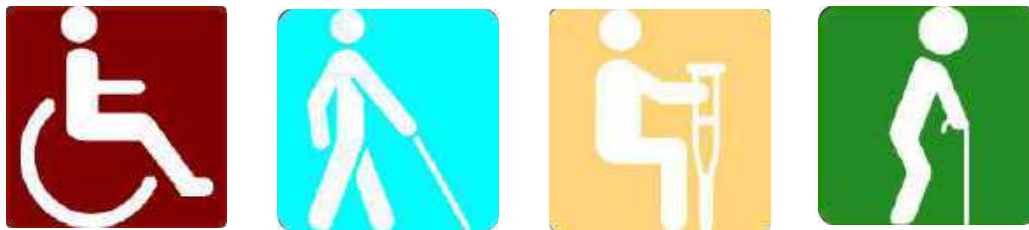




UNIVERSITY OF THE PHILIPPINES
MASTER DEVELOPMENT PLAN



ACCESSIBILITY GUIDELINES

OFFICE OF DESIGN AND PLANNING INITIATIVES
OFFICE OF THE VICE PRESIDENT FOR DEVELOPMENT

2018

UNIVERSITY OF THE PHILIPPINES
MASTER DEVELOPMENT PLAN
ACCESSIBILITY GUIDELINES

Table of Contents

Site Development.....	5
Pedestrian Walkways, Sidewalks, and Foot Paths.....	5
Parking.....	13
Signage and Way-Finding	17
Crossings	21
Accessible Ramps.....	23
Handrails and Grab Bars	27
Buildings.....	28
Accessible Entrances.....	28
Handrails and Grab Bars	29
Floors.....	30
Doors.....	31
Switches	34
Thresholds	34
Corridors	35
Signage and Way-Finding	36
Toilets and Baths	40
Elevators.....	47
Stairs	50
Telephones	51
Automated Teller Machines (ATMs).....	52
Dressing Rooms and Cubicles	52
Counters.....	52
Canteens and Other Dining Facilities	53
Dormitories and Other Transient Lodging Facilities	54
Auditoriums, Arenas, Theaters, and Other Assembly Areas with Fixed Seating Accommodations.....	55

Safety	57
Fencing for Roadworks and Excavations for Roads and Sidewalks.....	57
Covers for Excavations	58
Signages for Roadworks on the Carriageway	59
Location of Emergency Exits	60
Areas of Refuge.....	60
Audio Visual Fire Alarm Systems.....	61
Special Facilities and Structures	62
Swimming Pools.....	62
Sports Facilities	63
Batas Pambansa Blg. 344: The Law to Enhance Mobility of Disabled Persons	67

Chapter 1

Site Development

Pedestrian Walkways, Sidewalks, and Foot Paths

1. The gradient along the length of sidewalks/walkways should be kept as level as possible and shall make use of slip resistant materials. Slip resistant materials shall have a Coefficient of Friction of 0.6 for level surfaces and 0.8 for sloping surfaces (American Society for Testing and Materials (ASTM) Standards compliant).
2. Whenever and wherever possible, sidewalks/walkways should have a gradient not steeper than 1:20 or 5%.
3. Sidewalks/walkways should have a maximum cross gradient of 1:100 or 1%.
4. Sidewalks/walkways shall have a minimum clear width of 1.20 M.

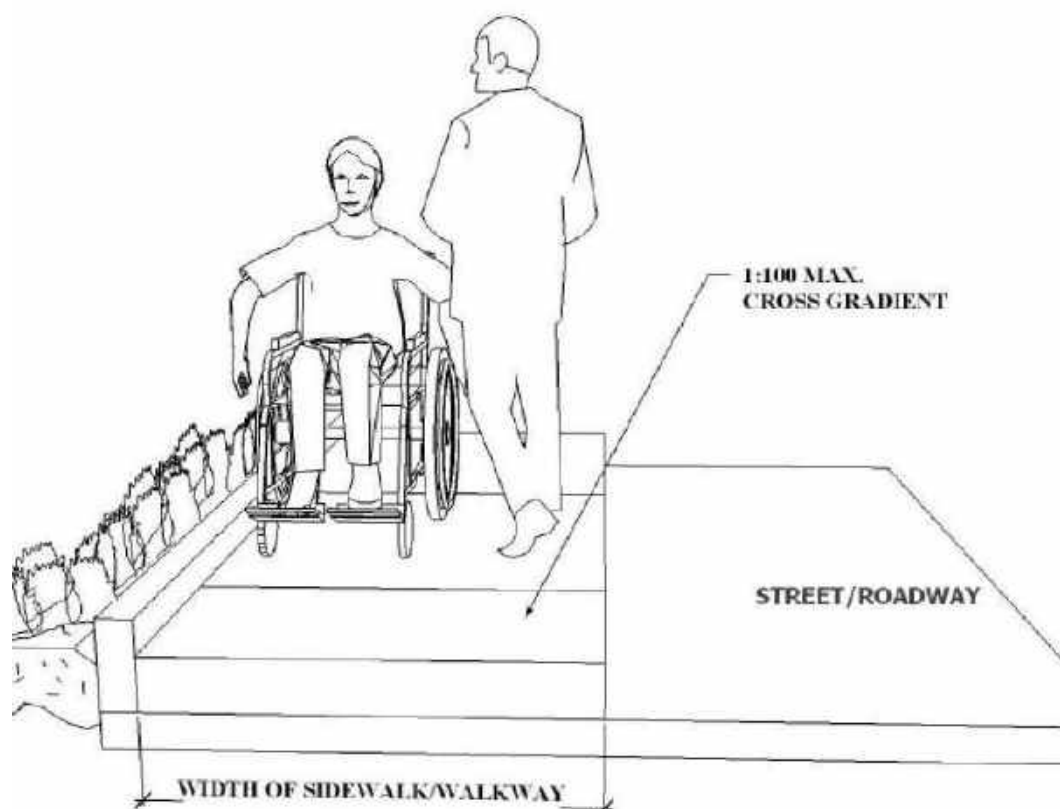


Figure 1. Image above shows 1.20m Minimum Sidewalk Width for 2-Way Traffic and 1:100 Maximum Cross Gradient

5. If possible, gratings should never be located along sidewalks/walkways. When occurring along sidewalks/walkways, grills of grating openings shall:
 - 5.1. oriented perpendicular to direction of travel;
 - 5.2. have a maximum center to center dimension spacing of 13 mm between members (See Fig. 2);
 - 5.3. not project above nor be recessed below the level of the sidewalk/walkway by more than 6mm (See Fig. 2).

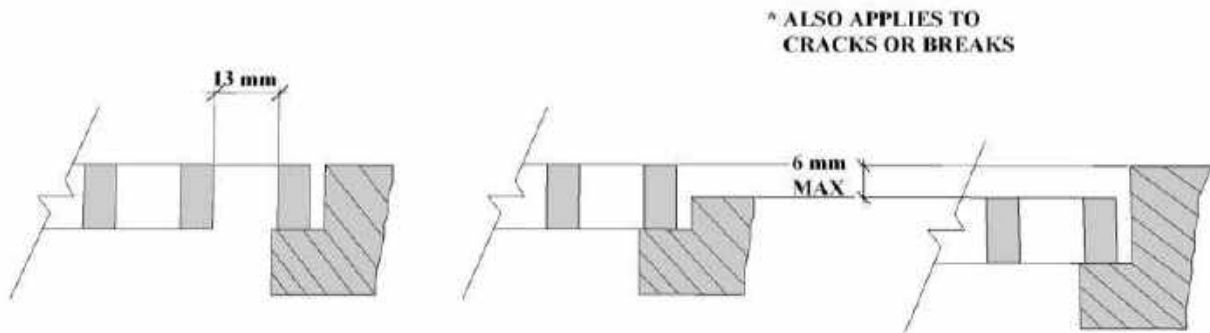


Figure 2. Image above shows critical dimensions for Gratings

6. Sidewalks/walkways should have a continuous surface without abrupt pitches in angle or interruptions by cracks or breaks creating edges above 6 mm.
7. Sidewalks and walkways shall use slip resistant materials. Slip resistant materials shall have a Coefficient of Friction of 0.6 for level surfaces and 0.8 for sloping surfaces (ASTM Standards compliant).
8. In lengthy or busy sidewalks/walkways, spaces should be provided at some point along the route so that a wheelchair may pass another or turn around. These spaces should have a minimum clear dimension of 1.50 M and should be spaced at a maximum distance of 12.00 M between rest stops (See Fig. 3).

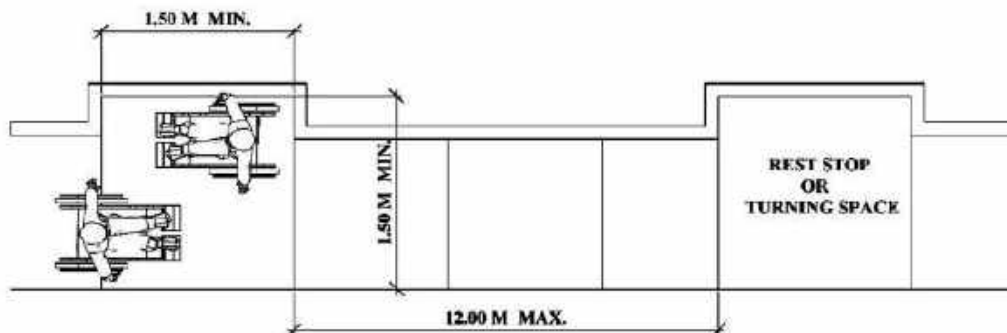


Figure 3. Rest Stops or Turning spaces on Sidewalks and Walkways

9. To guide persons with visual impairment, sidewalks/walkways should as much as possible follow straightforward routes with right angle turns.
10. Where planting is provided adjacent to the sidewalk/walkway, regular trimming is essential to ensure that branches of trees or shrubs do not extend beyond sidewalks/walkways or paths, as not only do these present a particular danger to the person with visual impairment, but they also reduce the effective sidewalk/walkway width available to pedestrians in general.
11. Sidewalk/walkway clear vertical headroom should not be less than 2.00 M and preferably higher (See Fig. 5).

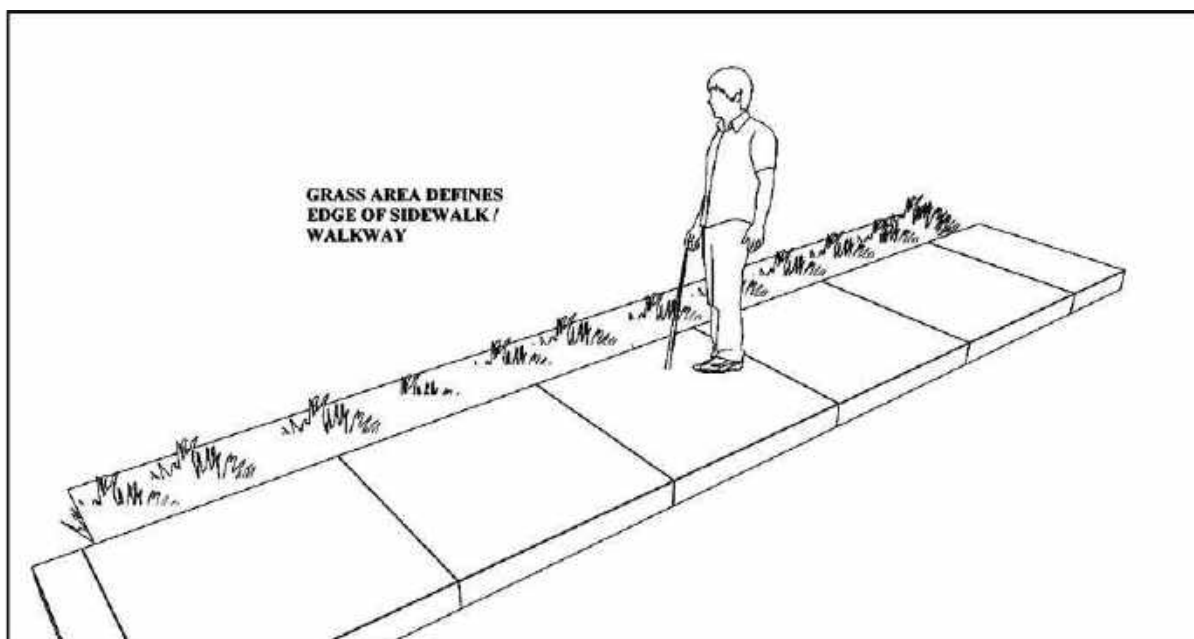


Figure 4. Use of Grass Area or Planting Strip to Define Inner Edge of Sidewalks/Walkways

12. Where open spaces are provided, persons with visual impairment can become particularly disoriented. Therefore, it is extremely helpful if sidewalks/walkways or paths can be given defined edges either through the use of planters with dwarf walls, or a grass verge, or similar, which provides a texture different from the path as shown in Fig. 4. Tactile surfaces/markings should be provided.
13. Dropped Sidewalks
 - 13.1. Dropped sidewalks should be provided at pedestrian crossings and at the end of walkways of a private street or access road.

