



Department of
Building and Safety
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Residential Stair, Railing, and Guard Requirements

Legally constructed buildings are allowed to remain as they were originally built. However, any additions, alterations or repairs to any structure must meet the current code requirements.

Required Guardrail locations:

Guardrails are required along walking surfaces, (including stairs, ramps, decks, and landings) if the walking surface is higher than 30 inches from the ground measured anywhere within the 3 feet surrounding the outside of the walking surface.

Required Guardrail Heights and Openings:

The railing must be at least 42 inches tall and no openings which allow passage of a sphere 4 inches in diameter are allowed.

Required Guardrail Heights and Openings for Stairs:

The railing must be at least 34 inches tall. If the top of the railing is also being used as the hand rail, the maximum height is 38 inches (as measured from the nose of the stair). No openings which allow passage of a sphere 4 3/8 inches in diameter are allowed except for the triangular openings at the side of the stair formed by the riser, tread, and bottom rail. In this location, the passage of a 6 inch sphere is not allowed.

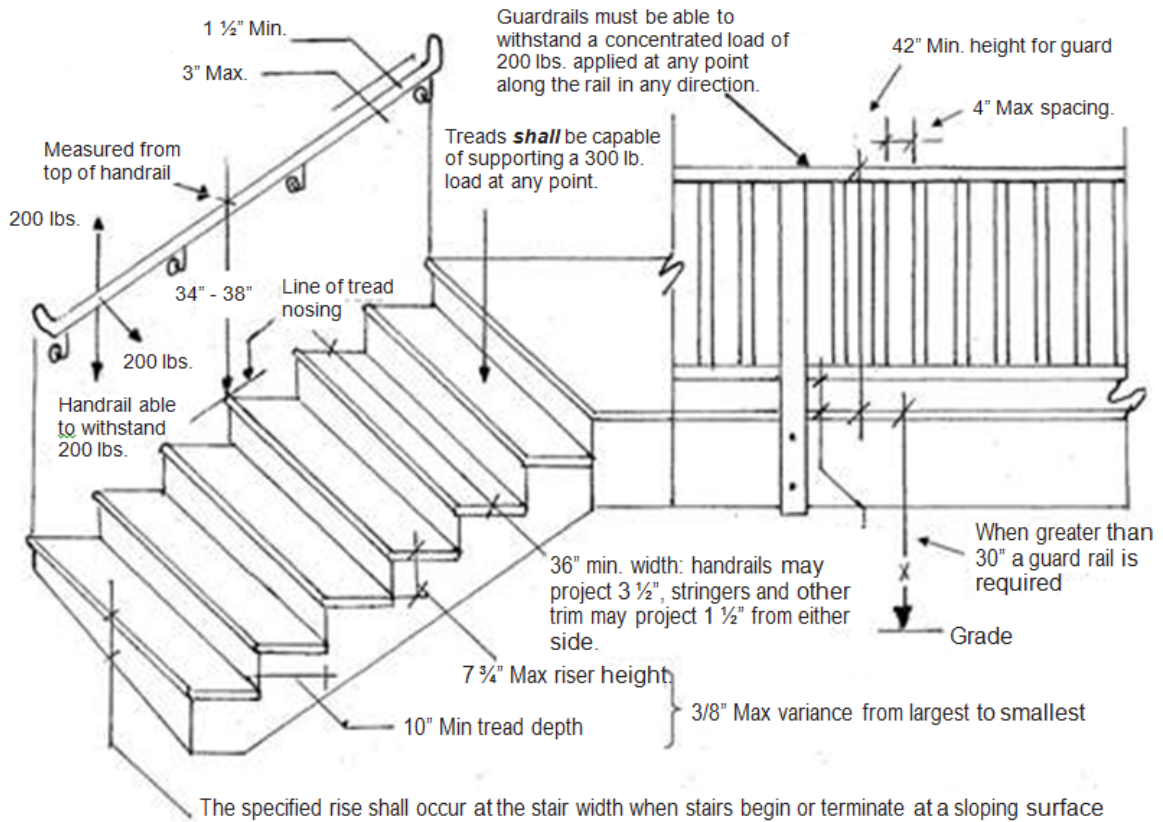
Required Handrail Requirements:

Handrails are required on at least one side of stairs with 4 or more risers and must be able to withstand at least 200 pounds. The height of the handrail must at least 34 inches but cannot be more than 38 inches above nosing of the stair. The handgrip portion of handrail must be at least 1 1/4 inches but not more than 2 inches in circular cross section and must be installed at least 1 1/2 inches from the wall or other surface. The handrail must end at a post, safety terminal, or by turning it back to the wall.

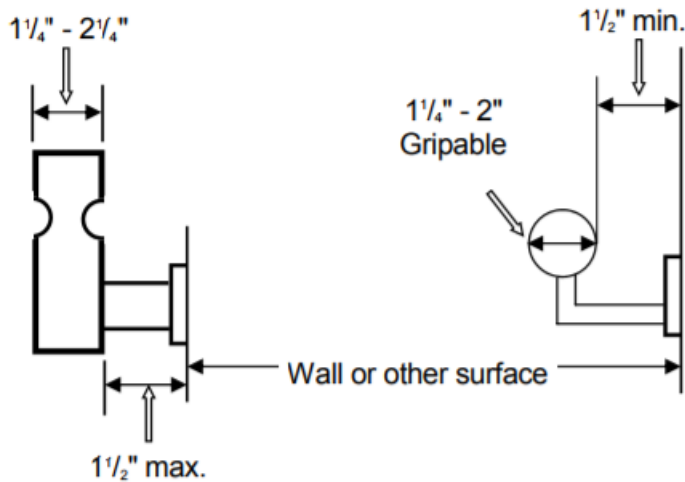
Stair and Riser Requirements:

Stairways need to be at least 36 inches wide. Each tread must be at least 10 inches in depth and the riser height cannot be taller than 7 3/4 inches tall. A nosing is required on treads less than 11 inches. Any nosing must be at least 3/4 inches or a maximum of 1 1/2 inches. The difference from the deepest to the narrowest tread, from the tallest to the shortest riser, or from the smallest to largest nosing projection in a run of stairs cannot be more than 3/8 of an inch. Stairways of a height of more than 30 inches cannot have open risers that would allow passage of a sphere 4 inches in diameter.

These are the general code requirements of residential stairs, railings, and guards based on the 2016 CA building code. This handout is intended to provide general information only. For further information, please refer to the 2016 Residential Building Code.



Acceptable Handrail Details



Unacceptable Handrails

