Stair requirements under the 2012 International Residential Code. See IRC sections R311 and R312 for additional detailed requirements and exceptions.

**NOTE:** All exterior deck and stair wood must be factory preservative treated, cedar, redwood or other approved materials with resistance to decay.

**Elevation or Side View**

- **Guard or Guardrail**
- **Less Than 4"** at balusters
- **Baluster or ornamental pattern such that a 4” sphere cannot pass through**
- **Top of Guard Min 34” from nosings at open stairs**
- **Less Than 4 3/8”** at side of stairs
- **Graspable Handrail** (Required on one side of stairs with 4 or more Risers)
- **Newel Post**

**Plan or Top View**

- **Handrail to Wall or Post Min 1 ½”**
- **Handrails must Return to Wall or End at Post – No Projecting Ends**

**Elevation or Side View**

- **Riser**
- **Tread**
- **Sloping Plane across Nosings**
- **Min. 6’-8” Headroom**
- **Min. 36 inches at Landings and raised floor surfaces.**

**Plan or Top View**

- **Floor or Grade** (Ground Level)
- **3’ Min. Landing**
- **12’-0” Max. between Landings**
- **3’ Min. to 1 ½” Nosing required unless Open Risers or 11” Treads or greater**

**Elevation or Side View**

- **Max. riser height is 7 ¾”**
- **Solid Risers or “Open Risers” with less than 4” Open Space**
- **Treads and Risers may not vary in height more than 3/8” between the smallest and largest.**
- **Tread - Minimum 10” Nosing to Nosing**

**Elevation or Side View**

- **12’-0” Max. between Landings**
- **3’ Min. Landing**
- **3’ Min. to 1 ½” Nosing required unless Open Risers or 11” Treads or greater**

**Plan or Top View**

- **Handrail to Wall or Post Min 1 ½”**
- **Handrails must Return to Wall or End at Post – No Projecting Ends**
- **NO! (Snagging Hazard)**
IRC “R311.7.8.3 Handrail grip size: All required handrails shall be of one of the following types or provide equivalent graspability.

1. **Type I.** Handrails with a circular cross section shall have an outside diameter of at least 1 1/4 inches (32mm) and not greater than 2 inches (51 mm). If the handrail is not circular it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6 1/4 inches (160 mm) with a maximum cross section of dimension of 2 1/4 inches (57 mm).

![Type I Handrails Diagram]

2. **Type II.** Handrails with a perimeter greater than 6 1/4 inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3 /4 inch (19 mm) measured vertically from the tallest portion of the profile and achieves a depth of at least 5 /16 inch (8 mm) within 7 /8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3 /8 inch (10 mm) to a level that is not less than 1 3 /4 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 1/4 inches (32 mm) to a maximum of 2 3/4 inches (70mm). Edges shall have a minimum radius of 0.01 inches (0.25 mm).” [ADA requires minimum 1 ¼” and maximum 1 ½” dimensions on handrails.]

![Type II Handrails Diagram]

**Additional Handrail Code Information**

“R311.8.3.1 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 (864 mm) and not more than 38 inches (965 mm).”

“R311.8.3.3 Continuity. 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 (38 mm) between the wall and the handrails.”