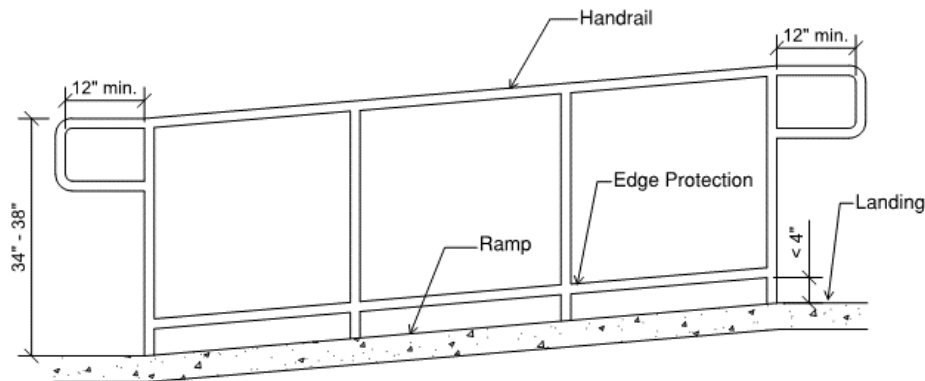


Accessible Ramps and Landings

This tip sheet reflects code requirements of the 2021 International Building Code (IBC) and ICC A117.1-2017 with Washington State Amendments.

Existing buildings will be permitted to use specific provisions from the 2009 A117.1 Standard, unless specified. A building erected prior to adoption of 2017 A117.1 Standard or for which a permit has been issued. Reference 2018 tip sheets for information.

New buildings will use provisions from the A117.1-2017 standard.



Typical Ramp Features

Ramps

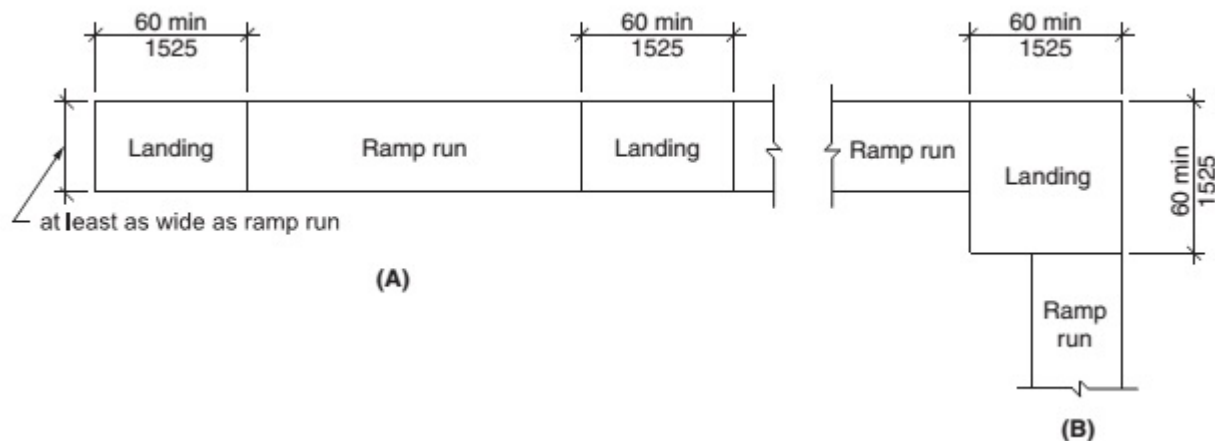
- Slope:** The maximum ramp slope shall be 1 unit rise to 12 units run (8.3 percent slope). (IBC 1012.2, A117.1 405.2) Existing buildings permitted to be steeper than 1:12 where slopes are necessary due to space limitations, must comply with Table 405.2 A117.1.
- Rise:** The maximum rise for any ramp run is 30 inches. (IBC 1012.4, A117.1 405.6)
- Width:** Clear width of an interior accessible route shall be 36 inches; clear width of an exterior accessible route shall be 48 inches minimum. measured between handrails or other projections. See exceptions for existing buildings and facilities and reduces clear widths (A117.1 403.5.1). (IBC 1012.5.1, 1101.2.2,
- Surface:** Ramp surfaces shall be stable, firm, and slip resistant. (, A117.1 302)
- Drainage:** Landings subject to wet conditions shall be designed to prevent the accumulation of water. Exposed exterior ramps and their approaches shall be constructed to prevent the accumulation of water on walking surfaces. (A117.1 405.10)
- Cross Slope:** Maximum ramp cross slopes shall not be steeper than 1 unit rise to 48 units run. (IBC 1012.3, A117.1 405.3)
- Headroom:** Headroom shall not be less than 80 inches. (A117.1 307.2)

Handrails

- Rise:** Ramps with a rise greater than 6 inches require handrails. (IBC 1012.8, A117.1 405.8)
- Height:** Handrails must be a maximum uniform height between 34 inches minimum and 38 inches measured above the finish surface. (IBC 1014.2.1; A117.1 505.4)
- Extension:** Handrails must extend at least 12 inches beyond the top and bottom of any ramp run and shall return to a wall, guard, floor, or shall be continuous to the handrail of an adjacent ramp run (A117.1 505.10.1)
- Continuity:** Handrails shall be continuous within the full length of each ramp run. Inside handrails on switchback or dogleg ramps shall be continuous between runs. See exception for handrails in aisles serving seating. (IBC 1014.4; A117.1 505.3)
- Gripping Surface:** Shall be continuous, without interruption by newel posts, other construction elements or obstructions. See exceptions. (A117.1 505.6)

