

Elkhart County Planning & Development

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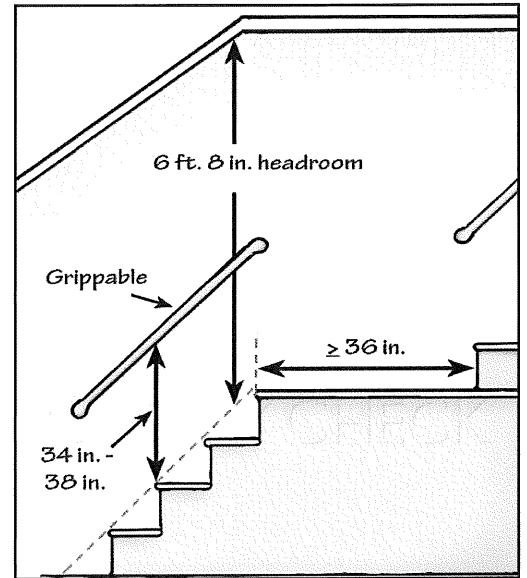
REQUIREMENTS FOR STAIRS AND HANDRAILS

R311.5 Stairways.

R311.5.1 Width. Stairways shall not be less than 36 inches in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than 31.5 inches where a handrail is installed on one side and 27 inches where handrails are provided on both sides.

Exception: The width of spiral stairways shall be in accordance with Section R311.5.8.

R311.5.2 Headroom. The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform.



R311.5.3 Stair treads and risers.

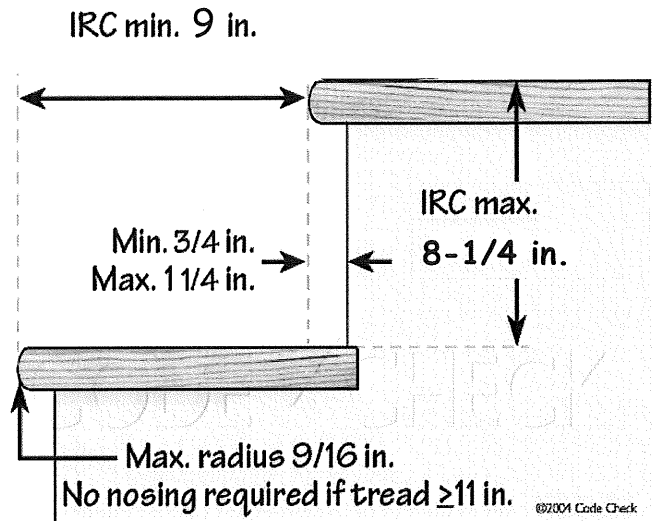
R311.5.3.1 Riser height. (675 IAC 14-4.3-30) The maximum riser height shall be 8-1/4 inches. The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch.

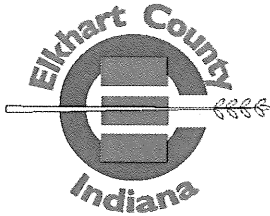
R311.5.3.2 Tread depth. (675 IAC 14-4.3-31) The minimum tread depth shall be 9 inches. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch. Winder treads shall have a minimum tread depth of 10 inches measured as above at a point 12 inches from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 6 inches at any point. Within any flight of stairs, the greatest winder tread depth at the 12 inch walk line shall not exceed the smallest by more than 3/8 inch.

R311.5.3.3 Profile. The radius of curvature at the leading edge of the tread shall be no greater than 9/16 inch. A nosing not less than 3/4 inch but not more than 1 1/4 inch shall be provided on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 inch between two stories, including the nosing at the level of floors and landings. Beveling of nosing shall not exceed 1/2 inch. Risers shall be vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees from the vertical. Open risers are permitted, provided that the opening between treads does not permit the passage of a 4-inch diameter sphere.

Exceptions:

1. A nosing is not required where the tread depth is a minimum of 11 inches.
2. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches or less.





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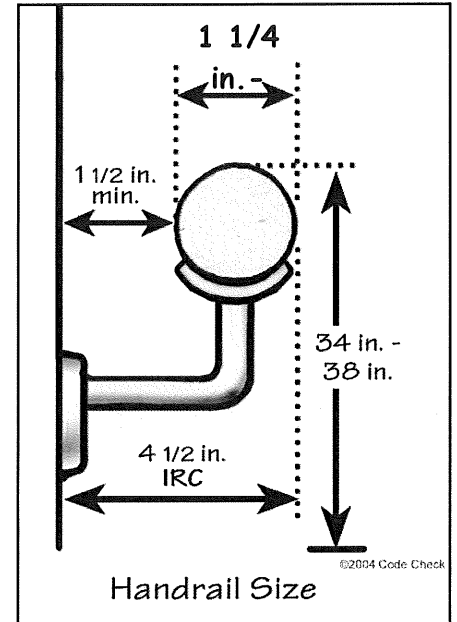
R311.5.6 Handrails. Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.

R311.5.6.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches and not more than 38 inches.

R311.5.6.2 Continuity. (675 IAC 14-4.3-30) Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1-1/2 inch between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn or by a landing.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

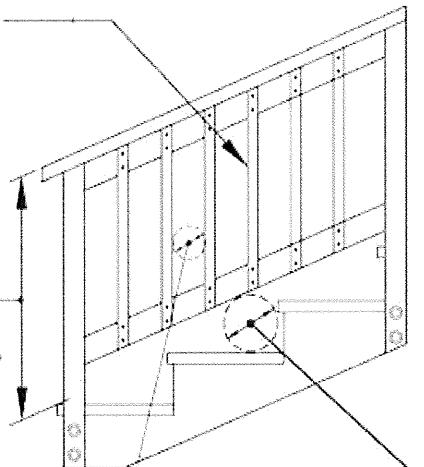


R311.5.6.3 Handrail grip size. (675 IAC 14-4.3-30) The handrail grip size portion of handrails shall have a circular cross section of 1 1/4 inches minimum to 2-7/8 inches maximum. Other handrail shapes that provide an equivalent grasping surface are permissible. Edges shall have a minimum radius of 1/8 inch.

R312.1 Guards required. (675 IAC 14-4.3-35) Porches, balconies, decks or raised floor surfaces located more than 30 inches above the floor or grade below shall have guards not less than 36 inches in height. Open sides of stairs with a total rise of more than 30 inches above the floor or grade below shall have guards not less than 34 inches in height measured vertically from the nosing of the treads. Porches and decks which are enclosed with insect screening shall be provided with guards where the walking surface is located more than 30 inches above the floor or grade below. Guards that are installed on porches, balconies, decks or raised floor surfaces that are 30 inches or less above the floor or grade are not required to comply with Section 312.

stair guard is required for stairs with a total rise of 30" or more; see GUARD REQUIREMENTS for more information

stair guard height: 34" min. measured from nosing of step



Openings for required guards on the sides of stair treads shall not allow a sphere 4-3/8" to pass through.

Triangular opening shall not permit the passage of a 6" diameter sphere.

R312.2 Guard opening limitations.

(675 IAC 14-4.3-36) Required guards on open sides of stairways, raised floor areas, balconies, decks and porches shall have intermediate rails or ornamental closures which do not allow passage of a sphere 4 inches or more in diameter.

Exceptions:

1. The triangular openings formed by the riser, tread and bottom rail of a guard at the open side of a stairway are permitted to be of such a size that a sphere 6 inches cannot pass through.
2. Openings for required guards on the sides of stair treads shall not allow a sphere 4-3/8 inches to pass through.