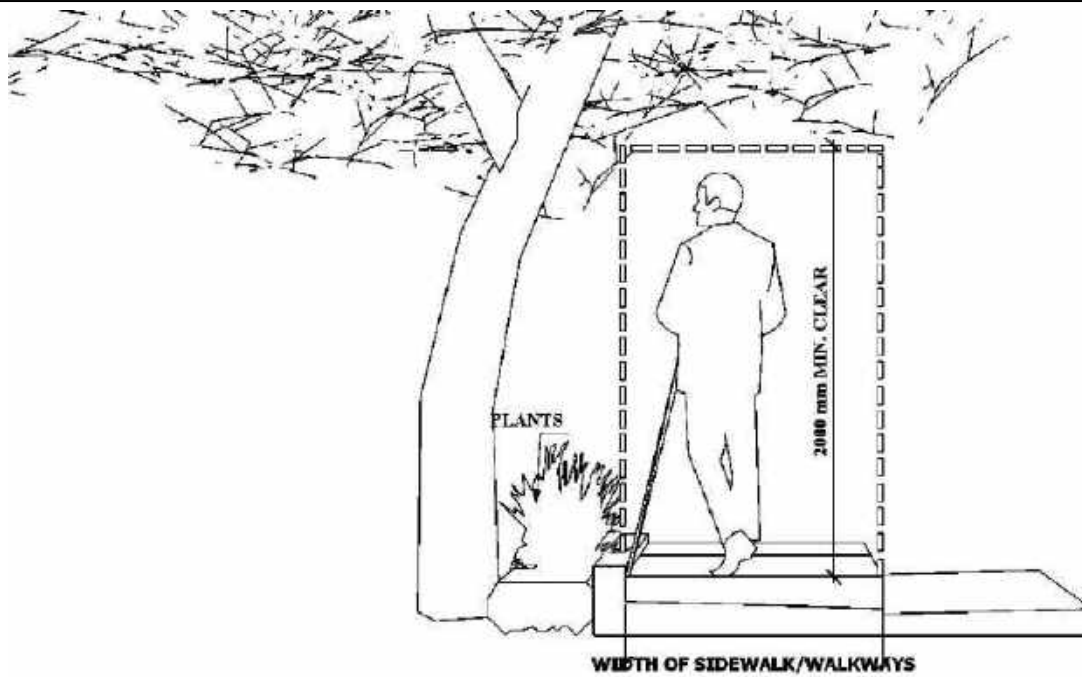


Figure 5. Image above shows the required Minimum Headroom Clearance of 2.00 M. under tree canopies and overhead signage for the safety especially of Persons with Visual Impairment

- 13.2. Dropped sidewalks at crossings shall have a width corresponding to the width of the crossing.
- 13.3. For crossings and walkways less than 1.50 M in width, the base/level surface at the bottom of the ramp shall have a minimum depth of 1.50 M with a width corresponding to the width of the crossing.

For crossings and walkways less than 1.50 M in width, the base/level surface at the bottom of the ramp shall have a minimum width

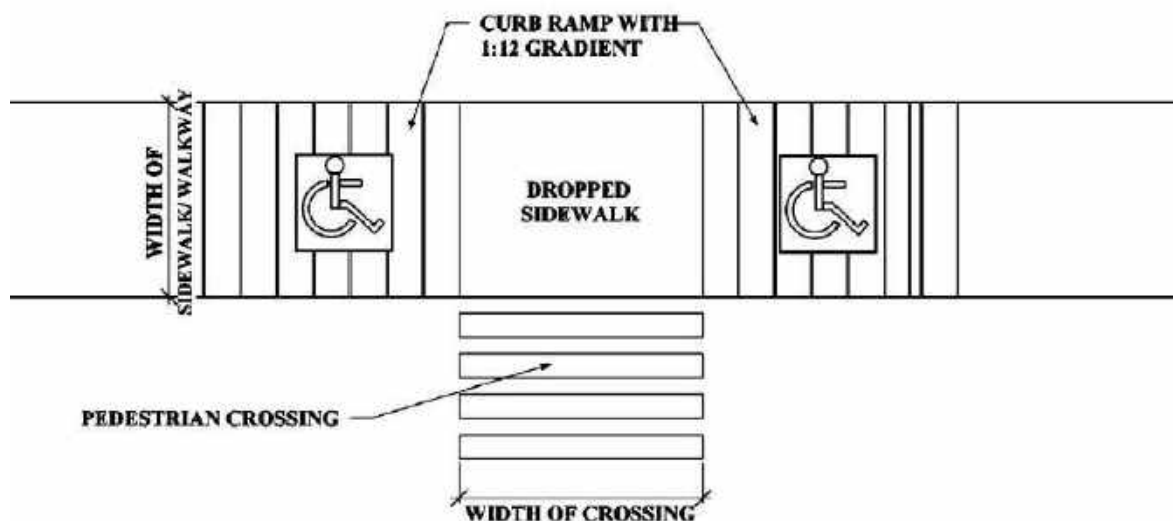


Figure 6. Image above shows the required Minimum Headroom Clearance of 2.00 M. under tree canopies and overhead signage for the safety especially of Persons with Visual Impairment

corresponding to the width of the crossing (4.00 M minimum for national roads and as mandated by Local ordinances for local roads).

- 13.4. Dropped sidewalks shall be sloped towards the road with a maximum cross gradient of 1:100 (1%) to prevent water from collecting.

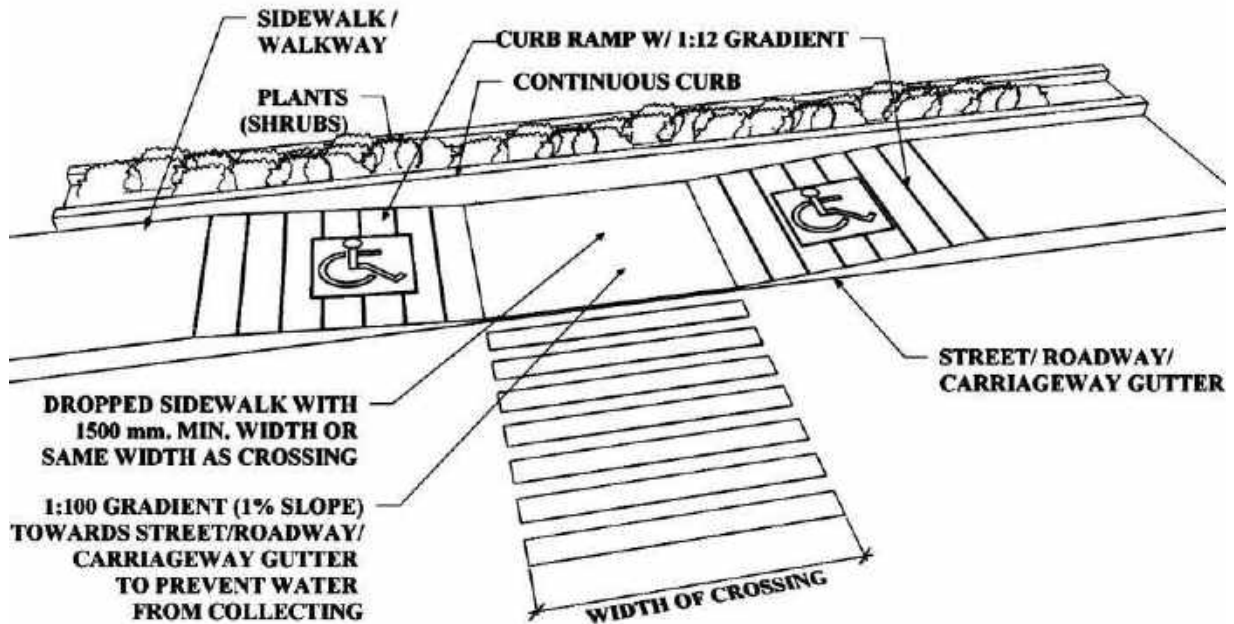


Figure 7. Perspective View of a Dropped Sidewalk

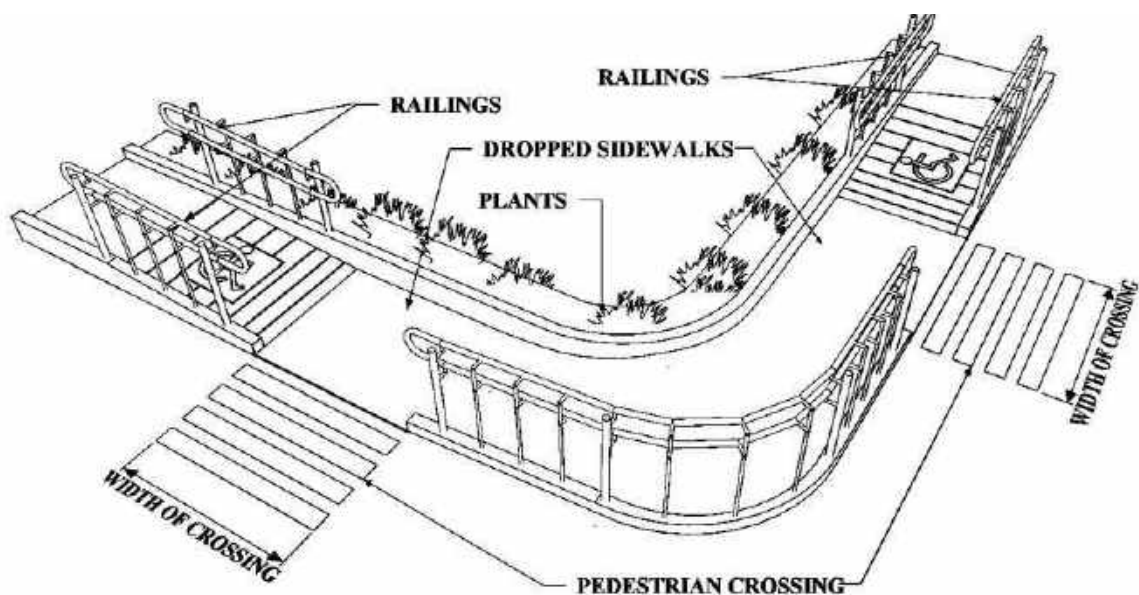


Figure 8. Perspective View of a Dropped Sidewalk at a Street Corner

- 13.5. Dropped sidewalks shall be sloped towards the road with a maximum cross gradient of 1:100 (1%) to prevent water from collecting.
- 13.6. The difference in elevation between the base/level area of a dropped sidewalk from the road or gutter shall not exceed 19 mm.
- 13.7. Provide the following signage:
 - 13.7.1. Pole mounted signage, 600 mm x 600 mm in size and mounted at a minimum clear height of 2.00 M from the sidewalk floor. Pole mounted signs (planted) should not obstruct the path of pedestrians. Refer to DPWH Guidelines (Road Signs and Pavement Marking Manual) for installing pole mounted signs on sidewalks.

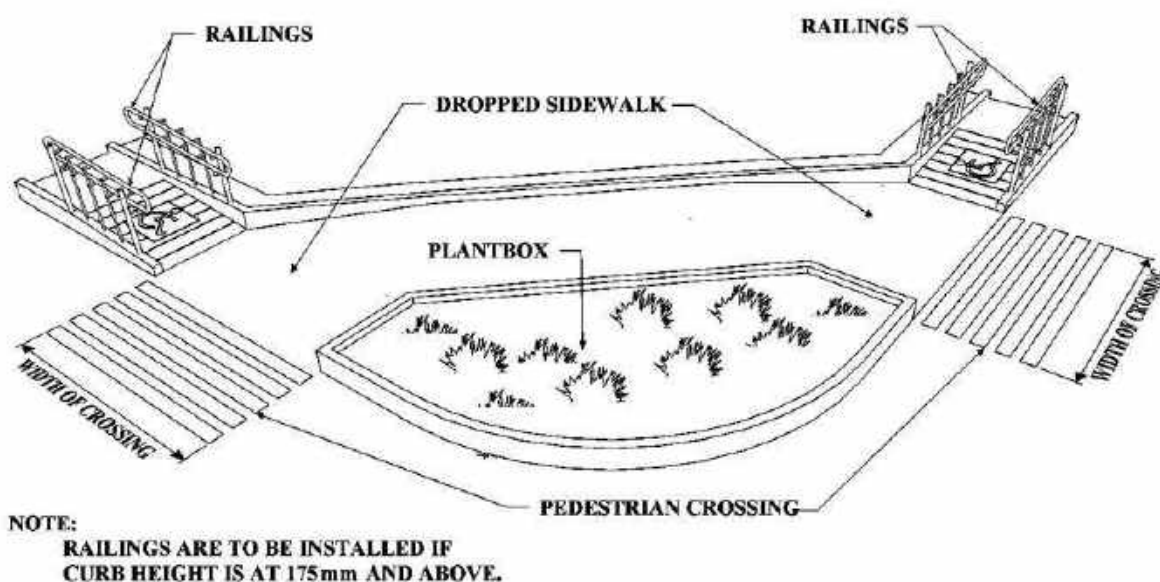


Figure 9. Perspective View of another variation of a Dropped Sidewalk at a Street Corner

- 13.7.2. Pavement sign painted or marked on the ramp complying with the following:
 - 13.7.2.1. a square with dimensions of at least 600 mm (for ramps less than 1.20 M wide) but not more than 800 mm (for ramps 1.20 M and wider);
 - 13.7.2.2. be located at the center of each ramp;

13.7.2.3. the color of the International Symbol of Access shall be white on a blue background.

