

RESIDENTIAL STAIRWAY & HANDRAIL REQUIREMENTS

Width

Stairways shall not be less than 36 inches wide. The handrail may project maximum of 4-1/2 inches into this dimension
[2013 CRC R311.701]

Dimension Tolerances

The largest tread depth or riser height within any stairway shall not exceed the smallest by more than 3/8 inch.
[2013 CRC R311.7.5.2.1]

Risers and Treads

- If you are building a new standard residential stairway (not spiral), each step (or riser) can't be more than 7-3/4 inches high or less than 4".
- Treads are the flat surfaces that you step onto. For new stairs the treads have to be a minimum of 10 inches deep from front to back (not counting the part underneath the nosing of the tread above). The exposed edge of the tread is called nosing, and the nosing must stick out at least 3/4 inch but not more than 1-1/4 inches.
- The steps in a flight of stairs have to be even so people don't trip. The code allows only 3/8 inch difference between the smallest and largest rise, and only 3/8 inch difference between the largest and smallest tread measured from front to back.
[2013 CRC R311.7.5.2.1]

Handrails

Required at four or more risers

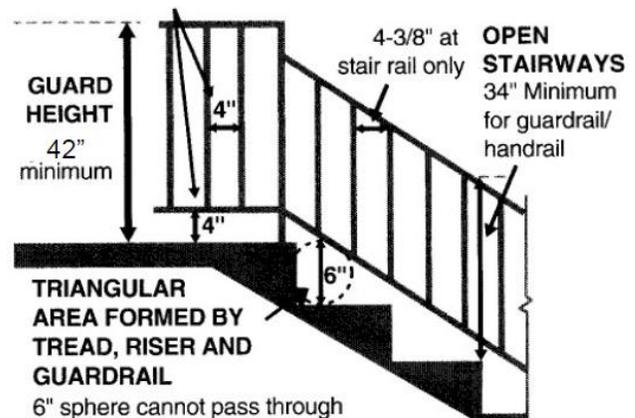
- The top shall be placed not less than 34 inches, nor more than 38 inches, above the nosing of the treads. Ends shall be returned or terminated in newel posts or safety terminal.
- All required handrails shall be continuous for the full length of the stairs from a point directly above the top.

Exceptions:

1. Handrails may be interrupted by a newel post at a turn.

Guard Opening Limitations

INTERMEDIATE RAIL SPACING OR PATTERN
4" sphere cannot pass through

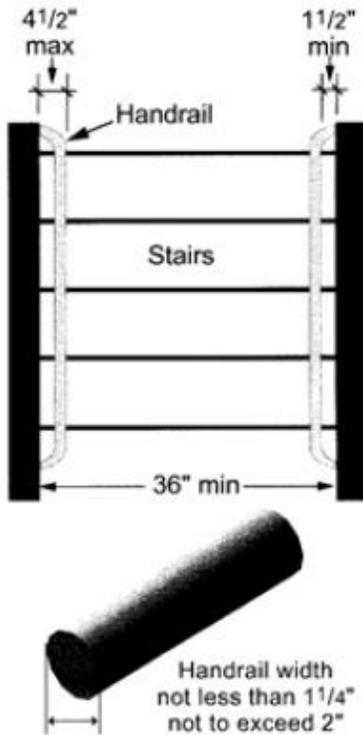


2. A volute, turnout or newel post is allowed over the lowest tread.

Note: The outside diameter of a circular handrail may be no more than 1-1/4 inches and no greater than 2 inches. A non-circular must have a perimeter dimension of at least 4 inches and no greater than 6-1/4 inches. The maximum cross section is 2-1/4 inches. [2013 CRC R311.7.8.3]

- Stairways must have a handrail if the stairway has four or more risers.
- Handrails may project over the stairs by 4-1/2 inches maximum on each side of the stairway.
- Handrails must be continuous for the full length of the stairs. They must run back into the wall or butt into a post so that purse straps and clothing won't get caught behind them and cause a fall.
- Handrails attached to the wall must have space between the wall and the rail of at least 1-1/2 inches to provide a graspable surface.
- Handrails on the open side of the stairway must meet requirements. [2013 CRC R312.1.2 EXC.1].

