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Subchapter 7. General Industry Safety Orders

Group 1. General Physical Conditions and Structures Orders Article 2. Standard Specifications

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§3231. Stairways.

(a) General. Every stairway serving any building or portion thereof shall conform to the requirements of this Section. (See Section 3214 for stair rail and handrail specifications and Section 3234 for industrial stairways). (Title 24, Part 2, Section 3305(a).)

(b) Width.

(1) Stairways serving an occupant load of more than 50 shall be not less in width than 44 inches.

Stairways serving an occupant load of 50 or less may be 36 inches wide. Private stairways serving an occupant load of less than 10 may be 30 inches wide.

(2) Trim shall not reduce the required width by more than 3 1/2 inches. Handrails may project from each side of a stairway a distance of 3 1/2 inches into the required width. Stringers may project 1 1/2 inches. (Title 24, Part 2, Section 3305(b).)

(c) Rise and Run.

(1) The rise of every step in a stairway shall be not less than 4 inches nor greater than 7 1/2 inches.

(2) The run shall not be less than 10 inches as measured horizontally between the vertical planes of the furthestmost projection of adjacent treads. The largest tread run within any flight of stairs shall not exceed the smallest by more than 3/8 inch. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch.

Exception: Private stairways serving an occupant load of less than 10 and stairways to unoccupied roofs may be constructed with an 8 inch maximum rise and a 9 inch minimum run.

(Title 24, Part 2, Section 3305(c).)

(d) Surface. All treads shall be slip-resistant. Stairways shall be maintained clear and in good repair.

(Title 24, Part 2, Section 2-3305(s).)

(e) Circular Stairways. Circular stairs may be used as an exit providing the minimum width of run is not less than 10 inches and the smaller radius is not less than twice the width of the stairway. All treads in any one flight between landings shall have identical dimensions within a three-eighths inch tolerance.

(Title 24, Part 2, Section 3305(e).)

(f) Landings. Every landing shall have a dimension measured in the direction of travel equal to the width of the stairway. Such dimension need not exceed 4 feet when the stair has a straight run. Landings, when provided, shall not reduce the width to less than one-half the required width at any position in the swing or by more than 7 inches by a door when fully open. There shall be not more than 12 feet vertically between landings.

(Title 24, Part 2, Section 3305(g) and (i).)

(g) Stairway to Roof. In every building four or more stories in height, one stairway shall extend to the roof surface, unless the roof has a slope greater than 4 in 12. (Title 24, Part 2, Section 3305(o).)

(h) Headroom. Every required stairway shall have a headroom clearance of not less than 6 feet 6 inches. Such clearances shall be established by measuring vertically from a plane parallel and tangent to the stairway tread nosing to the soffit above at all points. (Title 24, Part 2, Section 3305(p).)

In existing installations where overhead clearance is less than 6 feet 6 inches above stairways, the stairway shall be relocated, the obstruction shall be removed, or if both of these are impracticable a suitable warning shall be placed near the obstruction so as to notify employees of its presence. Where the nature of the hazard is such that padding it will increase safety, this also shall be done. (Title 24, Part 2, Section 2-3305(p), Exception.)

(i) Enclosure Construction of Exit Stairways. When an exit stairway is required to be protected by separation from other parts of the building the separating construction shall be of not less than two-hour fire-resistive construction in buildings more than four stories in height and shall be of not less than one-hour fire-resistive construction elsewhere.

(1) Openings into Enclosures. There shall be no openings into exit enclosures except exit doorways and openings in exterior walls. All exit doors in an exit enclosure shall be protected by a fire assembly having a fire-protection rating of not less than one hour where one-hour shaft construction is permitted and one and one-half hours where two-hour shaft construction is required. Doors shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector as provided for in Section 4306(b). The maximum transmitted temperature end point shall not exceed 450 degrees F above ambient at the end of 30 minutes of the fire exposure specified in U.B.C. Standard No. 43-2.

(Title 24, Part 2, Section 3308(c).)