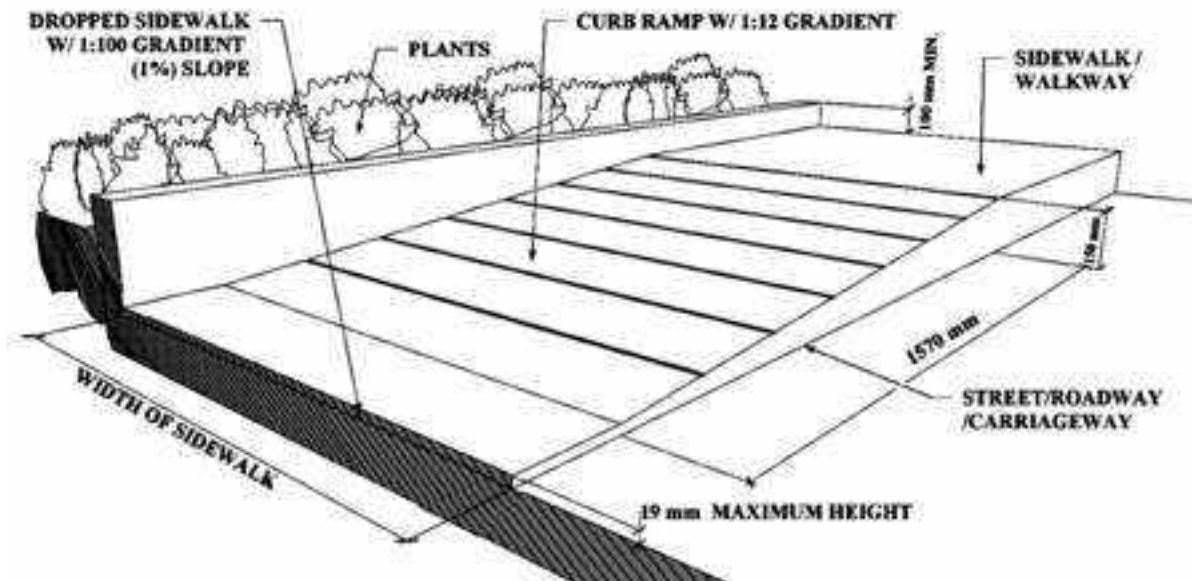


Figure 10. 3D Cross Section of a typical Dropped Sidewalk

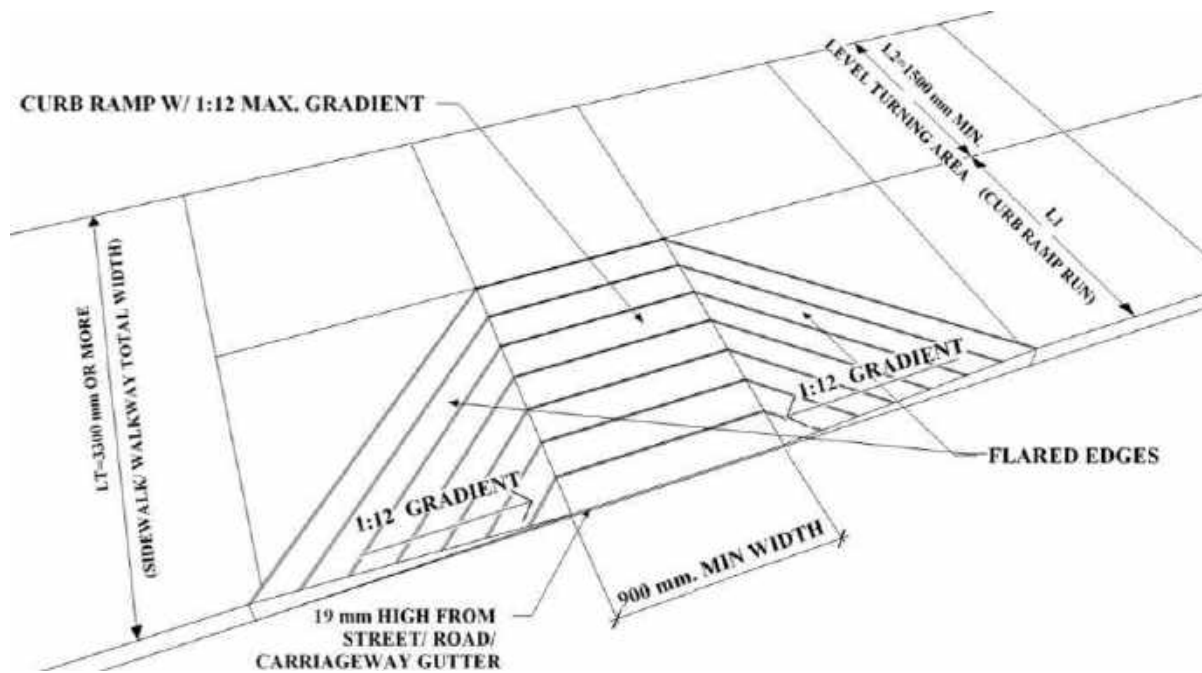


Figure 11. Perspective View of a Curb Ramp

14. Dropped Sidewalks

14.1. Curb ramps shall only be allowed when it will not obstruct a sidewalk/walkway or in any way lessen the width of a sidewalk/walkway or lessen the level/turning area of 1.50 M x 1.50 M Curb ramps shall only be allowed if the width of sidewalks/walkways are more than 3.30

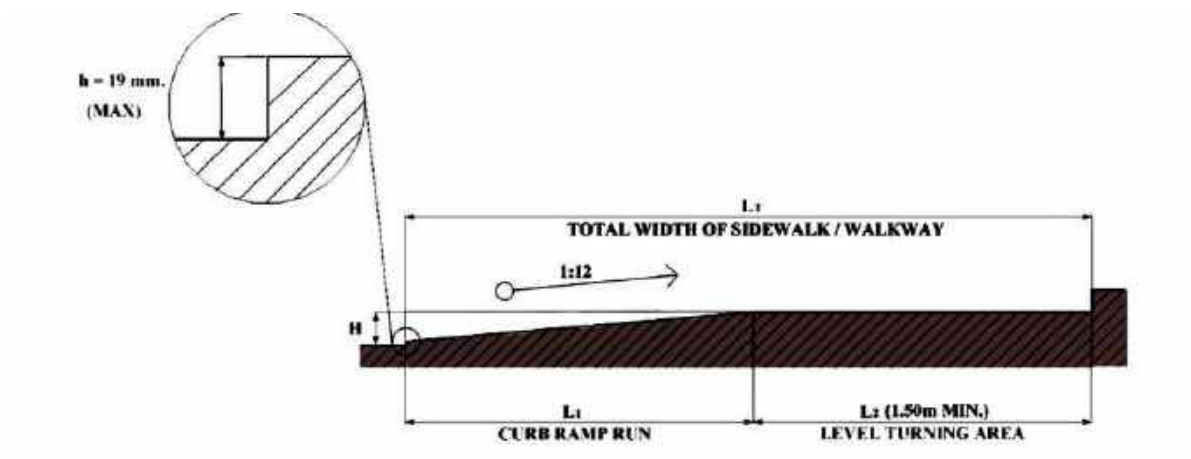


Figure 12. Cross Section of a Curb Ramp

M.with a corresponding curb height of 150 mm, otherwise dropped sidewalks shall be used.

- 14.2. For drop off points for persons with disabilities at loading bays, the minimum width of a curb ramp should be 900 mm.
- 14.3. Curb ramps shall have a gradient not steeper than 1:12.
- 14.4. Provide the following signage:
 - 14.4.1. Pole mounted signage, 600 mm x 600 mm in size and mounted at a minimum clear height of 2.00 M from the sidewalk floor. Pole mounted signs (planted) should not obstruct the path of pedestrian. Refer to DPWH guidelines for installing pole mounted signs on sidewalks.
 - 14.4.2. Pavement sign painted or marked on the ramp complying with the following:
 - 14.4.2.1. a square with dimensions of at least 600 mm (for ramps less than 1.20 M wide) but not more than 800 mm (for ramps 1.20 M and wider);
 - 14.4.2.2. be located in the center of the ramp;
 - 14.4.2.3. the color of the International Symbol of Access shall be white on a blue background

Parking

1. Accessible parking slots shall be located nearest to accessible main entrances.
2. PWDs should be on board the vehicle to be able to use the reserved parking space for PWDs (for control use). In addition, an access parking sticker/card is required with control number.
3. Accessible parking slots should be perpendicular to or an angle to the road or circulation aisles.
4. Accessible parking slots shall have:
 - 4.1. A minimum width of 3.70 M and a length of 5.00 M.

Table 1. This table shows the required number of Accessible Parking Slots in relation to the Total Number of Parking Slots

ACCESSIBLE PARKING SLOT REQUIREMENT	
TOTAL NUMBER OF PARKING SLOT	REQUIRED NUMBER OF ACCESSIBLE PARKING SLOTS
1-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6
201-300	7
301-400	8
401-500	9
501-1000	2% OF TOTAL SPACES
1001-OVER	20+ (FOR EACH 100 OR A FRACTION THEREOF OVER 1000)

- 4.2. A walkway with a minimum clear width of 1.20 M. provided between the front ends of parked cars.
- 4.3. Dropped sidewalks or curb ramps leading to the parking level where access walkways are raised.

- 4.4. Pavement markings, upright, pole mounted signages
- 4.5. Have a firm, level surface without aeration slabs.
5. Where parking spaces are required to be provided, the number of accessible parking lots for vehicles driven by persons with disabilities or vehicles with passengers with disabilities shall be in accordance with Table 1 below:
6. Parking slots for persons with disabilities shall never be located at ramped or sloping areas.
7. For multi-storey indoor parking structures, accessible parking slots shall be located right next to accessible elevators, or as close as possible to accessible pedestrian entrances.
8. In buildings with multiple accessible entrances with adjacent parking, accessible parking slots shall be dispersed and located closest to the accessible entrances.
9. In parking facilities that do not serve a particular building, accessible parking shall be located on the shortest accessible route of travel to an accessible pedestrian entrance of the parking facility.
10. For all accessible parking slots, provide the following signage:
 - 10.1. Pole mounted parking signage, 600 mm x 600 mm in size and mounted at a minimum clear height of 2.00 M from the parking floor.
 - 10.2. Pavement sign painted or marked on the designated lot complying with the following:

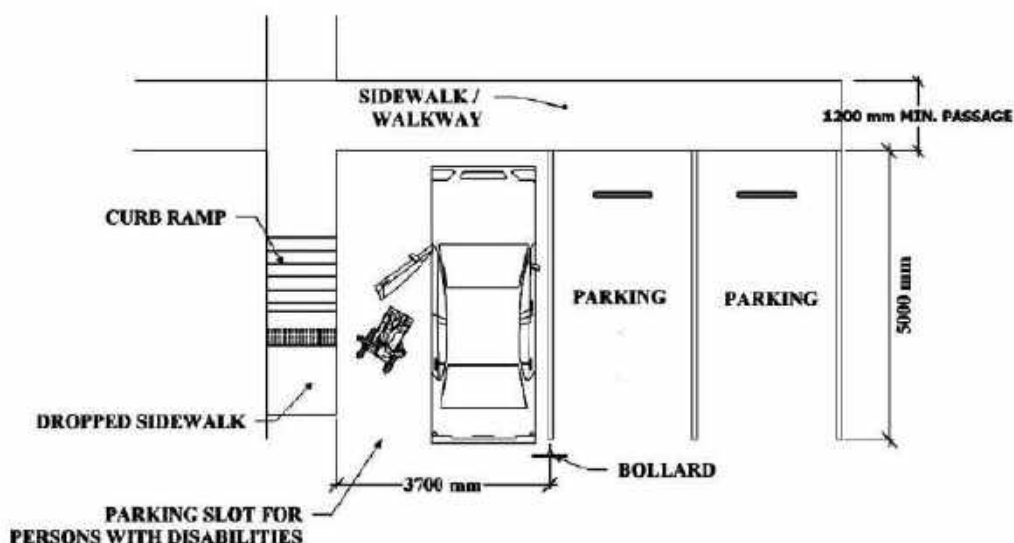


Figure 13. Plan view of an Accessible Parking Slot

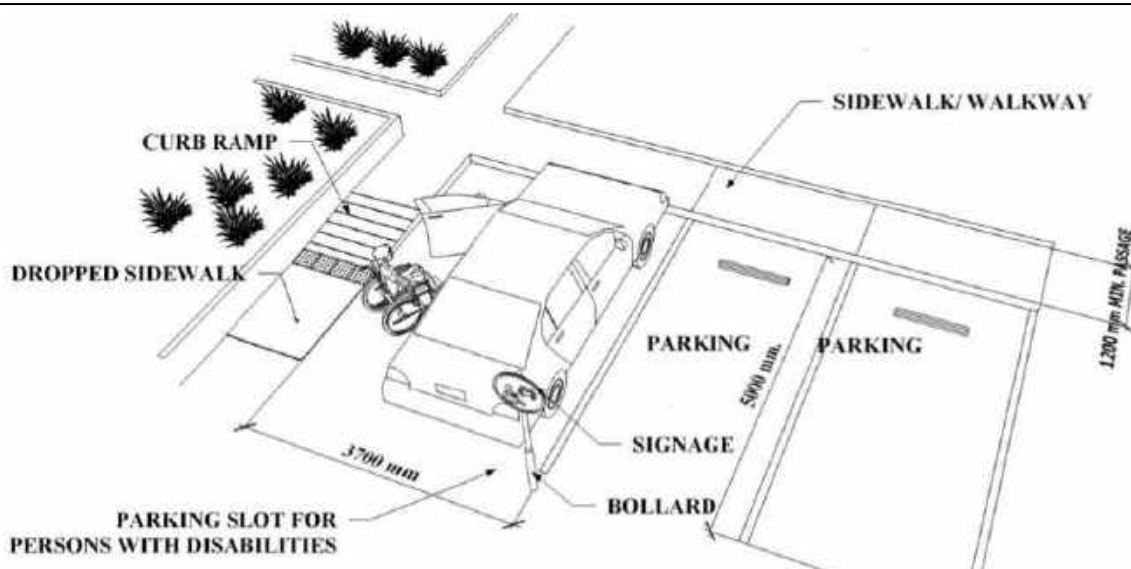


Figure 14. Three-dimensional view of an Accessible Parking Slot

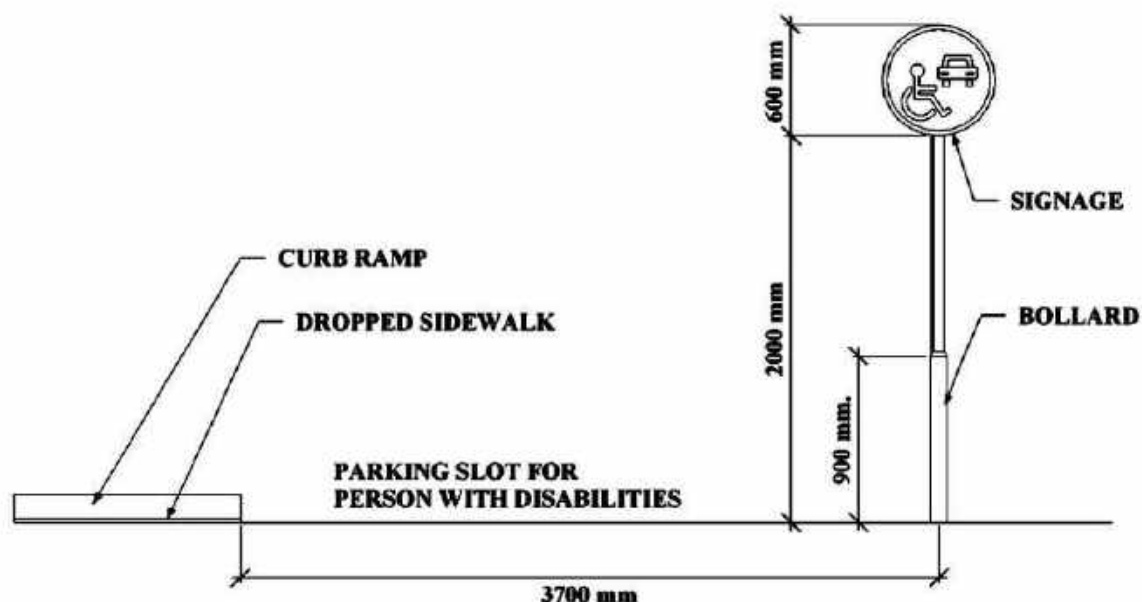


Figure 15. Accessible Parking Slot with Upright Pole-Mounted Signage

- 10.2.1. a square with dimensions of at least 1.00 M but not more than 1.50 M;
- 10.2.2. be located in the center of the accessible parking slot;
- 10.2.3. The International Symbol of Access shall be composed of a white symbolized figure of a person in a wheelchair with a square background in UN Blue Color. The symbolized figure shall always face to the right.