Guards

- Landings or Ramps:** Provide guards for portions of landings or ramps that are more than 30 inches measured vertically to the floor or grade below at any point within 36 inches horizontally to the edge of the open side. (IBC 1015.2)
- Height:** Guards must be a minimum of 42 inches in height measured vertically from the surface of the ramp, except within individual dwelling units in Group R2 or R3, guards may be 36 inches in height above the adjacent walking surface. (IBC 1015.3)



Ramp Layout Dimensions

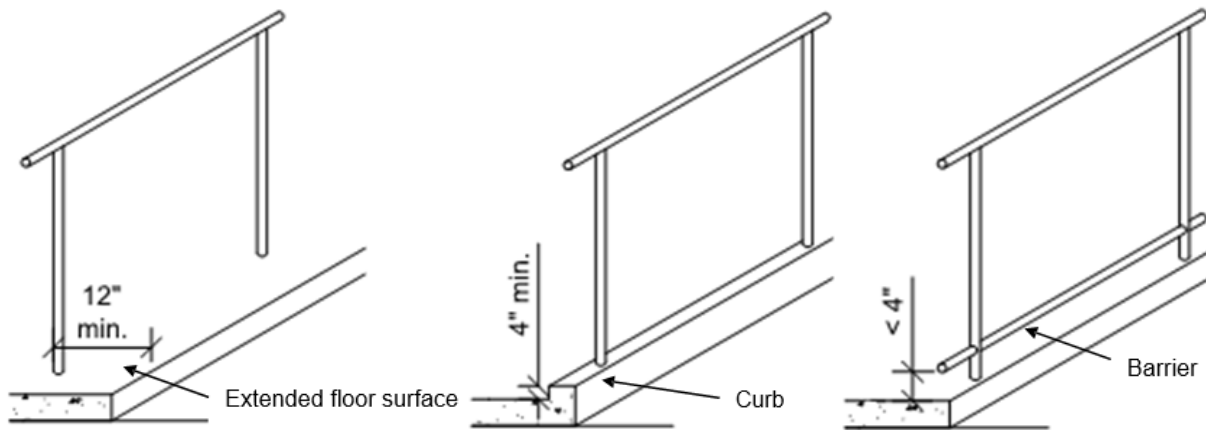
Landings

- Surface:** Ramp surfaces shall be stable, firm and slip resistant materials securely attached. (IBC 1012.7.1; A117.1 302.1)
- Drainage:** Exposed exterior ramps and their approaches shall be constructed to prevent the accumulation of water on walking surfaces. (IBC 1012.7.2, A117.1 405.10)
- Landings:** Ramps shall have landings at the top and bottom, points of turning, entrance, exits, and doors and at least one intermediate landing for each 30 inches of rise with a minimum dimension of 60 inches in the direction of the ramp run. (IBC 1012.6; IBC 1012.4; A117.1 405.7.3; A117.1 405.6)
- Change of Direction:** Ramps that change direction between runs at landings shall have a clear landing 60 inches minimum by 60 inches minimum. (IBC 1012.6.14; A117.1 405.7.4)
- Width:** The minimum width of the landing shall be the width of the widest ramp adjoining the landing. (IBC 1012.6.2, A117.1 405.7.2)
- Cross Slope:** Landings shall not have a cross slope steeper than 1 unit rise to 48 units run (2 percent slope). (IBC 1012.6.1, A117.1 405.7.1)
- Doors:** Maneuvering clearances for doors may overlap the landing area where doorways are adjacent to the ramp. Where a door or gate is subject to locking is located adjacent to a ramp landing, the landing shall be sized to provide a turning space complying with A117.1 304.3. (IBC 1012.6.5; A117.1 405.7.5)

Edge Protection

- Where Required:** Edge protection shall comply with either an extended floor surface (A117.1 405.9.1) or by a curb or barrier (A117.1 405.9.2). Edge protection is required on each side of ramp runs and at each side of ramp landings. (IBC 1012.10, A117.1 405.9)
Exceptions:
 - Edge protection is not required on ramps that are not required to have handrails, provided they have flared sides complying with ICC A117.1 406. curb ramp provisions. (IBC)
 - Edge protection is not required on side of ramp serving an adjacent ramp run or stairway. (IBC)
 - Edge protection is not required on sides of ramp landings having a vertical drop off of not more than 1/2-inch within 10 inches horizontally of the required landing area. (IBC)
 - Edge protection shall not be required on the sides of the ramped aisles where the ramps provide access to the adjacent seats and aisle access ways. (A117.1)
- Extended Floor Surface (Option 1):** Extend the floor surface of the ramp run or ramp landing a minimum of 12 inches beyond the inside face of a railing complying with IBC 1014. (see the figure below). (IBC 1012.10.2, A117.1 405.9.1)

- Curb (Option 2):** Create a curb that is a minimum height of 4 inches (see the figure below). (IBC 1012.10.1, A117.1 405.9.2.1)
- Wall or Barrier (Option 3):** Construct a wall or barrier to prevent the passage of a 4-inch diameter sphere where any portion of the sphere is within 4 inches of the floor or ground surface (see the figure below). (IBC 1012.10.1, A117.1 405.9.2.2)



Edge Protection Options