

# RAILING IBC CODE

## REFERENCE GUIDE

### GUARDRAIL

1. IBC 1015.2: Guards shall be located along open-sided walking surfaces that are located more than 30" measured vertically to the floor or grade below at any point.
2. IBC 1015.3: Required Guards shall be not less than 42" high.
3. IBC 1015.4: Required guards shall not have openings that allow passage of a sphere 4" in diameter.
4. IBC 1015.5: Key Exception 1: The triangular openings at the open sides of a stair formed by the riser, tread, and bottom rail shall not allow passage of a sphere 6" in diameter.
5. IBC 1015.5: Key Exception 2: Elevated walking surfaces for access to and use of electrical, mechanical, or plumbing systems or equipment only require that a 21" sphere not fit through the opening.
6. IBC 1607.8.1: Guards shall be designed to resist a linear load of 50 pounds per linear foot.
  - a. IBC 1607.8.1.1: Guards shall resist a concentrated load of 200 pounds.
  - b. IBC 1607.8.1.2: Intermediate rails, pickets, and posts shall be designed to resist a concentrated load of 50 pounds.

### HANDRAIL

1. IBC 1011.11: Stairways shall have handrails on each side which comply with section 1014.
2. IBC 1011.11: Key Exception: Stairways within dwelling units are permitted to have handrail on one side only.
3. IBC 1012.8: Ramps with a rise greater than 6" shall have handrails on both sides. Handrails shall comply with section 1014.
4. IBC 1014.2: Handrail height, measured above stair tread nosing's, or finish surface of ramp slope, shall be uniform, not less than 34" and not more than 38".
5. IBC 1014.3.1 Part 1: Circular handrails shall have an outside diameter of not less than 1.25" and not greater than 2".
6. IBC 1014.3.1 Part 2: Where the handrail is not circular, it shall have a perimeter dimension of not less than 4" and not greater than 6.25" inches with a maximum cross-sectional dimension of 2.25" and minimum cross-sectional dimension of 1".
7. IBC 1014.4: Handrail gripping surfaces shall be continuous, without interruptions by newel posts or other obstructions (Handrails within dwelling units are permitted to be interrupted by a newel post on turns and landings).
8. IBC 1014.4: Key Exception: Handrail brackets or pickets attached to the bottom of the handrail that do not project horizontally beyond the sides of the handrail within 1.5" of the bottom of the handrail shall not be considered obstructions.
9. IBC 1014.7: Clear space between a handrail and a wall or other surface shall be not less than 1.5".
10. IBC 1607.8.1: Handrail shall be designed to resist a linear load of 50 pounds per linear foot
  - a. IBC 1607.8.1.1: Handrail shall resist a concentrated load of 200 pounds.



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## **MORE TO KNOW ABOUT BUILDING CODES!**

Keep in mind that there are some municipalities that require more design loads than the IBC, for example, Reedy Creek which is a Disney owned property, has its own load requirements. It is also important to remember when using glass railings, in some or most locations the wind pressure for each location of guard railing will almost always exceed the loads called for by the IBC. In this case you want to make sure that you have a licensed engineer review the structural details for each guard railing location that has glass panels and ensure that it is designed in compliance with the correct PSF.

It's Important to keep in mind for cable railings, there are several locations around the United States and Canada that do NOT allow horizontal infills (this would be considered "climbable"). Make sure that you review each project locations specific municipalities restrictions before completing the design for your railing systems.

Make sure to always consult with a knowledgeable railing professional like Greco Architectural Metal Products to assist with designing your project to ensure that your guard and handrails will meet or exceed the requirements of that particular location.

## **NEED MORE INFORMATION?**

If you want more information or would like to consult with one of our professional sales people, please visit our website or contact us directly by phone or email.

[www.grecoarchitecturalmetals.com](http://www.grecoarchitecturalmetals.com)

Call us at 727-372-1100 ext (105)

Send us an email at [estimating.us@grecorailings.com](mailto:estimating.us@grecorailings.com)

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