

§ 1917.120

(10) The employer shall direct that ladders shall be placed so that employees climbing are not exposed to injury from projecting objects or doors that open toward the ladder.

[48 FR 30909, July 5, 1983, as amended at 62 FR 40201, July 25, 1997; 65 FR 40941, June 30, 2000]

§ 1917.120 Fixed stairways.

(a) *Definition.* “Fixed stairway” means interior and exterior stairs serving machinery, tanks and equipment, and stairs to or from floors, platforms or pits. The term does not apply to stairs intended only for fire exit purposes, to articulated stairs (the angle of which changes with the rise and fall of the base support) or to stairs forming an integral part of machinery.

(b) *New installations.* (1) Fixed stairs installed after October 3, 1983 shall be positioned within the range of 30 degrees to 50 degrees to the horizontal with uniform riser height and tread width throughout each run and be capable of a minimum loading of 100 pounds per square foot (445 N) and a minimum concentrated load of 300 pounds (1,334 N) at the center of any treadspan. Riser height shall be from 6 to 7.5 inches (15.24 to 19.05 cm), stair width a minimum of 22 inches (55.88 cm) between vertical barriers, tread depth a minimum of 12±2 inches (30.48±5.08 cm), and tread nosing shall be straight leading edges.

(2) Stair landings shall be at least 20 inches (50.8 cm) in depth. Where doors or gates open on a stairway, a landing platform shall be provided. Door swing shall not reduce effective standing area on the landing to less than 18 inches (45.72 cm) in depth.

(3) Fixed stairs having four or more risers shall have stair railings or handrails complying with §1917.112(c)(1).

(4) Railing height from tread surface at the riser face shall be 33±3 inches (83.82 cm ±7.62 cm).

(5) Restricted areas. When physical features require stairs steeper than those provided for by paragraph (b)(1) of this section, stairs at angles of 50° to 75° from the horizontal may be used if they:

(i) Are capable of a single concentrated load of 200 pounds (890 N) at the tread centers;

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(ii) Have open treads at least 4 inches (10.16 cm) in depth and 18 inches (45.72 cm) in width with a uniformly spaced vertical rise between treads of 6 to 9.5 inches (15.24 to 24.13 cm); and

(iii) Have handrails that meet the requirements of §1917.112(c)(1) on both sides and that are not less than 30 inches (76.2 cm) in height from the tread surface at the riser face.

(6) Maintenance. Fixed stairways shall be maintained in safe condition and shall not be obstructed.

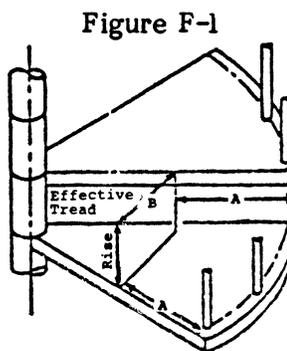
[48 FR 30909, July 5, 1983, as amended at 65 FR 40942, June 30, 2000]

§ 1917.121 Spiral stairways.

(a) *Definition.* “Spiral stairway” means one with closed circular form, uniform sector-shaped treads and a supporting column.

(b) *Requirements.* Spiral stairways shall meet the following requirements:

(1) Stairways shall conform to the minimum dimensions of Figure F-1;



SPIRAL STAIRWAY—MINIMUM DIMENSIONS

	A (half-tread width)	B
Normal use by employees.	11 inches (27.94 cm).	6 inches (15.24 cm).
Limited access	9 inches (22.86 cm).	5 inches (12.7 cm).

(2) Stairway risers shall be uniform and shall range from 6½ to 10½ inches (16.5 to 26.67 cm) in height;

(3) Minimum loading capability shall be 100 pounds per square foot (4.79kN), and minimum tread center concentrated loading shall be 300 pounds (1334 N);

(4) Railings shall conform to the requirements of §1917.112(c)(1). If balusters are used, there shall be a minimum of one per tread. Handrails shall be a minimum of 1¼ inches (3.18 cm) in outside diameter; and

(5) Vertical clearance shall be at least 6 feet, 6 inches (1.98 m) above the top step.

(c) *Maintenance.* Spiral stairways shall be maintained in safe condition.

[48 FR 30909, July 5, 1983, as amended at 62 FR 40201, July 25, 1997; 65 FR 40942, June 30, 2000]

§ 1917.122 Employee exits.

(a) Employee exits shall be clearly marked.

(b) If an employee exit is not visible from employees' work stations, directional signs indicating routes to the exit shall be posted.

(c) Exits shall be readily accessible and sufficient in number to provide employees with a convenient means of escape in emergencies. A clear passage to the exit shall be maintained.

(d) The minimum width of any employee exit shall be 28 inches (71.12 cm).

[48 FR 30909, July 5, 1983, as amended at 65 FR 40942, June 30, 2000]

§ 1917.123 Illumination.⁹

(a) Working and walking areas shall be illuminated. Unless conditions described in the regulations of the United States Coast Guard (33 CFR 126.15(1) and (n), and 33 CFR 154.570) exist in the case of specific operations, illumination in active work areas (for example, cargo transfer points) shall be of an average minimum light intensity of 5 foot-candles. The illumination in other work areas (for example, farm areas) shall be of an average minimum light intensity of 1 foot-candle except for security purposes when a minimum light intensity of ½ foot-candle shall be maintained. Where occasional work tasks require more light than that which is consistently and permanently provided, supplemental lighting shall be used.

⁹The United States Coast Guard, at 33 CFR 126.15(1) and (n), and 33 CFR 154.570 sets out requirements for illumination at "designated waterfront facilities" and "large oil transfer facilities."

(b) The lighting intensity shall be measured at the task/working surface, in the plane in which the task/working surface is present.

(c) Lights shall, so far as possible, be placed so that they will not shine in the eyes of employees.

[48 FR 30909, July 5, 1983, as amended at 62 FR 40201, July 25, 1997]

§ 1917.124 Dockboards (car and bridge plates).

(a) *General.* The employer shall provide safe means of passage between different surface levels and across openings.

(b) [Reserved]

(c) *Dockboards (car and bridge plates).*

(1) Dockboards shall be strong enough to support the loads imposed on them.

(2) Portable dockboards shall be anchored in position or be equipped with devices to prevent their movement.

(3) Hand holds or other effective means shall be provided on portable dockboards to permit safe handling.

(4) Positive means shall be used to prevent railcars or highway vehicles from being moved while dockboards or bridge plates are in position.

(5) Be designed, constructed, and maintained to prevent vehicles from running off the edge.¹⁰

(6) Dockboards shall be well maintained.

(d) *Ramps.* (1) Ramps shall be strong enough to support the loads imposed on them and be designed, constructed, and maintained to prevent vehicles from running off the edge.¹¹

(2) Ramps shall be equipped with a guardrail meeting the requirement of §1917.112(c)(1) if the slope is more than 20 degrees to the horizontal or if employees could fall more than 4 feet (1.22 m).

(3) Ramps shall have slip-resistant surfaces.

¹⁰When the gap to be bridged to greater than 36 inches (.91 m), an acceptable means of preventing vehicles from running off the edge is a minimum side board height of two and three-quarter inches.

¹¹When the gap to be bridged is greater than 36 inches (.91 m), an acceptable means of preventing vehicles from running off the edge is a minimum side board height of two and three-quarter inches.