences, or to articulated stairs, such as may be installed on floating roof tanks or on dock facilities, the angle of which changes with the rise and fall of the base support.

When stairs of public and private buildings are located at loading or receiving docks, in maintenance areas, etc., or are used exclusively by employees, the term "fixed industrial steps" will apply and be evaluated accordingly.  
[Statutory Authority: Chapter 49.17 RCW. 90-03-029 (Order 89-20), § 296-24-76503, filed 1/11/90, effective 2/26/90; Order 73-5, § 296-24-76503, filed 5/9/73 and Order 73-4, § 296-24-76503, filed 5/7/73.]

**WAC 296-24-76507 Stair strength.** Fixed stairways shall be designed and constructed to carry a load of 5 times the normal live load anticipated but never of less strength than to carry safely a moving concentrated load of 1,000 pounds.  
[Order 73-5, § 296-24-76507, filed 5/9/73 and Order 73-4, § 296-24-76507, filed 5/7/73.]

**WAC 296-24-76509 Stair width.** Fixed stairways shall have a minimum width of 22 inches.  
[Order 73-5, § 296-24-76509, filed 5/9/73 and Order 73-4, § 296-24-76509, filed 5/7/73.]

**WAC 296-24-76511 Angle of stairway rise.**

- (1) Fixed stairs shall be installed at angles to the horizontal of between 30 degrees and 50 degrees. Any uniform combination of rise/tread dimensions may be used that will result in a stairway at any angle to the horizontal within the permissible range. Table D-1 gives rise/tread dimensions which will produce a stairway within the permissible range, stating the angle to the horizontal produced by each combination. However, the rise/tread combinations aren't limited to those given in Table D-1.
- (2) Because of space limitations a permanent stairway sometimes has to be installed at an angle above the 50 degree critical angle. Such installations are commonly called inclined ladders or ship's ladders, which shall have handrails on both sides and open risers. They shall be capable of sustaining a live load of 100 pounds per square foot with a safety factor of 4. The following preferred and critical angles from the horizontal shall be considered for inclined ladders and ship's ladders:
  - (a) 35 to 60 degrees - Preferred angle from horizontal.
  - (b) 60 to 70 degrees - Critical angle from horizontal.

[Statutory Authority: Chapter 49.17 RCW. 89-11-035 (Order 89-03), § 296-24-76511, filed 5/15/89, effective 6/30/89; Order 73-5, § 296-24-76511, filed 5/9/73 and Order 73-4, § 296-24-76511, filed 5/7/73.]

**WAC 296-24-76513 Stair treads.** Each tread and the top landing of a stairway, where risers are used, should have a nose which extends one-half inch to 1 inch beyond the face of the lower riser. Noses should have an even leading edge. All treads shall be reasonably slip-resistant and the nosings shall be of nonslip finish. Welded bar grating treads without nosings are acceptable providing the leading edge can be readily identified by personnel descending the stairway and provided the tread is serrated or is of definite nonslip design. Rise height and tread width shall be uniform throughout any flight of stairs including any foundation structure used as one or more treads of the stairs.

TABLE D-1		
Angle to horizontal	Rise (in inches)	Tread run (in inches)
30°35'	6 ½	11
32°08'	6 ¾	10 ¾
33°41'	7	10 ½
35°16'	7 ¼	10 ¼
36°52'	7 ½	10
38°29'	7 ¾	9 ¾
40°08'	8	9 ½
41°44'	8 ¼	9 ¼
43°22'	8 ½	9
45°00'	8 ¾	8 ¾
46°38'	9	8 ½
48°16'	9 ¼	8 ¼
49°54'	9 ½	8

[Order 73-5, § 296-24-76513, filed 5/9/73 and Order 73-4, § 296-24-76513, filed 5/7/73.]

**WAC 296-24-76515 Length of stairways.** Long flights of stairs, unbroken by landings or intermediate platforms, should be avoided. Consideration should be given to providing intermediate platforms where practical and where such stairways are in frequent use. Stairway platforms shall be no less than the width of a stairway and a minimum of 30 inches in length measured in the direction of travel.