Note: An intercom may be installed at the vicinity of the accessible parking slot to enable persons with disabilities to call the building management for assistance.

11. PWDs should be on board the vehicle to be able to use the reserved parking space for PWDs (for control use). In addition, an access parking sticker/card is required with control number.



Figure 16. Image above shows the International Symbol of Access with the white image of a person on a wheelchair facing to the right with a blue background in the “United Nations Blue” color



Figure 17. Image above shows the ISO Standard signage for Accessible Parking slots

Table 2. Table below shows viewing distances with the corresponding size of signage

Viewing Distance (M)	Size (mm)
Up to 7.0	60 x 60
7.0 to 18.0	100 x 100
Above 18.0	200 x 200 to 450 x 450

Table 3. Table below shows viewing distances with the corresponding heights of letters or text

Required Viewing Distance (M)	Minimum Height of Letters (mm)
1.5	50
2.0	60
2.5	100
3.0	120
4.5	150
6.0	200
8.0	250

Signage and Way-Finding

1. The International Symbol of Access

The International Symbol of Access shall be composed of a white symbolized figure of a person in a wheelchair with a square background in the “United Nations” Blue Color. The symbolized figure shall always face to the right. Provide directional arrows when the space/area/function being referred to is facing left.

The “United Nations Blue” color is a shade of Blue that is 60% saturated and 90% bright. For reference purposes, United Nations Blue has the hex value #5B92E5. Pantone's® color #279 is a 92% match to the United Nations Blue Color.

2. Directional and information (Audio, Visual, and Tactile) signage shall be located at points that can be conveniently seen, heard, and felt by all persons with disabilities.
3. Signages should be kept simple and easy to understand. Signages should be made of contrasting colors and contrasting gray value to make detection and reading easy. Tactile maps shall be provided to guide persons with visual impairment.
4. The International Symbol of Access should be used to designate routes and facilities that are accessible in combination with pictographs. Directional signs incorporating the INTERNATIONAL SYMBOL OF ACCESS, as shown in Figure

- 15, shall be installed at passageways, and at points where there are changes in direction to lead persons with disabilities to various facilities such as lifts/ elevators, entrances, telephone booths, toilets, parking and the like.
5. Should a sign protrude into a sidewalk/walkway or route, a minimum clear vertical clearance of 2.00 M should be provided measured from the finish walkway floor line to the bottom of the protruding signage. Obstacles, projections, or other protrusions shall be avoided in pedestrian areas such as sidewalks/walkways, passageways, or aisles. Pedestrians with visual impairments often travel using the edge of the building line. Hence, objects mounted on walls, posts, or sides of buildings should therefore not protrude more than 100 mm into sidewalks/walkways and corridors.
 6. Signs and labels for public areas, and places should have tactile symbols, letters or numbers that should be embossed with a minimum height of 1 mm; Braille symbols shall be incorporated in signs indicating public places and safety routes.

Table 4. Table below provides purpose and description of different types of Tactile Blocks

TYPE	PURPOSE	DESCRIPTIVE TEXT
Warning Tactile Blocks	Indication of Potential Hazards Ahead	Grid Pattern
Positional Tactile Blocks	Indication of Possible Change in Walking Directions	Staggered
Directional Tactile Blocks	Indication of Intended Safe Path	Strips

7. Tactile Ground Surface Indicators
 - 7.1. Positional, directional, and warning tactile blocks must be provided to warn people with visual impairments that they are approaching:
 - 7.1.1. Stairways other than fire exit stairs
 - 7.1.2. Ramps other than fire-exit ramps, curb ramps, swimming pool ramps
 - 7.1.3. In the absence of suitable protective barriers:

7.1.3.1. overhead obstructions less than 2.00 M above floor level

7.1.3.2. areas where pedestrian and vehicular traffic intersect

7.2. Tactile warning indicators should have a 50% contrasting gray value from adjacent floor finishes.

DETAIL OF WARNING TACTILE BLOCK

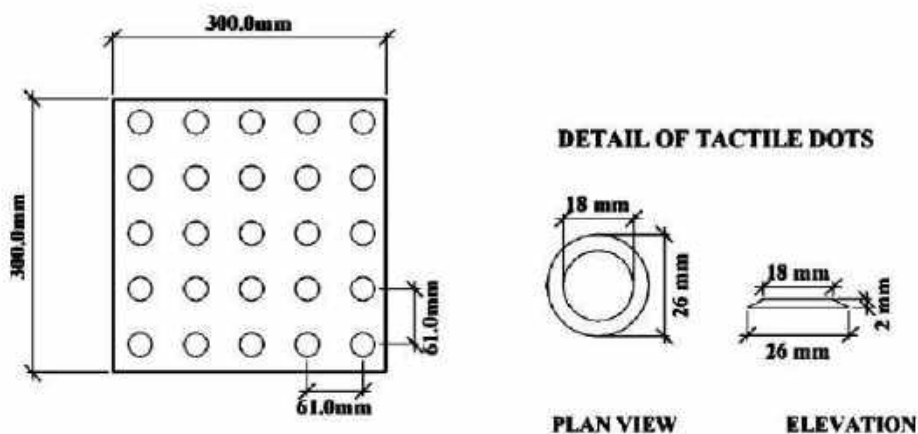


Figure 18. Image above shows the details of a typical Warning Tactile Block used to warn persons with visual impairments against changes in grade, ramps, steps, obstructions, and other potential dangers along walkways

DETAIL OF POSITIONAL TACTILE BLOCK

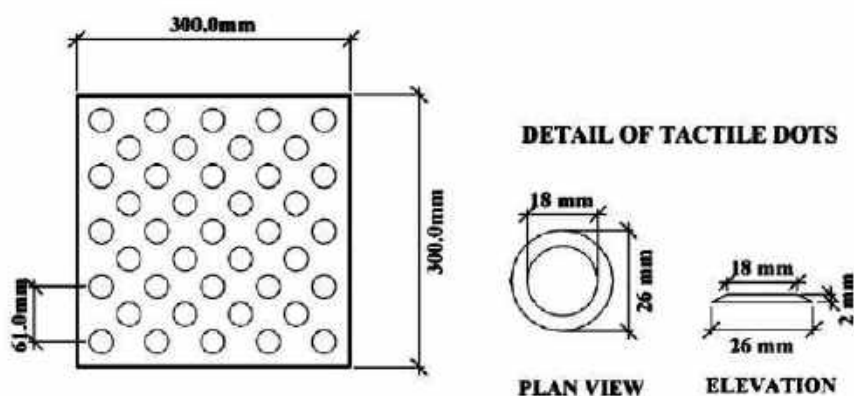


Figure 19. Image above shows the details of a typical Positional Tactile Block used to warn persons with visual impairments of decision points on pathways like changes in direction along walkways

DETAIL OF DIRECTIONAL TACTILE BLOCK

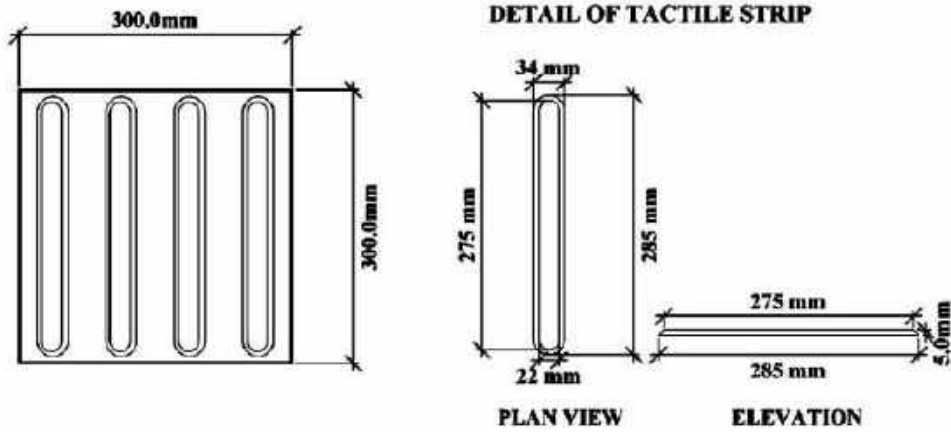


Figure 20. Image above shows the details of a typical Directional Tactile Block used to guide persons with visual impairments on the safe direction to take along walkways

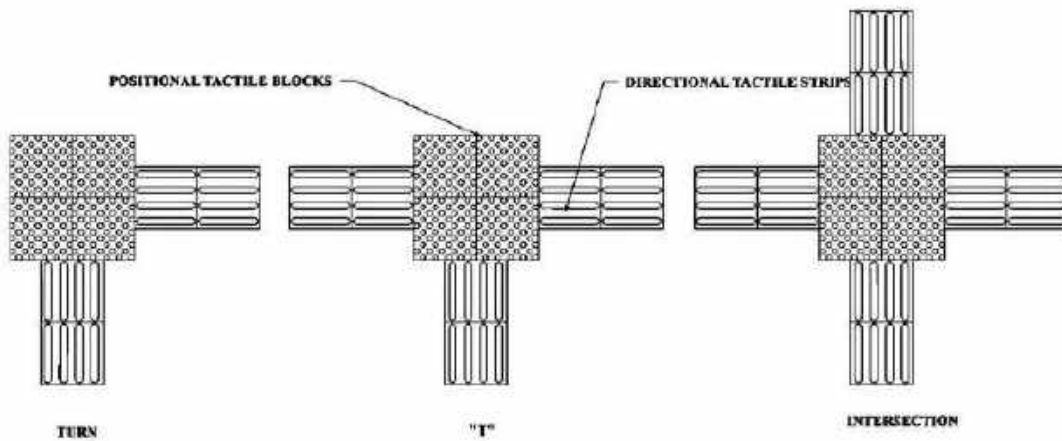


Figure 21. Images above show typical configurations of Tactile Guiding Blocks and Positional Tactile Blocks

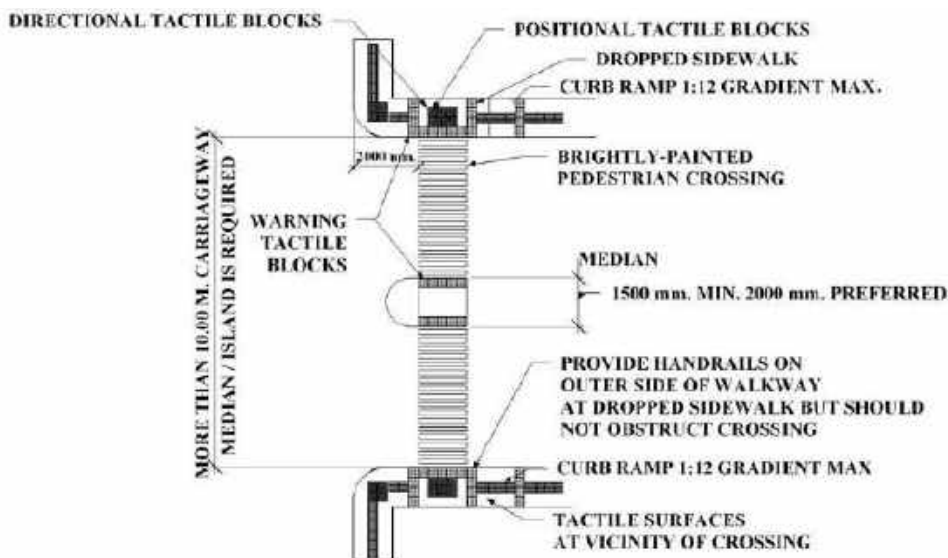


Figure 22. Image above shows possible configuration using Guiding Tactile Blocks, Positional Tactile Blocks, and Warning Tactile Blocks at pedestrian crossings

Crossings

1. In order to reduce the exposure time to vehicular traffic, all crossings at grade shall:
 - 1.1. Be as perpendicular as possible to the carriageway.
 - 1.2. Be located at the narrowest, most convenient part of the carriageway for mid-block crossings.
 - 1.3. Have a median/island of at least 1.50 M in depth, preferably 2.00 M, provided as a pedestrian refuge, where the width of carriageway to be crossed exceeds 10.00 M or at least 4 lanes.

