

# STAIRWAYS (RESIDENTIAL)

## STAIRS AND LANDINGS

Stairways must be at least 36" clear width above the handrail height. Handrails cannot project more than 4.5" into each side.

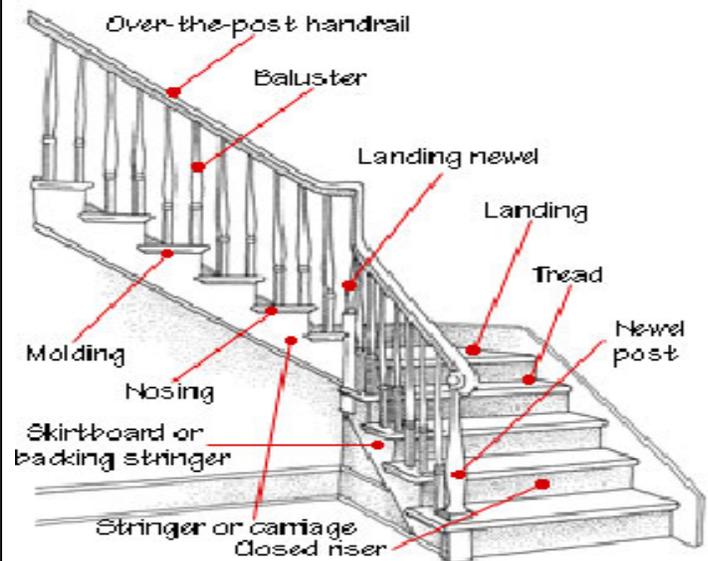
There must be at least 80" of headroom measured vertically from the sloped line of the nosing including landings throughout the stairway.

The maximum height of a riser is 7.75". Treads have to be at least 10" deep measured from nosing to nosing, and need to be a minimum of 4" tall. Treads and risers can vary 3/8" from smallest to largest as long as the maximum riser height and minimum tread depth are maintained.

If using winders, the treads cannot be shallower than 6" and need to be at least 10" deep when you are 12" into the winder at the walk line. The winder treads must also maintain uniform treads at the walk line with no tread depths varying more than 3/8" from largest to smallest.

The landings must be at least the width of the stairway and extend 36" in the direction of travel. Stairs cannot go up more than 12' without a landing.

Landings are not required at the top of interior stairways, including garage stairs, as long as the door does not swing over the stairs.



