

Quick Guide to Building Code Parameters for Ramp Design

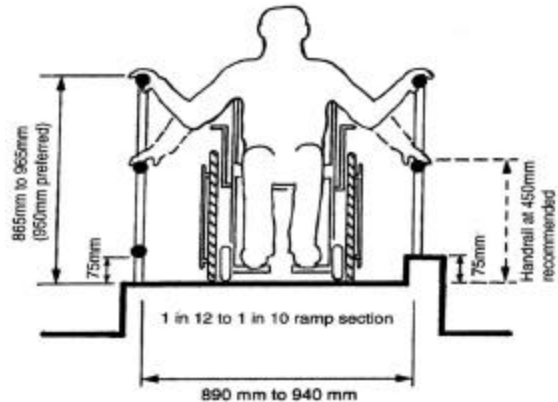
This is a brief guide only - refer to Building Code for complete requirements

RAMP OPTIONS FOR PERSONS WITH DISABILITIES - INTERIOR AND EXTERIOR

Ramp Slope (Height to Length Ratio)	Minimum Ramp Width (mm)	Maximum Distance Between Landings (mm)	Minimum Landing Size Width x Length (mm)	Handrails Required	Comments
> 1 in 20 to 1 in 16	1500	12000	1500 x 1500	both sides	slopes less than this are not considered a ramp
> 1 in 16 to 1 in 12	1500	9000	1500 x 1500	both sides	
maximum 1 in 12	1500	2000	1500 x 1500	one side	
> 1 in 12 to 1 in 10	890 to 940 between handrails	6000	ramp width x 1500	both sides	ramps repeated sequentially in series prohibited
> 1 in 10 to 1 in 8	1500	600	1500 x 1500	not required	known as 'curb cuts'. curb cuts repeated sequentially in series prohibited

RAMP OPTIONS FOR PERSONS WITH DISABILITIES - INTERIOR WIDE PASSAGE

Passageway Width (mm)		Minimum Ramp Width (mm)
up to and including 6000		915 between handrails
> 6000	1 ramp option	1500
	2 separate ramps option	915 between handrails



ADDITIONAL NOTES TO ABOVE TABLES:

- Ramps may need to be wider to accommodate minimum egress/exit widths.
- Handrails must be mounted 865mm to 965mm above the ramp surface. Guards 1070mm high may be required.

3. Where the ramp is 1500mm wide, handrails may project maximum 100mm from each side of the ramp into this width (total width reduction 200mm).
4. At least one handrail must have 300mm horizontal extensions beyond both top and bottom of the ramp slope.
5. If there is a vertical drop of more than 75mm at the side of the ramp, a 75mm high curb must be provided at the side of the ramp or alternatively flanking walls, railings or other such barriers must be provided such that the gap from the ramp surface to underside of such barriers is maximum 75mm.
6. Ramp surface must be slip resistant and must not have gratings which permit passage of a 13mm spherical object. Gratings with elongated openings must have them oriented approximately perpendicular to the direction of travel.
7. Ramp must be free of obstructions to a height of 1980mm (2100mm if to be used by ambulatory persons).
8. Persons who have suffered a stroke, have partial paralysis or who are unstable on their feet may be unaware of a changing floor plane, thereby experiencing instability when encountering a shallow ramp or sloping floor - stairs in addition to ramps should be considered.

RAMP OPTIONS FOR AMBULATORY PERSONS (not for persons with disabilities)

Occupancy Classification/Use	Maximum Ramp Slope (height to length ratio)	Comments
Exterior Use	1 in 10	
Group A - Assembly	1 in 10	
Group B - Care or Detention	1 in 10	
Group C - Residential	1 in 10	
Group D - Office or Personal Services	1 in 8	
Group E - Mercantile	1 in 6	
Group F - Industrial	1 in 6	Design of ramps for service rooms and industrial occupancies, intended only for occasional use in servicing equipment and machinery, is not prescribed by the Building Code.

ADDITIONAL NOTES TO ABOVE TABLE:

1. Minimum widths of ramps will default to minimum egress width requirements.
2. Handrail required on both sides, mounted 865mm to 965mm above ramp surface. Guards 1070mm high may be required.
3. At least one handrail must have 300mm horizontal extensions beyond both top and bottom of the ramp slope.
4. Ramp surface must be slip resistant.
5. Ramp must be free of obstructions to a height of 2100mm.

***GHL CONSULTANTS LTD** provides expertise in stair/ramp safety consulting, provisions for persons with disabilities, Building Code consulting and Fire Science Engineering. GHL advises on existing ramps in renovations and upgrading projects.*