

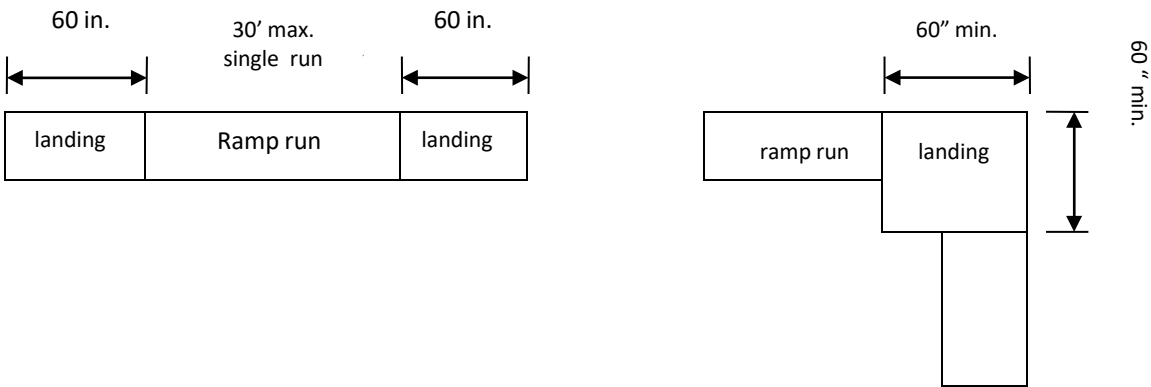
# Ramps

**REFERENCE: ICC/ANSI A117.1 2009**

The following information provides specifications and requirements for the building of a ramp to be used by handicapped persons. This is for reference only.

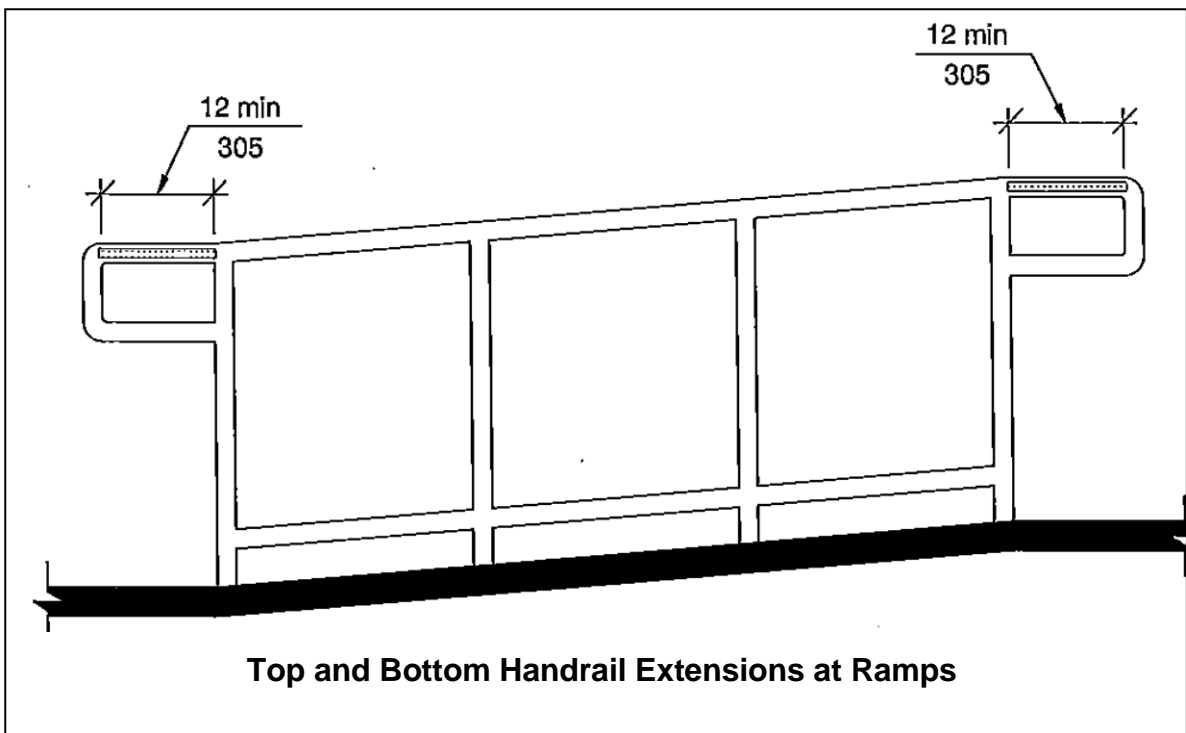
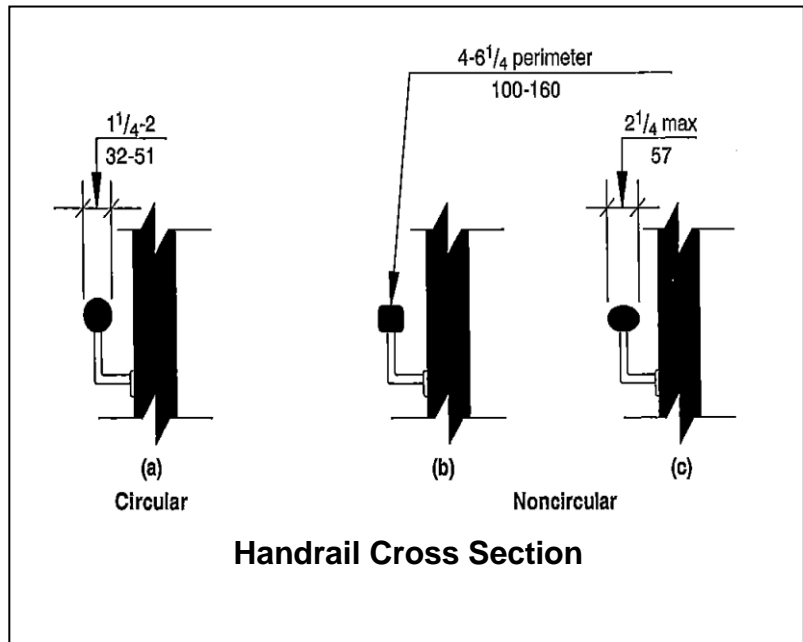
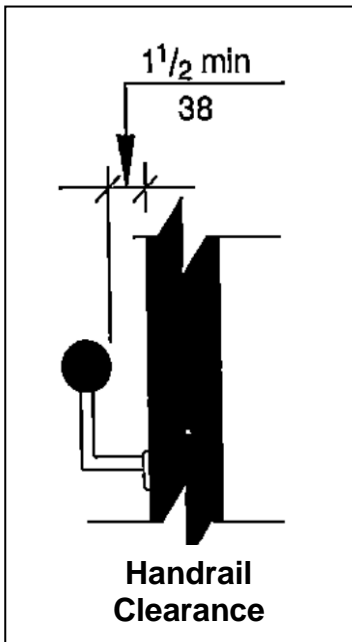
**Ramp:** A walking surface that has a running slope steeper than 1 unit vertical in 20 units horizontal (5% slope).