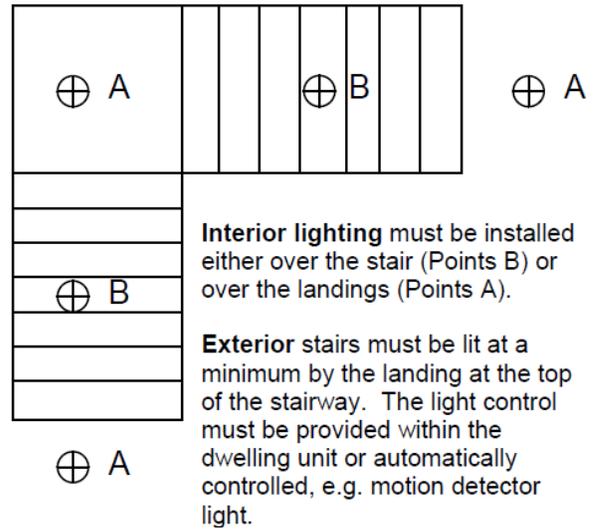
- For occupancies in group R-3 guards whose top rail also serves as a handrail shall have height not less than 34 inches and not more than 38 inches measured vertically from the leading edge of the stair tread nosing.
- The height of the handrails is measured straight up from the nosing of the tread to the top of the handrail. A handrail along a wall must be between 34 inches and 38 inches high.
- A round handrail must have a diameter no smaller than 1-1/4 inches and no larger than 2 inches, so that it can be easily and securely gripped. Other handrail shapes are allowed, if the perimeter dimension is at least 4 inches and not more than 6-1/4 inches, with a cross section dimension not more than 2-1/4 inches.



Illumination

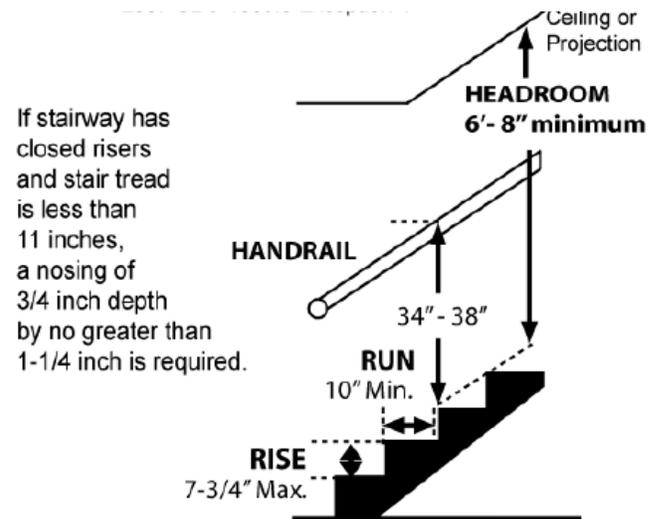
All interior and exterior stairways must be illuminated.

Stairway Lighting [2013 CEC]



Headroom

Every stairway shall have a headroom clearance of not less than 6 feet 8 inches. The minimum headroom in all parts of the stairway may not be less than 6 feet 8 inches. This is measured vertically from the sloped plane adjoining the tread nosings or from the floor surface of the landings. [2013 CRC R311.7.2]



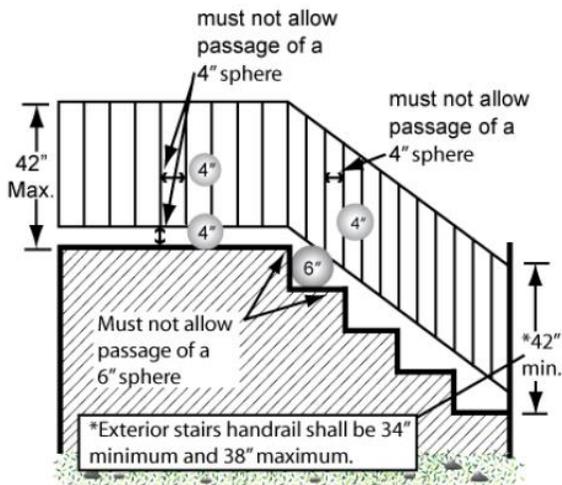
Guardrails

- A guardrail is required to prevent someone from falling from a balcony, deck, landing etc. that is more than 30 inches above the floor or ground below. Guardrails must be at least 42 inches high,

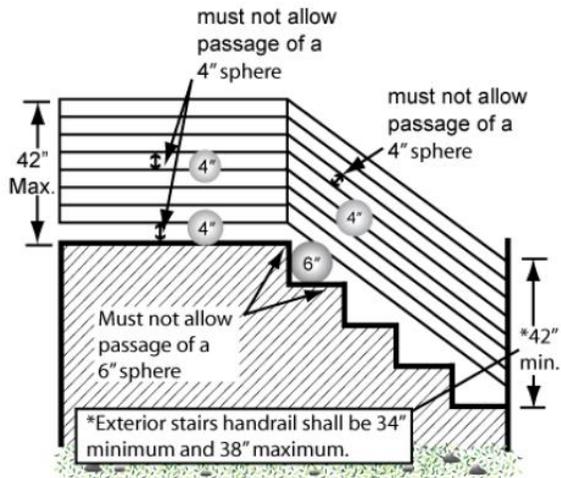
except that they may be 34 inches minimum and 38 inches maximum when located within dwelling units in R-3 occupancies whose top rail also serves as a handrail.