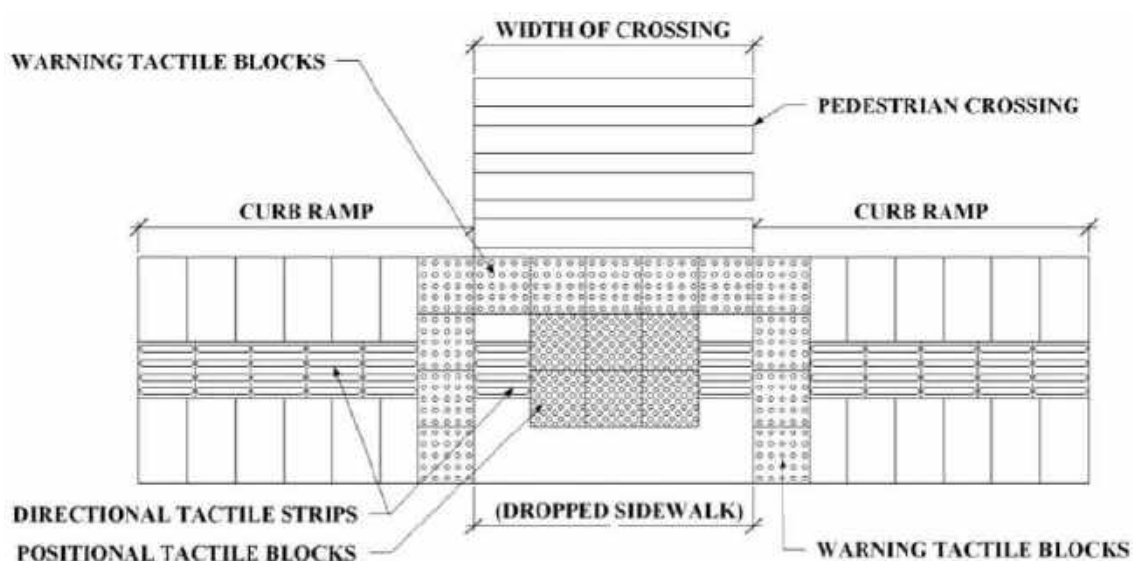


Figure 23. Image above shows blown up view of Guiding Tactile Blocks, Warning Tactile Blocks, and Positional Tactile Blocks at pedestrian crossings

- 1.4. Pedestrian crossings shall not be located at street corners but at a minimum distance of 2.00 M from the corner.
- 1.5. Provide directional tactile strips in the immediate vicinity of crossings as an aid to persons with visual impairment.
- 1.6. Secondary national and local roads with pedestrian crossings shall be provided with light controlled pedestrian crossing signals with synchronized audible pedestrian traffic signals.
- 1.7. The audible signal used for crossings should be easily distinguishable from other sounds in the environment to prevent confusion to persons with visual impairment. A prolonged sound should be audible to warn

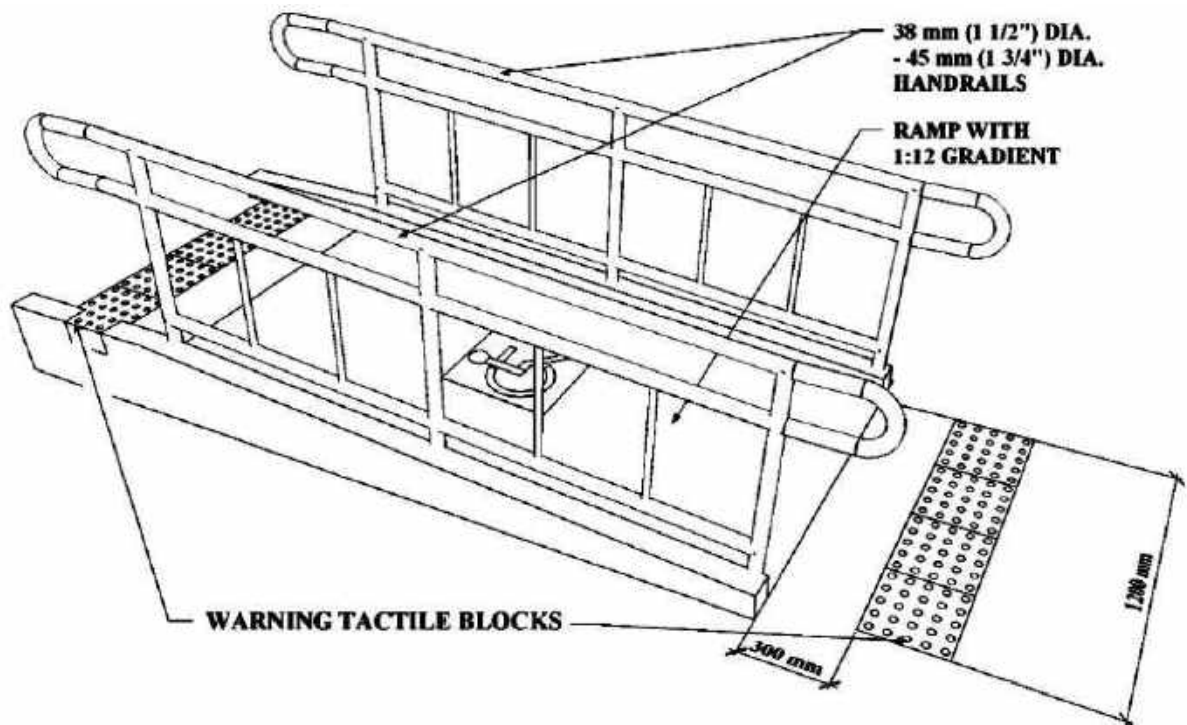


Figure 22. Image above shows a 3D view of an accessible ramp complete with handrails and continuous curbs on both sides, signage, and Warning Tactile Blocks

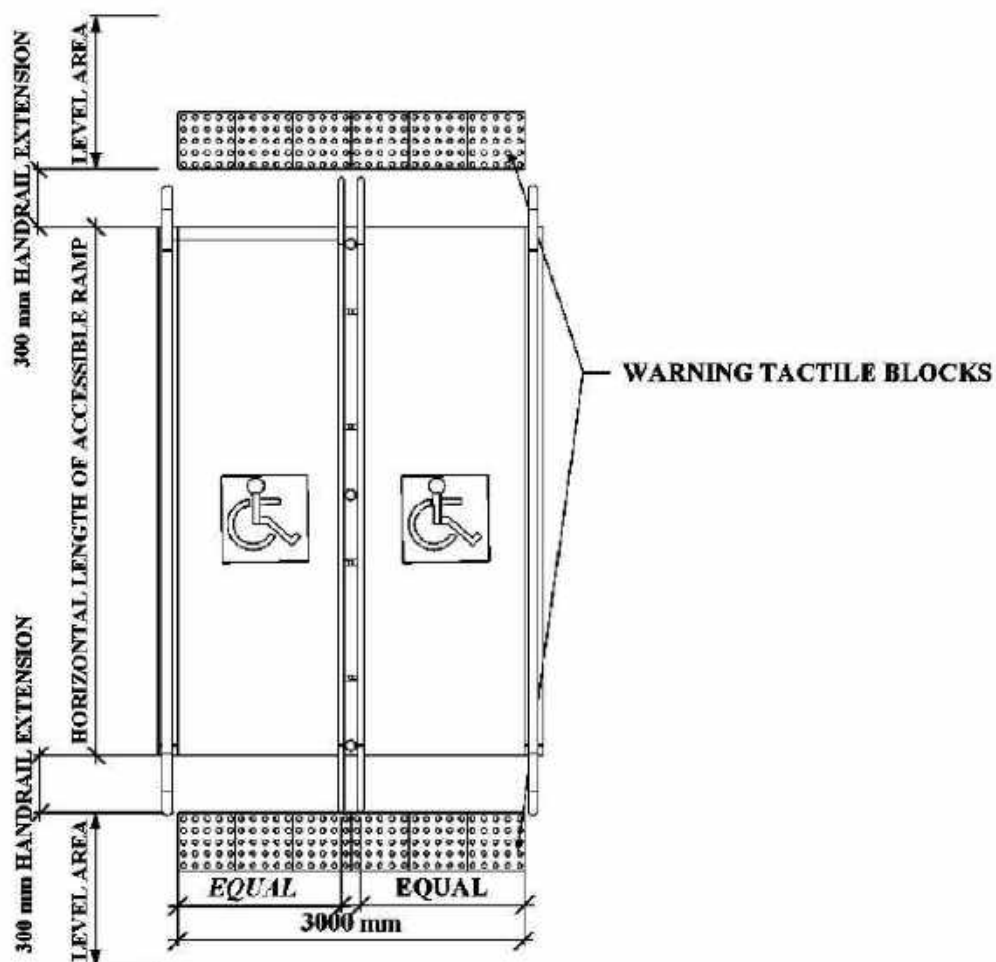


Figure 23. Image above shows a plan view of an accessible ramp more than 3.00 M wide and complete with handrails (including intermediate handrails) and continuous curbs on both sides and the middle, signage, and Warning Tactile Blocks

persons with visual impairment that the lights are about to change.

- 1.8. The flashing green period required for the person with disability should be determined on the basis of a walking speed of 900 mm/sec rather than 1.20 M/sec which is what is normally used. The minimum period for the steady green (for pedestrians) should be the crossing distance times 900 mm/sec (Refer to Traffic Engineering Center Guidelines for pedestrians with Disabilities).

Accessible Ramps

1. Changes in level or changes in grade shall require a ramp except when served by a dropped sidewalk, curb ramp, an elevator, or other mechanical lift device.
2. Accessible ramps shall have the following facilities and features:
 - 2.1. Minimum clear width of 1.20 M
 - 2.2. Gradient not steeper than 1:12
 - 2.3. For accessible ramps 3.00 M or more in width, provide intermediate handrails at the center. Use of double "J" type handrail supports are recommended.

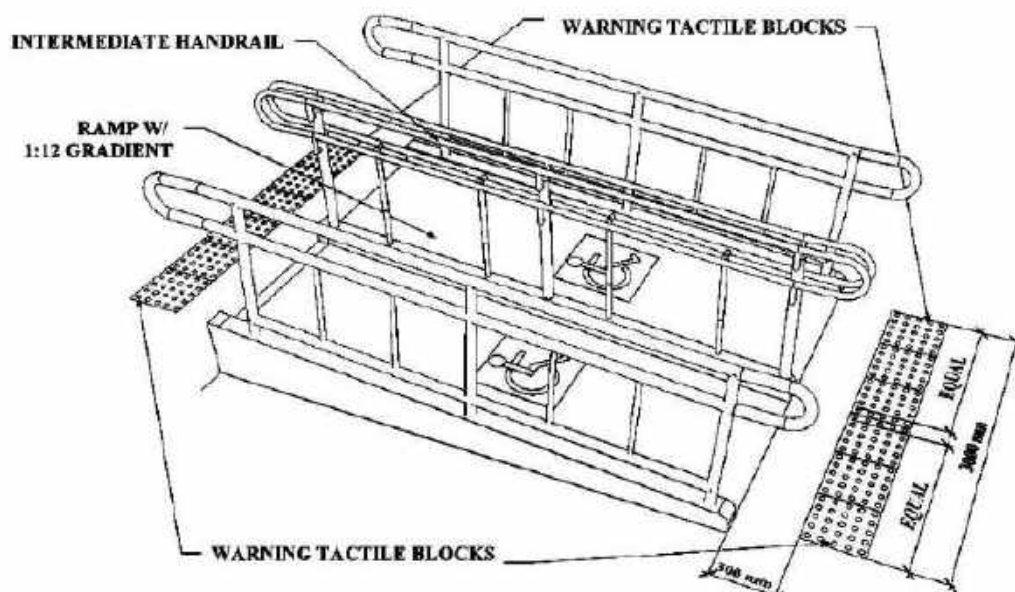


Figure 24. Image above shows a 3D view of an accessible ramp more than 3.00M. wide and complete with handrails (including intermediate handrails) and continuous curbs on both sides and the middle, signage, and Warning Tactile Blocks

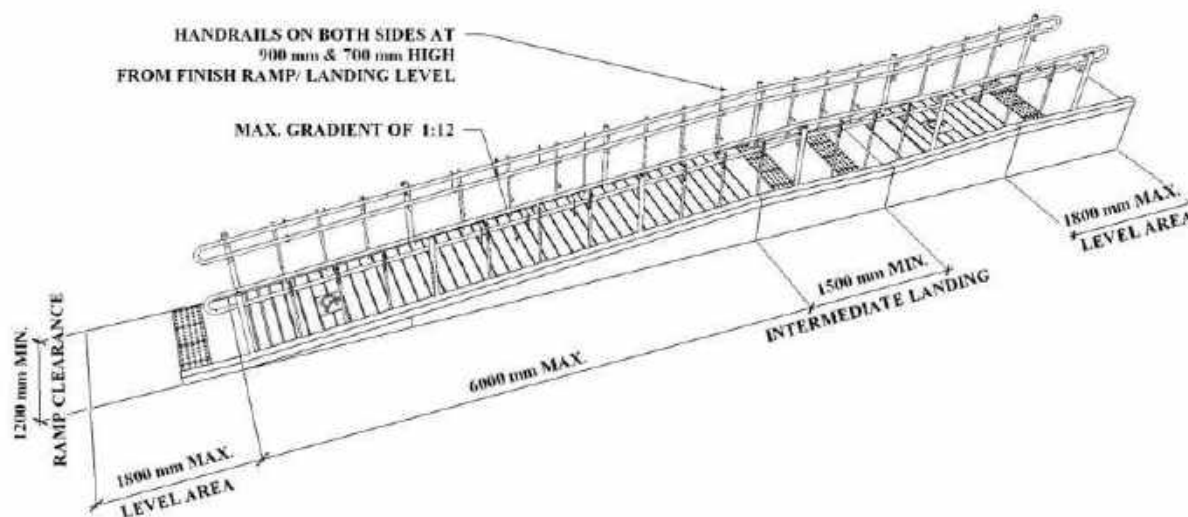


Figure 25. Image above shows a 3D view of an accessible ramp longer than 6.00 M with an intermediate landing and complete with handrails and continuous curbs on both sides, signage, and Warning Tactile Blocks

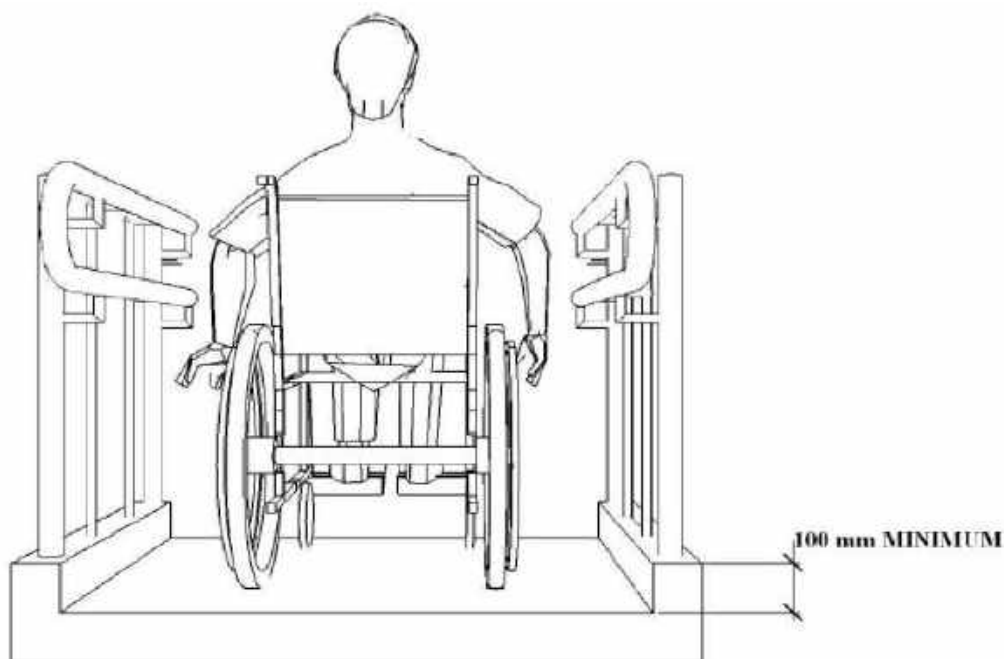


Figure 26. Image above shows a partial 3D view of an accessible ramp with handrails and continuous curbs on both sides. The minimum height of continuous curbs is 100 mm

- 2.4. Maximum length of 6.00 M: Accessible ramps with a total length longer than 6.00 M shall be provided with intermediate landings with a minimum length of 1.50 M.
- 2.5. Level area not less than 1.80 M at the top and bottom of any ramp.
- 2.6. Handrails on both sides of the ramp at 700 mm and 900 mm from the floor of the ramp.