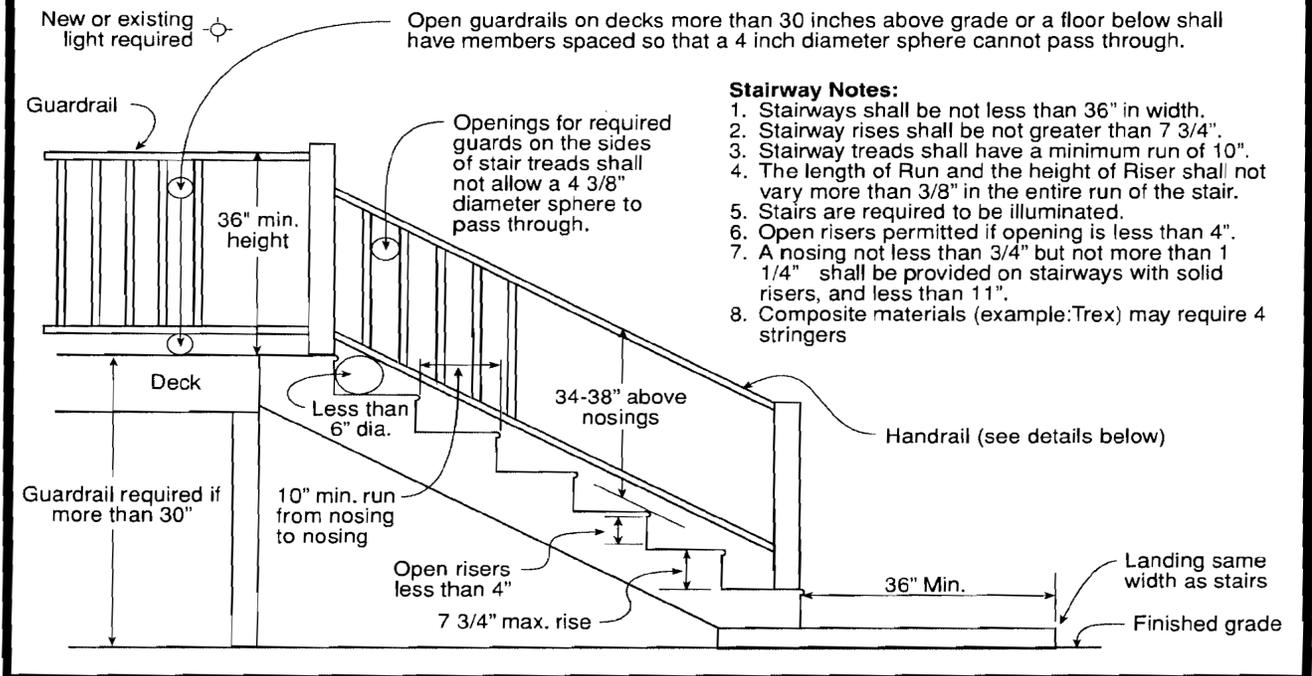
## GUARDRAILS

Guardrails are required when the walking surface is greater than 30" from the grade below and must be greater than 36" in height. When the top of the guardrail serves as the required handrail, the height can be reduced to 34" but no greater than 38".

Openings in guardrails shall not allow passage of a sphere 4" in diameter with a couple of exceptions. Openings in guardrails on the open side of stairs cannot allow the passage of a sphere greater than 4 3/8". The triangular opening created by a tread, riser, and guardrail cannot allow the passage of a sphere greater than 6". Open riser design in stairs also requires the opening to be no greater than 4" when 30" or higher to the grade below.

**See Stair and Handrail Specifications on page 2 for more details.**

## Stair & Handrail Specifications



### Stairway Notes:

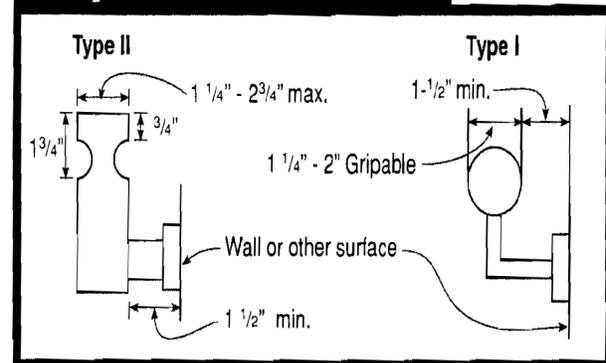
1. Stairways shall be not less than 36" in width.
2. Stairway rises shall be not greater than 7 3/4".
3. Stairway treads shall have a minimum run of 10".
4. The length of Run and the height of Riser shall not vary more than 3/8" in the entire run of the stair.
5. Stairs are required to be illuminated.
6. Open risers permitted if opening is less than 4".
7. A nosing not less than 3/4" but not more than 1 1/4" shall be provided on stairways with solid risers, and less than 11".
8. Composite materials (example:Trex) may require 4 stringers

## HANDRAILS

Handrails must be mounted between 34" and 38" above the tread nosing and must run the full length of the stairs. The handrails have to be at least 1.5" off the wall and where circular, need to be 1.25" to 2" in diameter. If the handrail is not circular, it must have a perimeter between 4" and 6.25" with a maximum cross section of 2.25". Other handrails may be acceptable as long as they are able to be grasped.

Handrails need to run continuously for the full flight of the stairs and return to the wall at the top and bottom. They can also stop and start at a newel post at landings. The use of a turnout, starting easing or volute, can also be used at the bottom tread.

## Acceptable Handrail Details



## Unacceptable Handrails