- Guardrails on interior stairs must have some kind of pattern, so that a 4-3/8 inch sphere can't pass through. However, all exterior guardrails along raised floors, landings, porches, decks and balconies must have intermediate rails or ornamental closures that do not allow passage of a 4 inch sphere.
- At the bottom edge of a guardrail along a series of steps, the space between the tread, riser and guardrail must be small enough to prevent a 6" sphere from getting through.

Guardrail with vertical pattern



Guardrail with horizontal pattern



Winder Stairs

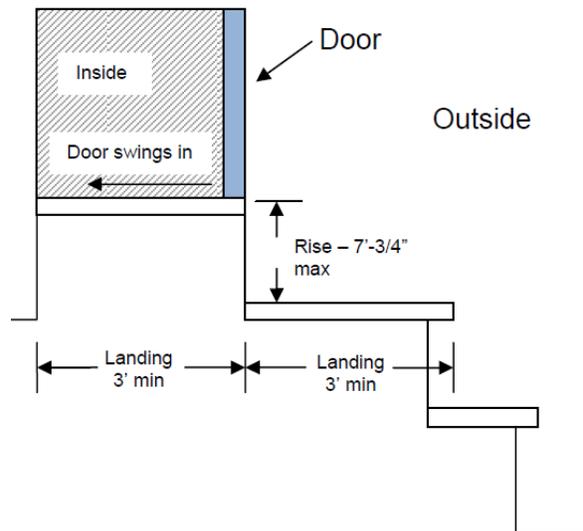
- Stairways that turn a corner, with treads that are narrow on one end and wider at the other, are called winder stairs. You may build winder stairs, but the treads must be at least 6 inches deep at their narrowest point. Also, all of your treads must be at least ten inches wide, measured 12 inches from where they are the narrowest. Although the tread size varies on winder stairs, there still may not be more than 3/8 inch variation between the largest and smallest rise.

Spiral Stairs

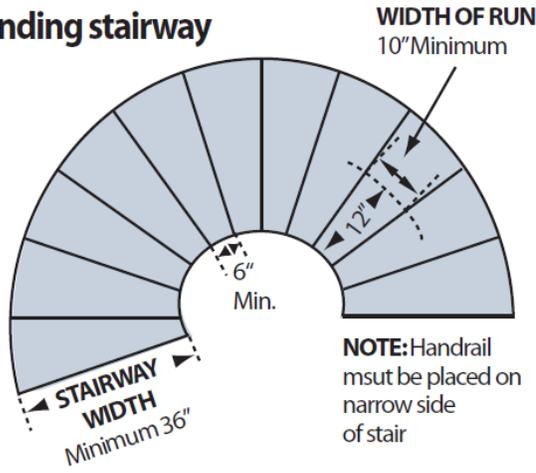
- Spiral stairway treads must be at least 7-1/2 inches deep measured 12 inches out from where they are narrowest. The risers can't be more than 9 -1/2 inches high.
- The minimum width of a spiral stairway from the center pole to the outside edge of the tread is 26 inches.
- Each spiral stair tread must be identical.
- Headroom space must be 6' 6" minimum. [CRC R311.7.10.1]

Landings

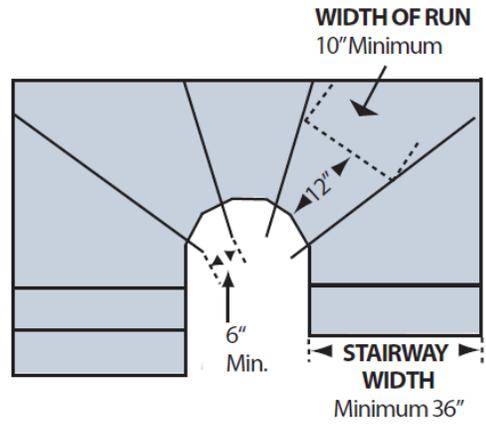
- Any exterior entry/exit door must have a landing at least 3' x 3' inside the door before there can be a step. The interior landing must not be more than 1-1/2 inches lower than the top of the threshold. On the outside of the door, the step-down may be 7'-3/4 " before you need another 3' x 3' minimum landing, providing the door does not swing over the stairs. After the landing there may be additional steps. [CRC R311.3.1]