- 2.7. 300 mm long extension of the handrail shall be provided at the top and bottom of ramps.
- 2.8. Curbs on both sides of the ramp with a minimum height of 100 mm.

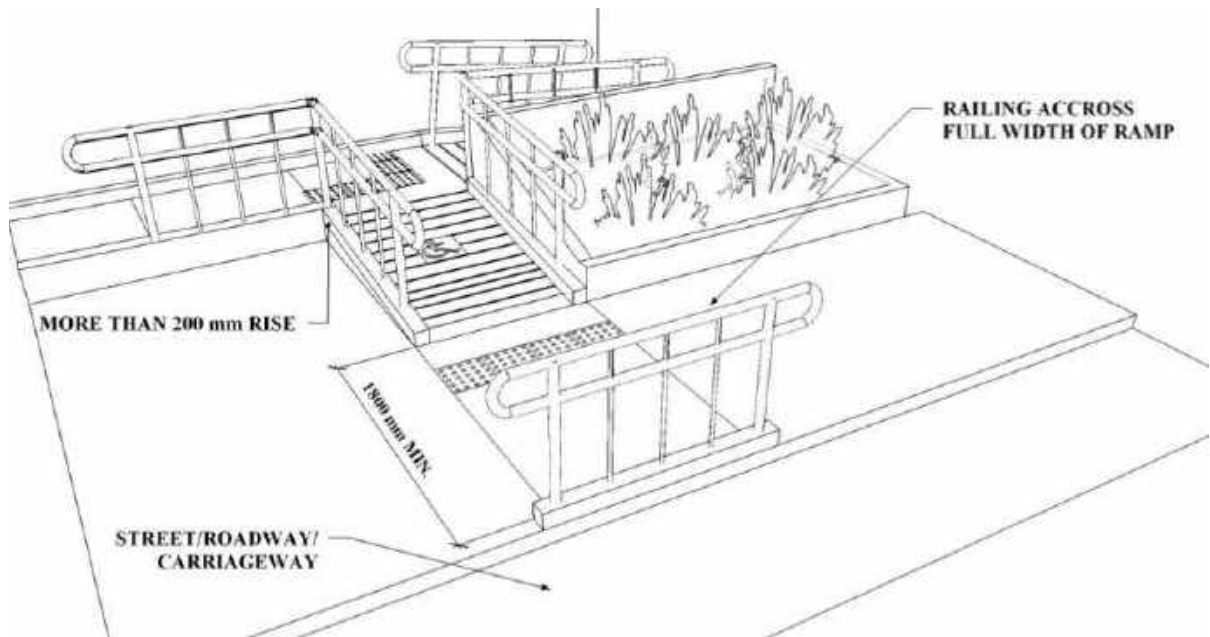


Figure 27. Image above is a 3D view of an accessible ramp perpendicular to a street with protective handrails at the edge of the sidewalk with width same as the accessible ramp

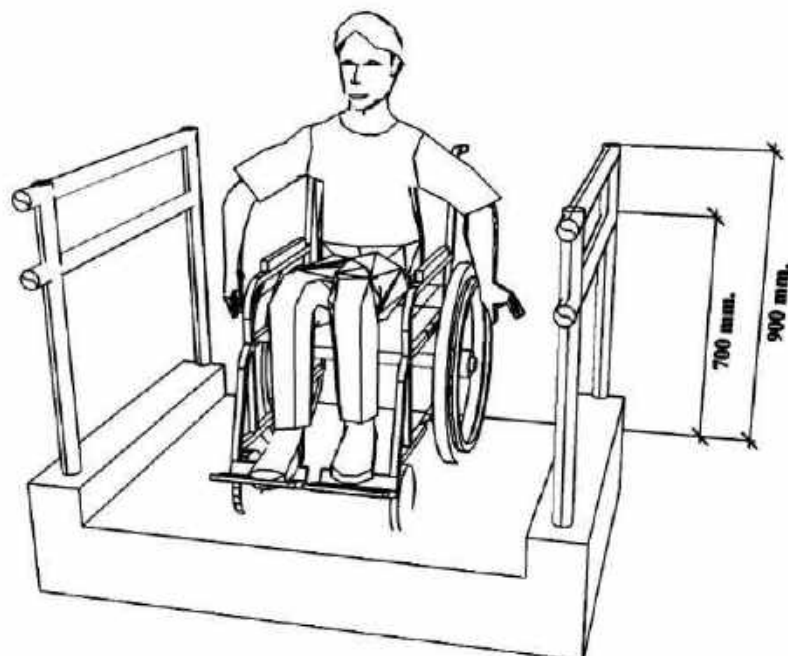


Figure 28. Image above shows a partial 3D view of an accessible ramp with handrails on both sides

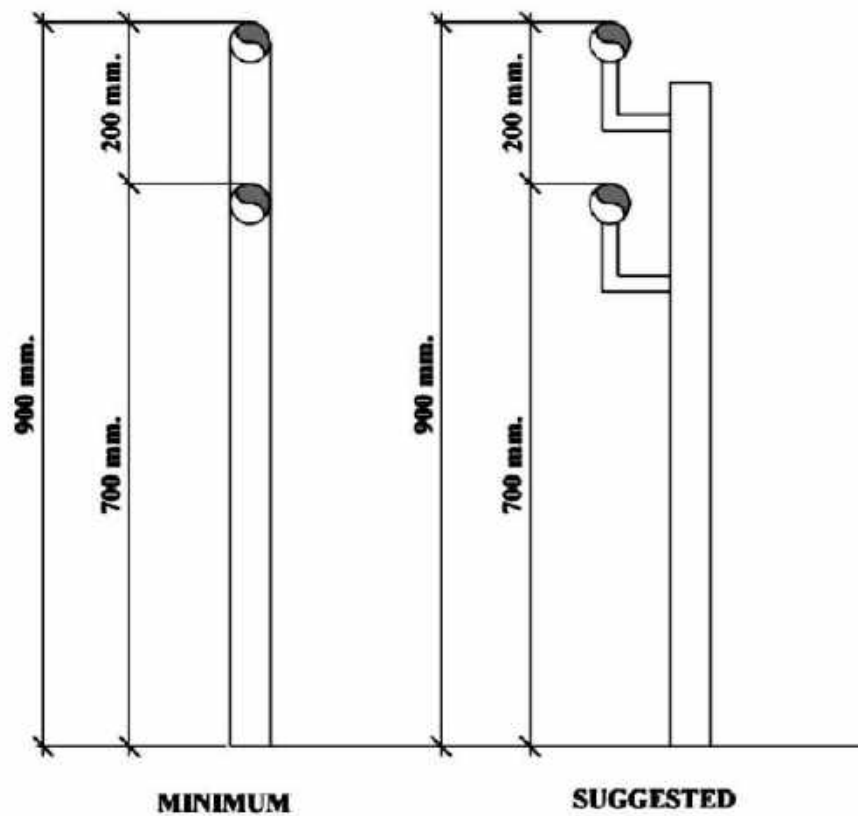


Figure 29. Image above shows two acceptable types of handrails. Handrails with “J” type anchors are preferred because it allows continuous unobstructed grasping

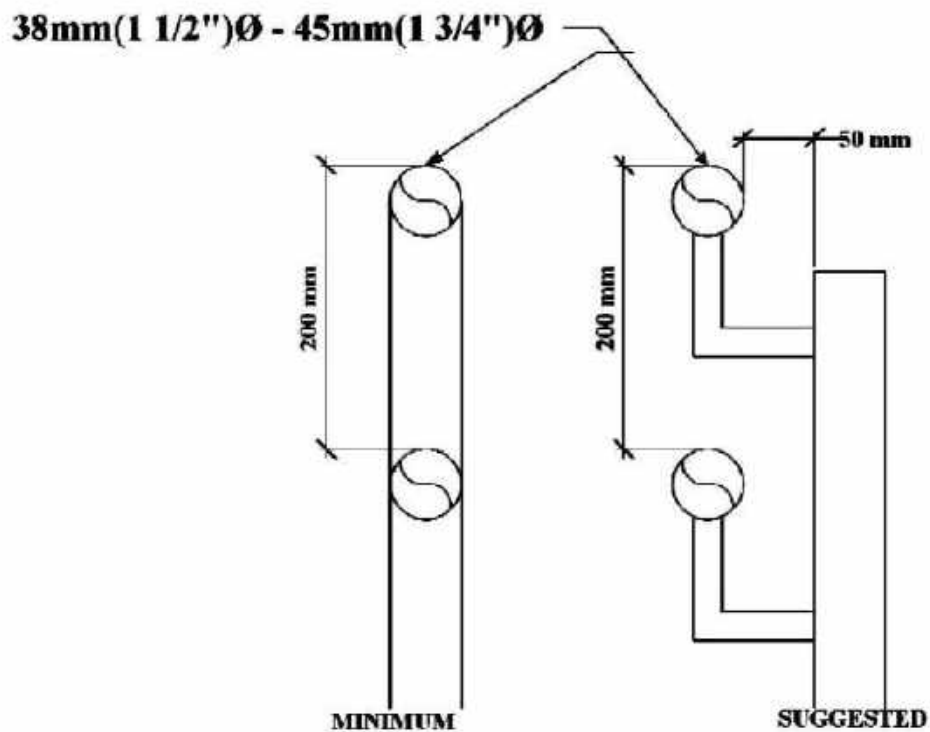


Figure 30. Image above is a closer view of acceptable types of handrails with appropriate dimensions

3. Any ramp with a rise greater than 170 mm and leads down towards an area where vehicular traffic is possible, should have a railing across the full width of its lower end, not less than 1.80 M from the foot of the ramp.

Handrails and Grab Bars

1. Handrails shall be required in accessible ramps with changes in grade higher than 170 mm.
2. Handrails shall be installed at both sides of ramps and stairs. Handrails may be provided at dropped sidewalks but should not be installed beyond the width of any crossing so as not to obstruct pedestrian traffic.
3. Handrails shall be installed at 900 mm and 700 mm above stairs or ramps.
4. Handrails material should be stainless steel (Grade 304).
5. Railings for protection should be installed at a height of 1.10 M minimum, measured from the top of the rail to the finish floor for ramps, balconies, landings or porches which are more than 750 mm above adjacent grade. These shall be installed in addition to the handrails required for accessible ramps (Section C, Item 2 per NBC Rule XII under Guard Rails).
6. A 300 mm long extension of the handrail shall be provided at the top and bottom of ramps and stairs.
7. Handrails and grab bars that require full grip should have an outside diameter of 38 mm (minimum) to 45 mm (maximum).
8. Handrails attached to walls should have a minimum clear distance of 50 mm from the wall. Handrails on ledges should have a minimum clear distance of 40 mm.
9. Stair handrails shall be continuous throughout the entire length and around landings less than 2.10 M in length, except where it is intersected by an alternative path of travel or has an entry door leading into it.

Chapter 2

Buildings

Accessible Entrances

1. Entrances shall be accessible from arrival and departure points to the interior lobby.
2. One (1) accessible entrance should be provided where elevators are accessible.
3. In case entrances are not on the same level of the site arrival grade, accessible ramps should be provided as access to the entrance level.