1. Ramps should have a slope not greater than 1:12 ratio with a maximum rise of 30 inches for a single run, after which there should be a landing. In existing buildings, ramps shall be permitted to have slopes steeper than 1:12 where space is limited and shall comply with Section 3411.8.5 of the 2018 International Building Code.
2. **Cross slope** of ramp runs shall not exceed 1:48.
3. **Ramp surfaces** shall be stable, firm and slip resistant.
4. **Clear width** shall be 36 inches minimum between handrails.
5. **Maximum rise** shall be 30 inches in a single run before a landing is required.
6. **Landings** shall be at the top and the bottom of each ramp run.
  - **Width.** Clear width of the landing shall be at least as wide as the widest ramp run leading to the landing.
  - **Length.** Landing shall have a clear length of 60 inches.
  - **Change in direction.** When changing direction, ramp landings shall be 60 inches by 60 inches minimum.
  - **Doorways.** Where a landing has a doorway, there should be enough space on the landing to accommodate a wheelchair after the door is opened.

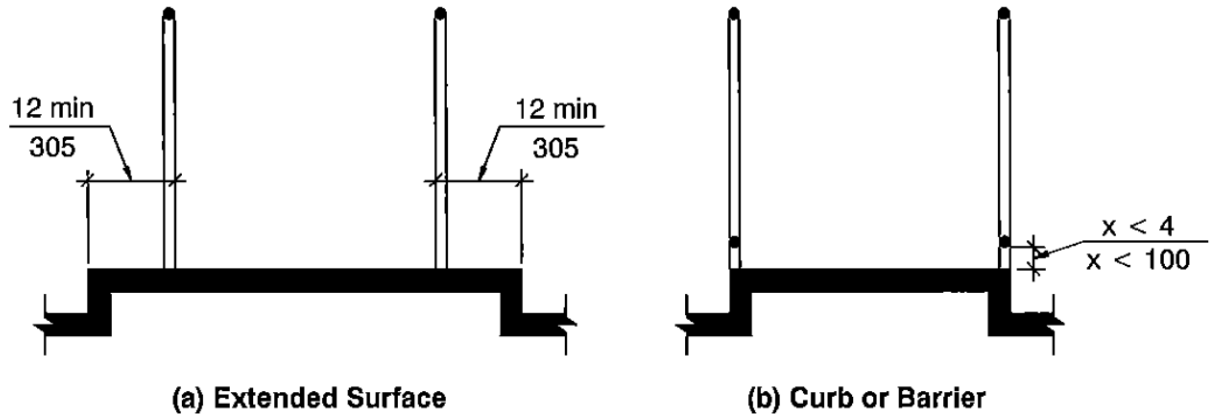


7. **Handrails.** A ramp with a rise greater than 6 inches shall have handrails on both sides.

- **Continuity.** Handrails shall be continuous within the full length of the ramp run. Inside handrails on switchback ramps shall be continuous between runs.
- **Height.** The top of the gripping surface shall be 34 inches minimum and 38 inches maximum.
- **Extensions.** Handrail extensions shall extend horizontally 12 inches minimum beyond the top and bottom of the ramp.



8. **Edge protection.** Edge protection shall comply with either (a) or (b) as shown below.



9. **Guards.** Ramps that are over 30 inches from grade shall also have guards installed.

- **Height.** The guard height shall not be less than 42 inches in height.
- **Openings.** Balusters shall be such that a 4 inch sphere cannot pass through any opening up to a height of 36 inches. From the height of 36 inches to 42 inches above the walking surface, a sphere of 4-3/8 inches in diameter shall not pass. Handrails are still required inside the guards.