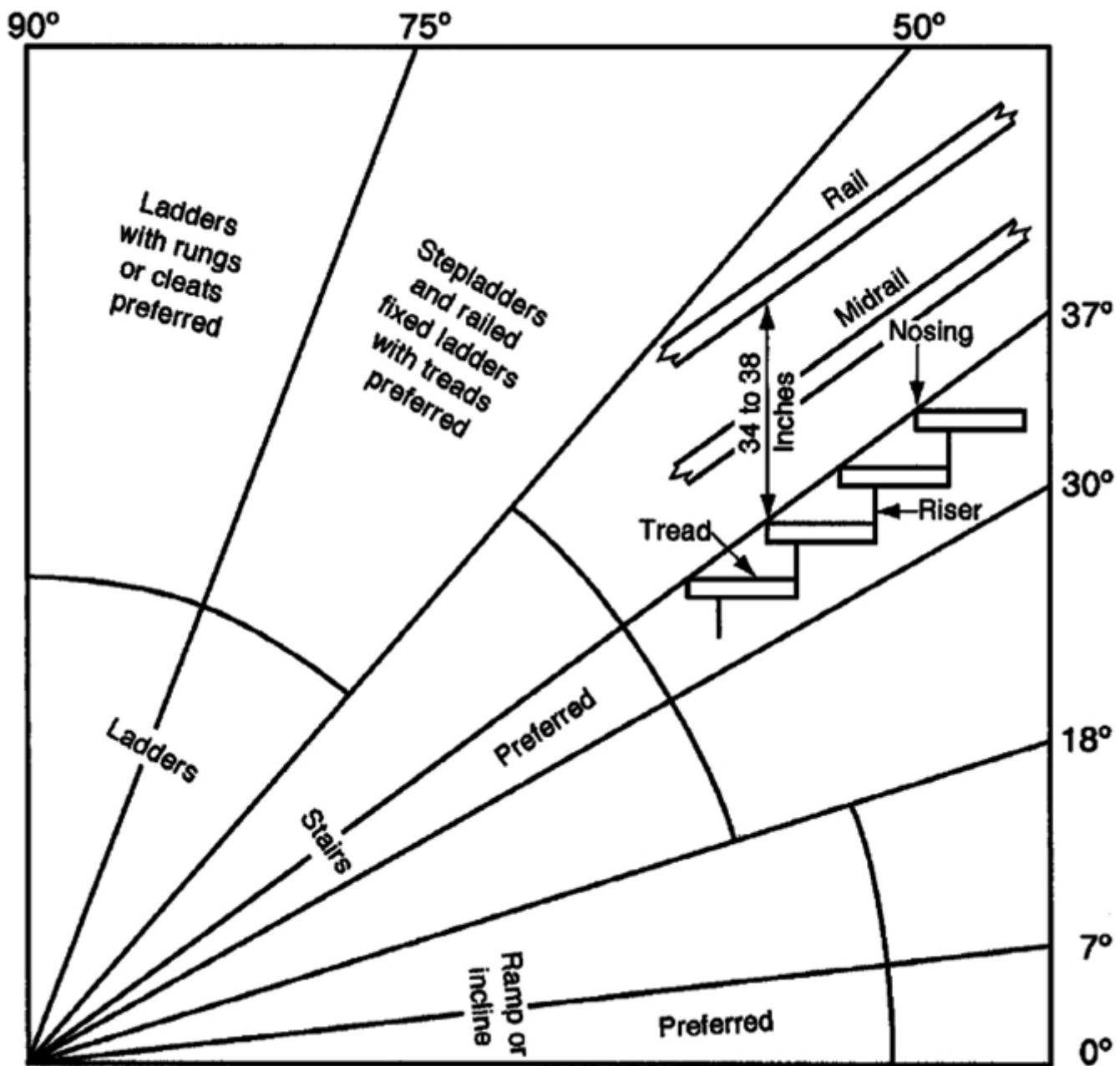



Figure E-1 (for stairs installed on or after April 3, 1997)

Note: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 18943(c), Health and Safety Code.

HISTORY

1. Amendment of subsection (h) and new subsection (i) and new Figure E-1 filed 5-10-77; effective thirtieth day thereafter (Register 77, No. 20). For prior history, see Register 76, No. 29.
2. Amendment of subsection (i)(1)(B) filed 12-23-77; effective thirtieth day thereafter (Register 77, No. 52).
3. Amendment filed 5-25-83; effective thirtieth day thereafter (Register 83, No. 22.) Approved by State Building Standards Commission 1-24-83.
4. Amendment filed 5-26-83; effective thirtieth day thereafter (Register 83, No. 22.) Approved by State Building Standards Commission 1-24-83.
5. Amendment of Figure E-1 filed 12-4-2007; operative 1-3-2008 (Register 2007, No. 49).

6. Change without regulatory effect providing more legible figure E-1 filed 2-9-2009 pursuant to section 100, title 1, California Code of Regulations (Register 2009, No. 7).

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