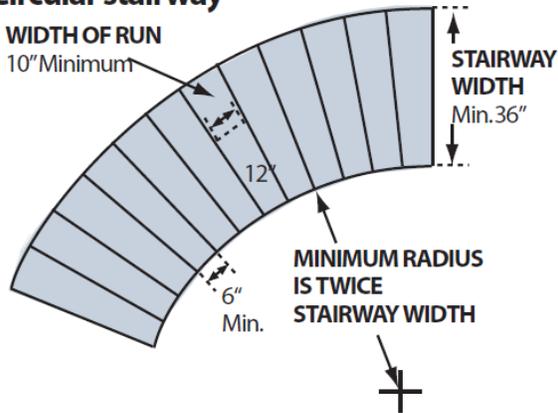
Winding stairway



Alternative use of winders

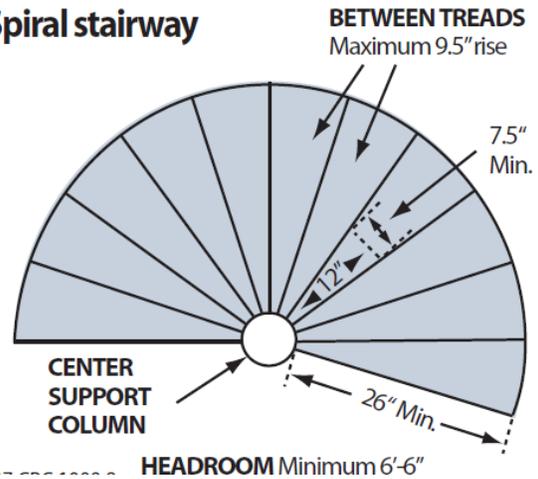


Circular stairway



[2013 CBC 1009.8]

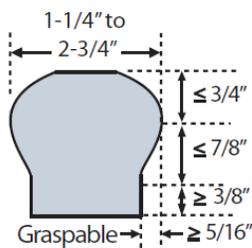
Spiral stairway



[2013 CRC]

Handrail

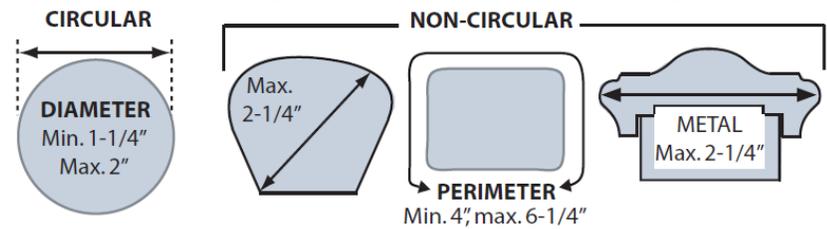
Perimeter greater than (\leq) 6-1/4"



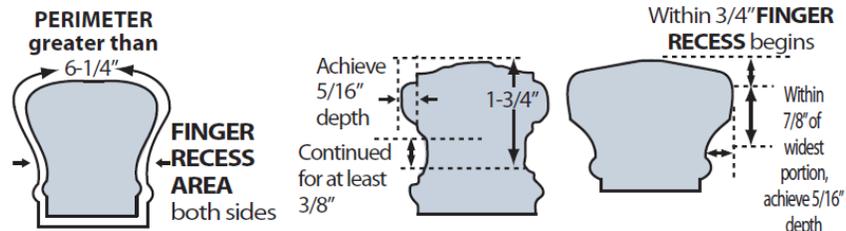
FINGER RECESS AREA required on both sides

Handrail details

Other shapes may be acceptable if they provide equivalent gripping service. Please contact the Building Division.



Handrail samples



Building Division Counter is open between the hours of 7:30 a.m. and 5:30 p.m. (closed for lunch 11:30 a.m. - 12:30 p.m.) Monday through Thursday. City Hall and the Building Division counter are closed on alternating Fridays ([see calendar](#)). Our Friday hours are 8:00 a.m. – 5:00 p.m. (closed for lunch 11:30 a.m. - 12:30 p.m.).

*****Please contact the Poway Building Division if you have any questions or concerns at (858) 668-4645 or building@poway.org*****