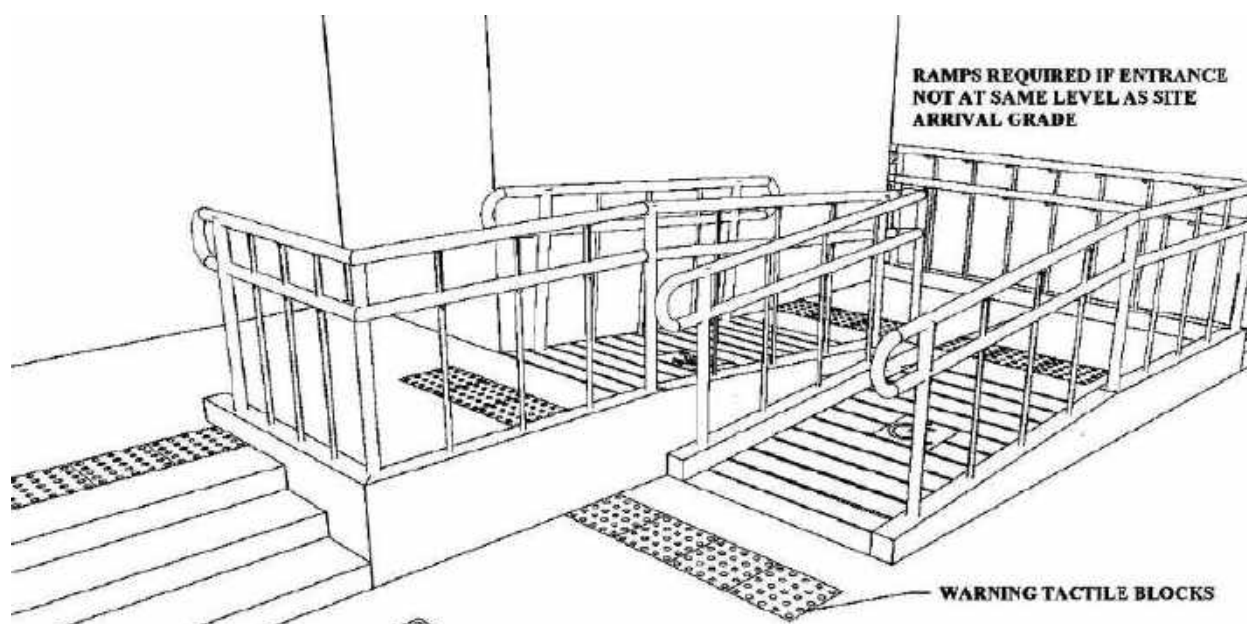


Figure 31. Image above shows an accessible entrance with an accessible ramp with handrails, warning tactile blocks, and signage

4. In case entrances are not on the same level of the site arrival grade, accessible ramps should be provided as access to the entrance level.
5. Entrances with vestibules shall be provided with a level area with at least a 1.80 M depth and a 1.50 M width.
6. In cases where frameless transparent glass doors and any other vertical transparent glass panels are provided, such glass panels should be provided

with horizontal or graphical patterns with contrasting gray value color against adjacent and background colors between 800 mm and 1.50M above the floor to prevent Persons with Disabilities from bumping against it.

7. Accessible entrances/exits of buildings shall be provided with large overhanging roof (canopy) to protect PWDs as well as non-PWDs from rain.

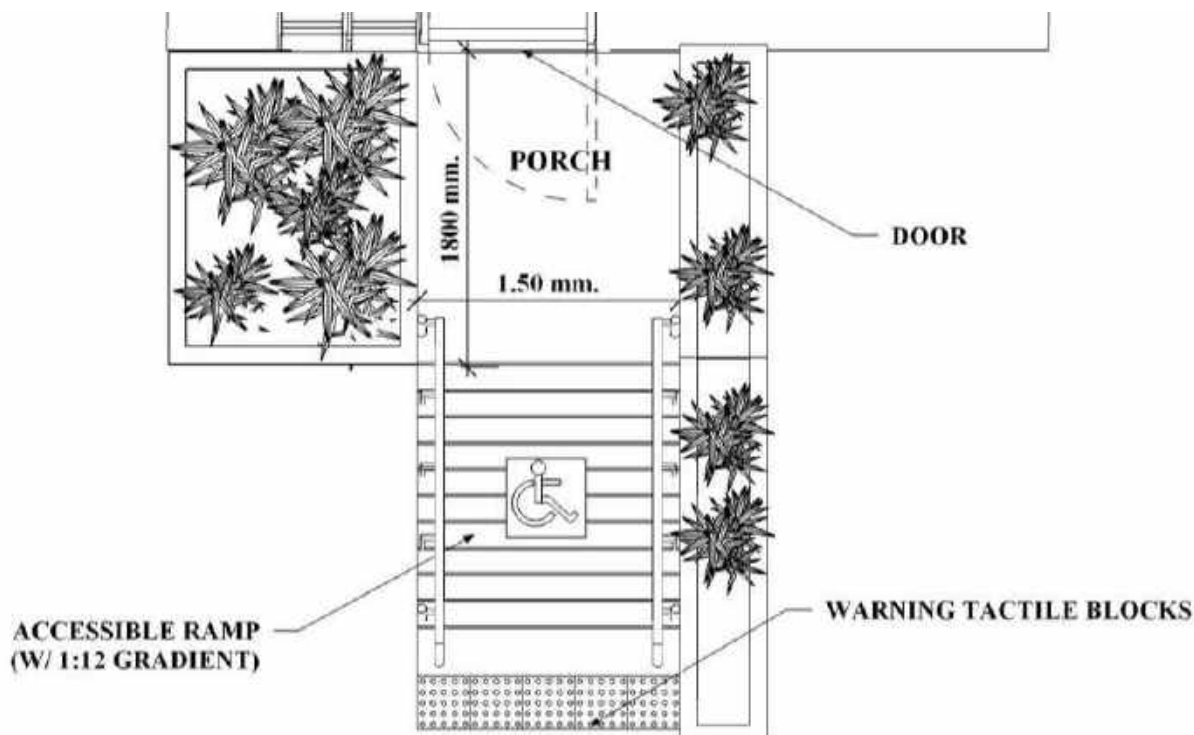


Figure 32. Image above shows an accessible building entrance with a 1.80 M deep entrance vestibule, an accessible ramp with handrails, and signage

Handrails and Grab Bars

1. Handrails shall be required for accessible ramps for changes in grade higher than 170 mm.
2. Handrails shall be installed at both sides of ramps and stairs. Handrails may be provided at dropped sidewalks but should not be installed beyond the width of any crossing so as not to obstruct pedestrian traffic.
3. Handrails shall be installed at 900 mm and 700 mm above stairs or ramps.
4. Handrails material should be stainless steel (Grade 304).
5. Railings for protection should be installed at a height of 1.10 M minimum, measured from the top of the rail to the finish floor for ramps, balconies,

- landings or porches which are more than 750 mm above adjacent grade. These shall be installed in addition to the handrails required for accessible ramps (Section C, Item 2 per NBC Rule XII under Guard Rails).
6. A 300 mm long extension of the handrail shall be provided at the top and bottom of ramps and stairs.
 7. Handrails and grab bars that require full grip should have an outside diameter of 38 mm (minimum) to 45 mm (maximum).
 8. Handrails attached to walls should have a minimum clear distance of 50 mm from the wall. Handrails on ledges should have a minimum clear distance of 40 mm.
 9. Stair handrails shall be continuous throughout the entire length and around landings less than 2.10 M in length except where it is intersected by an alternative path of travel or has an entry door leading into it.

Floors

1. All floors shall use slip resistant materials. Slip resistant materials shall have a coefficient of friction of 0.6 for level surfaces and 0.8 for sloping surfaces.
2. If carpets or carpet tiles are used as floor surfacing, they must:
 - 2.1. be securely attached;
 - 2.2. have a firm cushion, pad, or backing;
 - 2.3. have a level loop, textured loop, level cut pile, or level cut/uncut pile texture;
 - 2.4. have maximum pile thickness shall be 13 mm;
 - 2.5. have exposed edges of carpet shall be fastened to floor surfaces and have trim along the entire length of the exposed edge;
 - 2.6. Carpet edge trim shall comply with the following:
 - 2.6.1. Changes in level up to 6 mm may be vertical and without edge treatment.

- 2.6.2. Changes in level between 16 mm and 13 mm shall be beveled with a slope no greater than 1:2.
- 2.6.3. Changes in level greater than 1/2 in (13 mm) shall be accomplished by means of a ramp that complies with the aforementioned standards.

Doors

1. All doors shall have a minimum clear opening of 900 mm. Clear openings of doors shall be measured from the face of a fully open door at 90 degrees and the face of the door jamb on the latch side of the door.



Figure 33. Image above shows a sliding door with a minimum clear opening of 900 mm

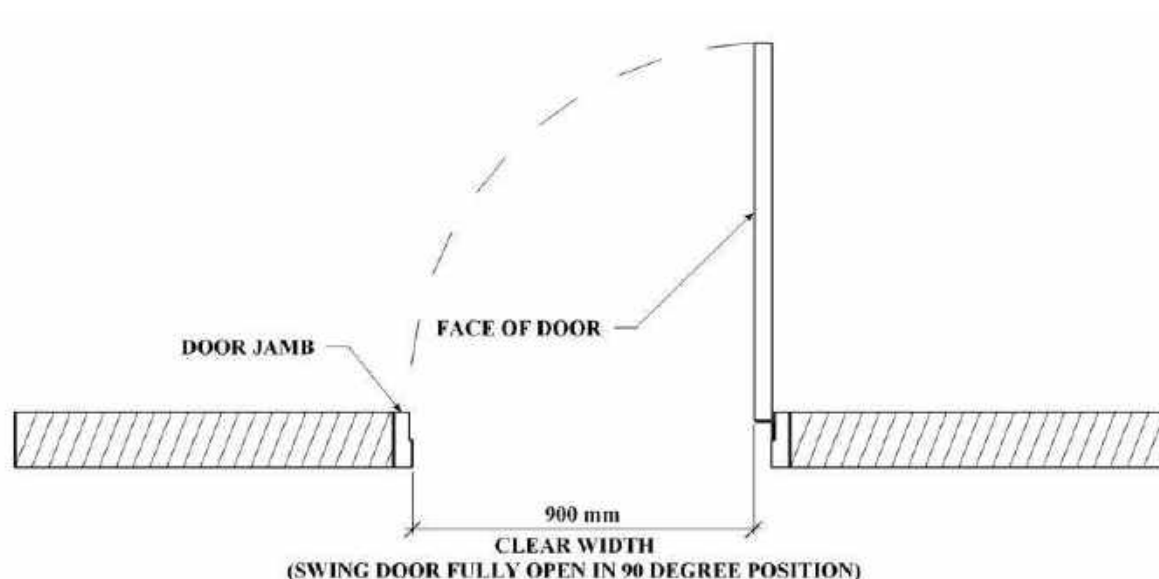


Figure 34. Image above shows a swing door with a minimum clear opening of 900 mm measured from the face of the open door to the face of the jamb on the latch side of the door

2. Lever type locksets should be operable by a pressure or force not more than 1.0 kg; the door closer device pressure on an interior door shall not exceed 4.0 kg.

3. A minimum clear level space of 1.50 M x 1.50 M shall be provided before and extending beyond a door. Exception is applicable only when a door shall open onto but not into a corridor. The required clear, level space on the corridor side of the door may be a minimum of 1.20 M corridor width.
4. Protection should be provided from doors that swing into corridors.
5. Out-swinging doors should be provided at storage rooms, closets, toilets ,and accessible restroom stalls.
6. Latching or non-latching hardware should not require wrist action or fine finger manipulation.
7. Lever type locksets and other hardware should be located between 20 mm and 1.06 M above the floor; 900 mm is preferred.
8. Vertical pull handles, centered at 1.06 M above the floor, are preferred to horizontal pull bars for swing doors or doors with locking devices.
9. Doors along major circulation routes should be provided with kick plates made of durable materials at a height of 300 mm to 400 mm.

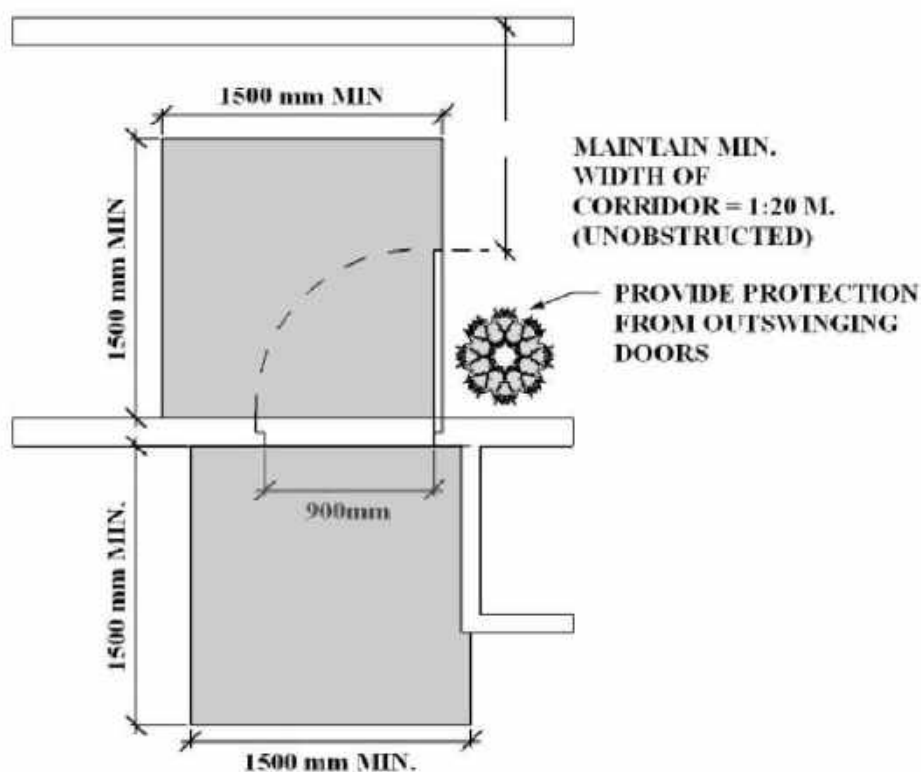


Figure 35. Image above shows the required clear corridor width of 1.20 M beyond the latch side of open doors with plant boxes and similar accessories to protect people from the swing of the door. The same image also shows the required 1.50 M X 1.50 M turning space for people who use wheelchairs

