

# Handrail Requirements

## BPC-001

❖ **Purpose:** The purpose of this form is to provide the requirements for construction and placement of handrails for stairways and ramps in residential construction. These requirements are based on Chapter 10 of the 2007 California Building Code. ❖

**Stairways:** The definition of a stairway is “one or more flights of stairs, either exterior or interior, with the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one level to another”.

Stairways shall have handrails on each side unless specifically exempted by one or more of the following exceptions.

### EXCEPTIONS:

1. Stairway within dwelling units, spiral stairways and aisle stairs serving seating on only one side are permitted to have a handrail on one side only.
2. Deck, patios and walkways that have a single change in elevation where the landing depth on each side of the change of elevation is greater than what is required for a landing do not require handrails.
3. In group R-3 occupancies, a continuous run of treads or flight of stairs with fewer than four risers does not require handrails.
4. Changes in room elevations of only one riser within dwelling units and sleeping units in group R-2 occupancies do not require handrails.

**Ramp:** The definition of a ramp is “a walking surface that has a running slope steeper than 1 vertical in 20 units horizontal (5% slope)”. Ramps with a rise greater than 6 inches shall have handrails on each side.

### Handrail requirements:

- The height of handrails is measured from the stair tread nosing, or the finished surface of a ramp slope and shall be uniform, not less than 34 inches and not more than 38 inches.

The handgrip portion of a handrail when circular in shape shall have an outside dimension not less than 1¼ inches and not greater than 2 inches or the shape shall provide an equivalent gripping surface. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches and not greater than 6 1/4 inches with a maximum cross section dimension of 2 1/4 inches. Edges shall have a minimum radius of 0.01 inch. The handgrip portion of handrails shall have a smooth surface with no sharp corners.

- Handrails shall be continuous for the full length of stairways and ramps unless specifically exempted by one or more of the following exceptions.

### EXCEPTIONS:

1. Handrails within dwelling units are permitted to be interrupted by a newel post at a stair or ramp landing.
2. Within a dwelling unit, the use of a volute, turnout or starting easing is allowed on the lowest tread.
3. Handrail brackets or balusters attached to the bottom surface of the hand rail that do not project horizontally beyond the side of the handrail within 1 1/2 inches of the bottom of the handrail shall not be considered obstructions.

Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of and adjacent stair flight or ramp run. At ramps where handrails are not continuous between runs, the handrails shall extend horizontally above the landing 12 inches minimum beyond the top and bottom of ramp runs. The following is an exception to these requirements.

**EXCEPTION:**

1. Handrails within a dwelling unit that is not required to be accessible need extend only from the top riser to the bottom riser.
- There shall be a clear space of 1 1/2 inches between a handrail and a wall or other surface. Any wall or other surface adjacent to a handrail shall be free of any sharp or abrasive elements.
  - On ramps, the clear space between handrails shall be 36 inches minimum.
  - Projections into the required width of stairways and ramps at each handrail shall not exceed 4.5 inches at or below the handrail height.
  - Stairways shall have intermediate handrails located so that all portions of the stairway width required for egress capacity are within 30 inches of a handrail.