[Order 73-5, § 296-24-76515, filed 5/9/73 and Order 73-4, § 296-24-76515, filed 5/7/73.]

**WAC 296-24-76519 Vertical clearance.** Vertical clearance above any stair tread to an overhead obstruction shall be at least 7 feet measured from the leading edge of the tread.

[Order 73-5, § 296-24-76519, filed 5/9/73 and Order 73-4, § 296-24-76519, filed 5/7/73.]



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**WAC 296-24-76555 (Cont.)**

- (3) Stairs and platforms shall be installed so the top landing of the alternating tread stair is flush with the top of the landing platform.
- (4) Stair design and construction shall sustain a load of not less than 5 times the normal live load, but never less strength than to carry safely a moving concentrated load of 1,000 pounds.
- (5) Treads shall be equipped with slip-resistant surfaces.
- (6) Where a platform or landing is used, the width shall not be less than the width of the stair nor less than 30-inch depth in the direction of travel. Stairs shall be flush with the top of the landing platform.

[Statutory Authority: Chapter 49.17 RCW. 92-17-022 (Order 92-06), § 296-24-76555, filed 8/10/92, effective 9/10/92; 91-03-044 (Order 90-18), § 296-24-76555, filed 1/10/91, effective 2/12/91.]

**WAC 296-24-855 Other working surfaces.**

[Order 73-5, § 296-24-855, filed 5/9/73 and Order 73-4, § 296-24-855, filed 5/7/73.]

**WAC 296-24-85501 Dockboards (bridge plates).**

- (1) Portable and powered dockboards shall be strong enough to carry the load imposed on them.
- (2) Portable dockboards shall be secured in position, either by being anchored or equipped with devices which will prevent their slipping.
- (3) Powered dockboards shall be designed and constructed in accordance with Commercial Standard CS202-56 (1961) "Industrial Lifts and Hinged Loading Ramps" published by the U.S. Department of Commerce.
- (4) Handholds, or other effective means, shall be provided on portable dockboards to permit safe handling.
- (5) Positive protection shall be provided to prevent railroad cars from being moved while dockboards or bridge plates are in position.

[Order 73-5, § 296-24-85501, filed 5/9/73 and Order 73-4, § 296-24-85501, filed 5/7/73.]

**WAC 296-24-85503 Forging machine area.**

- (1) Machines shall be so located as to give (a) enough clearance between machines so that the movement of one operator won't interfere with the work of another, (b) ample room for cleaning machines and handling the work, including material and scrap. The arrangement of machines shall be such that operators won't stand in aisles.
- (2) Aisles shall be provided of sufficient width to permit the free movement of employees bringing and removing material. This aisle space is to be independent of working and storage space and should be defined by marking.
- (3) Wood platforms used on the floor in front of machines shall be substantially constructed with nonslip surfaces.

[Statutory Authority: RCW 49.17.040, 49.17.150, and 49.17.240. 79-08-115 (Order 79-9), § 296-24-85503, filed 7/31/79; Order 73-5, § 296-24-85503, filed 5/9/73 and Order 73-4, § 296-24-85503, filed 5/7/73.]

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**WAC 296-24-85505 Veneer machinery.**

- (1) Sides of steam vats shall extend to a height of not less than 36 inches above the floor, working platform, or ground.
- (2) Large steam vats divided into sections shall be provided with substantial walkways between sections. Each walkway shall be provided with a standard handrail on each exposed side. These handrails may be removable, if necessary.
- (3) Covers shall be removed only from that portion of steaming vats on which people are working and a portable railing shall be placed at this point to protect the operators.
- (4) Workers shall not ride or step on logs in steam vats.

[Statutory Authority: Chapter 49.17 RCW. 94-15-096 (Order 94-07), § 296-24-85505, filed 7/20/94, effective 9/20/94; Order 73-5, § 296-24-85505, filed 5/9/73 and Order 73-4, § 296-24-85505, filed 5/7/73.]