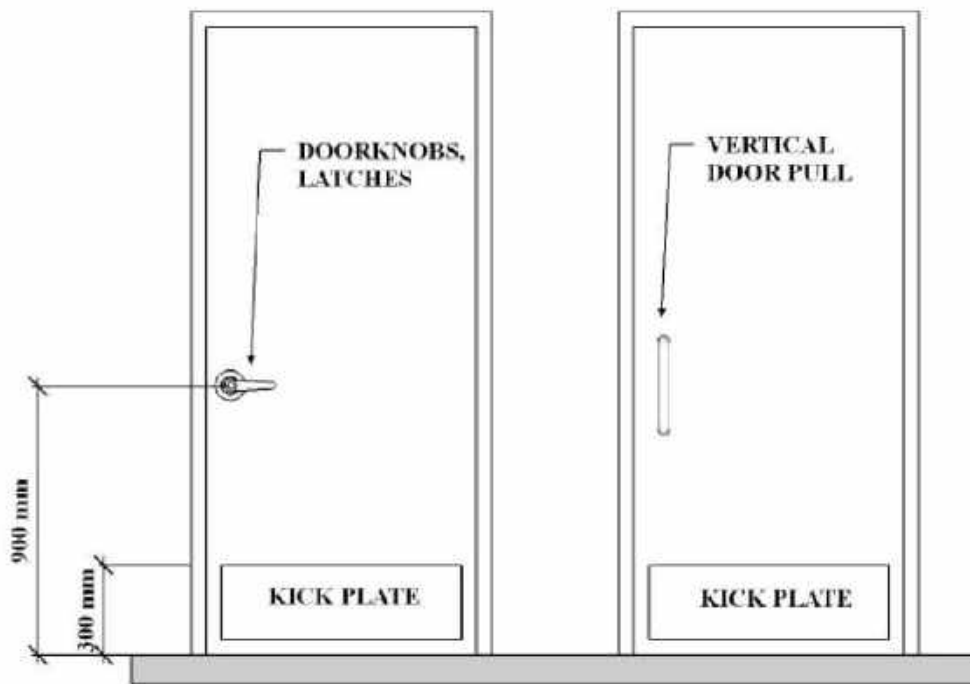


Figure 36. The left image shows a door that uses a lever type lockset. The right shows a door with a vertical door pull. Both doors are provided with kick plates

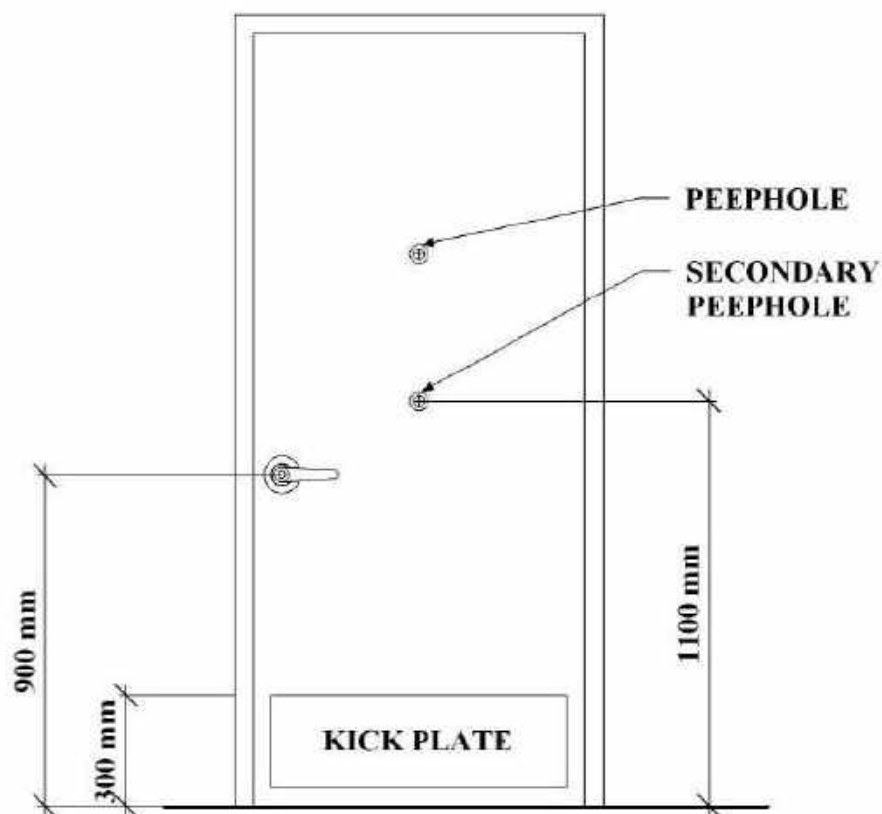


Figure 37. Image above shows a door installed with a secondary peephole for persons who use wheelchairs. The same door has a lever type lockset and a kick plate

10. For doors with peepholes, provide a secondary peephole at a height of 1.10 M from the finish floor for wheelchair users.

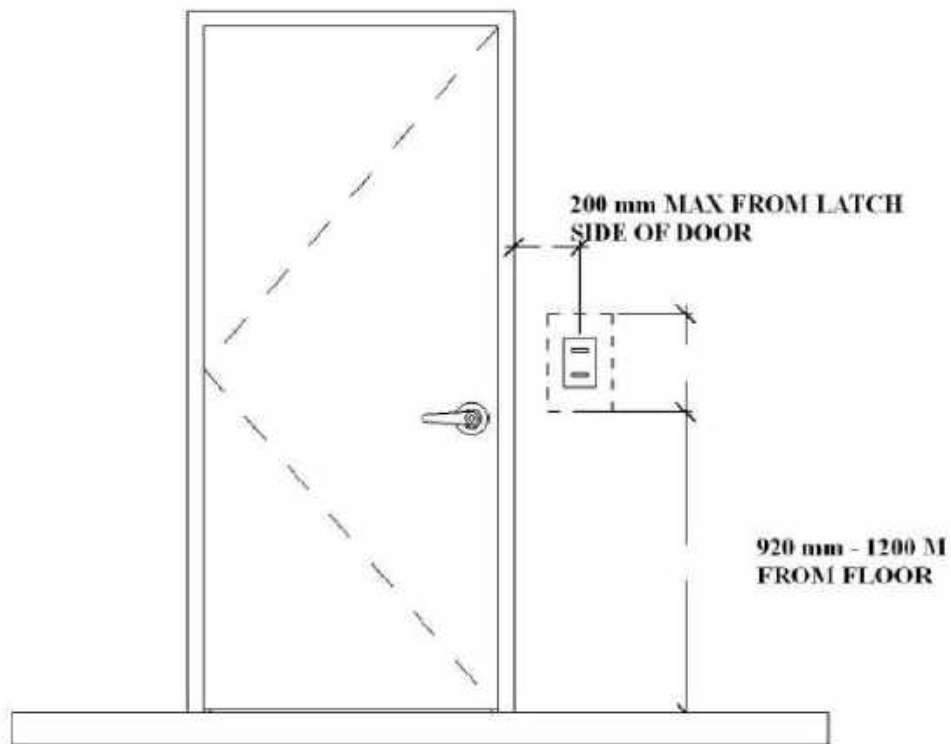


Figure 38. Image above shows light switches installed between 920 mm and 1.20 M from the floor and 200 mm from the jamb at the latch side of the door

Switches

1. Manual switches shall be positioned within 920 mm to 1.20 M above the floor.
2. Manual switches should be located no further than 200 mm from the latch side of the door.

Thresholds

1. Thresholds shall be kept to a minimum; whenever necessary, thresholds and sliding door tracks shall have a maximum height of 19 mm and shall be beveled if higher than 6 mm with a gradient of 1:8.

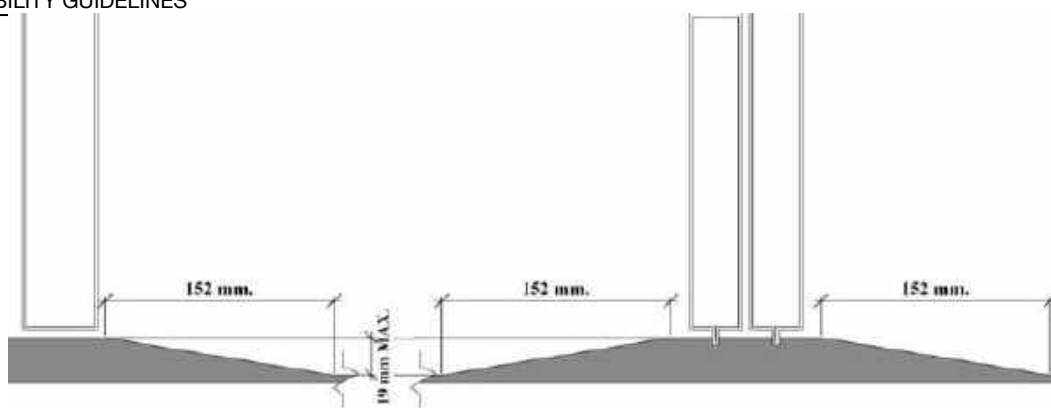


Figure 39. Image above shows thresholds with the maximum height of 19 mm and the maximum slope of 1:8

Corridors

1. Corridors shall have minimum clear width of 1.20 M to allow for both a wheelchair user and a Non-PWD to pass. Where space is required for two (2) wheelchairs to pass, the minimum width shall be 1.80 M.
2. Turnabout spaces should be provided for wheelchairs to turn around; these spaces shall have a minimum dimension of 1.50 M x 1.50 M and shall be spaced at a maximum of 12.00 M.
3. Turnabout spaces should also be provided at or within 3.50 M of every dead-end corridor.

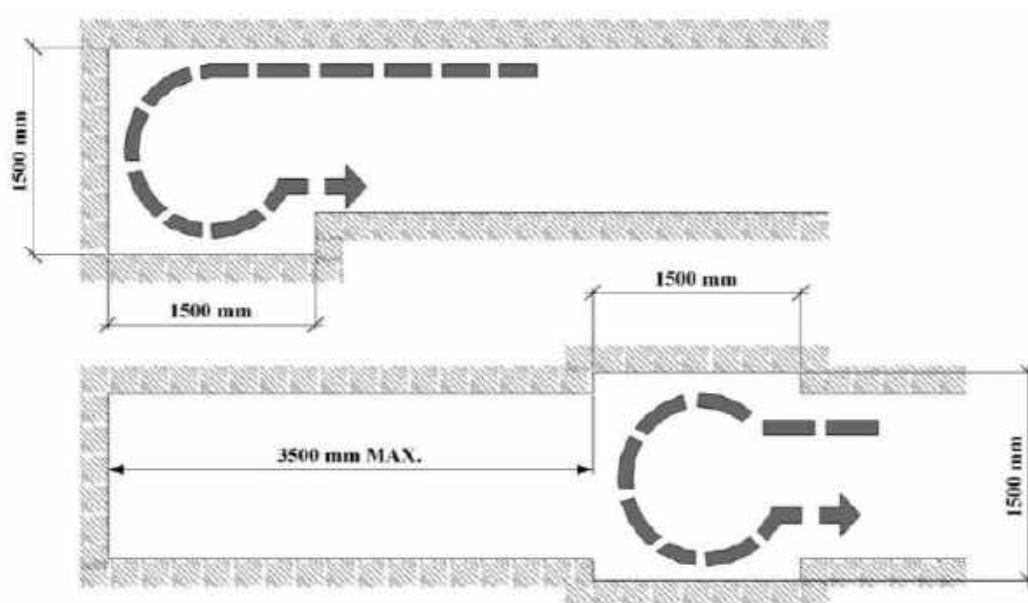


Figure 40. Image above shows turn around spaces with minimum dimensions of 1.50 M x 1.50 M

4. As in walkways, corridors should be maintained level and provided with a slip resistant surface.

Signage and Way-Finding

1. The International Symbol of Access

The International Symbol of Access shall be composed of a white symbolized figure of a person in a wheelchair with a square background in the "United Nations" Blue Color. The symbolized figure shall always face to the right. Provide directional arrows when the space/area/function being referred to is facing left.

The "United Nations Blue" color is a shade of Blue that is 60% saturated and 90% bright. For reference purposes, United Nations Blue has the hex value #5B92E5. Pantone's® color #279 is a 92% match to the United Nations Blue Color.

2. Directional and information (Audio, Visual, and Tactile) signage shall be located at points that can be conveniently seen, heard, and felt by all persons with disabilities.
3. Signages should be kept simple and easy to understand. Signages should be made of contrasting colors and contrasting gray value to make detection and reading easy. Tactile maps shall be provided to guide persons with visual impairment.
4. The International Symbol of Access should be used to designate routes and facilities that are accessible in combination with pictographs. Directional signs incorporating the INTERNATIONAL SYMBOL OF ACCESS shall be installed at passageways, and at points where there are changes in direction to lead persons with disabilities to various facilities such as lifts/elevators, entrances, telephone booths, toilets, parking, and the like.
5. Should a sign protrude into a sidewalk/walkway or route, a minimum clear vertical clearance of 2.00 M should be provided measured from the finish walkway floor line to the bottom of the protruding signage. Obstacles, projections or other protrusions shall be avoided in pedestrian areas such as sidewalks/walkways, passageways or aisles. Pedestrians with visual impairments often travel using the edge of the building line, hence,

objects mounted on walls, posts, or sides of buildings, should therefore not protrude more than 100 mm into sidewalks/walkways and corridors.

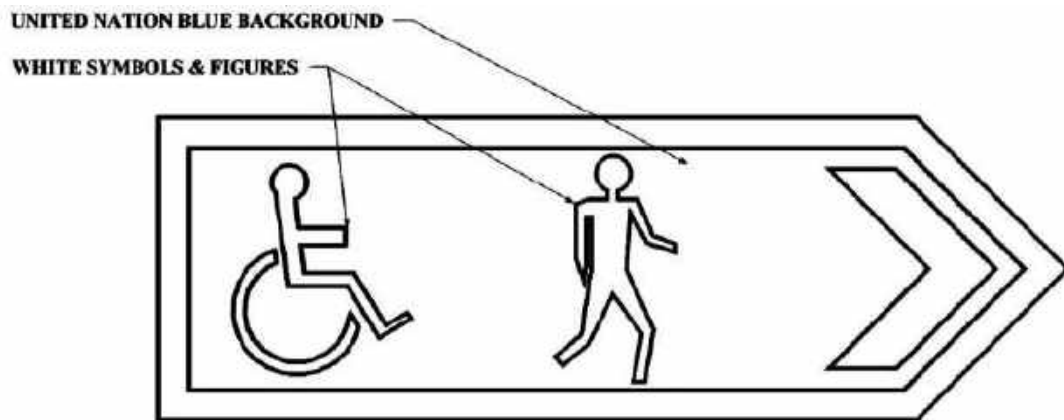


Figure 41. Image at above shows an example of directional signage for way finding

6. Directional and information (Audio, Visual, and Tactile) signages shall be located at points that can be conveniently seen, heard, and felt by all

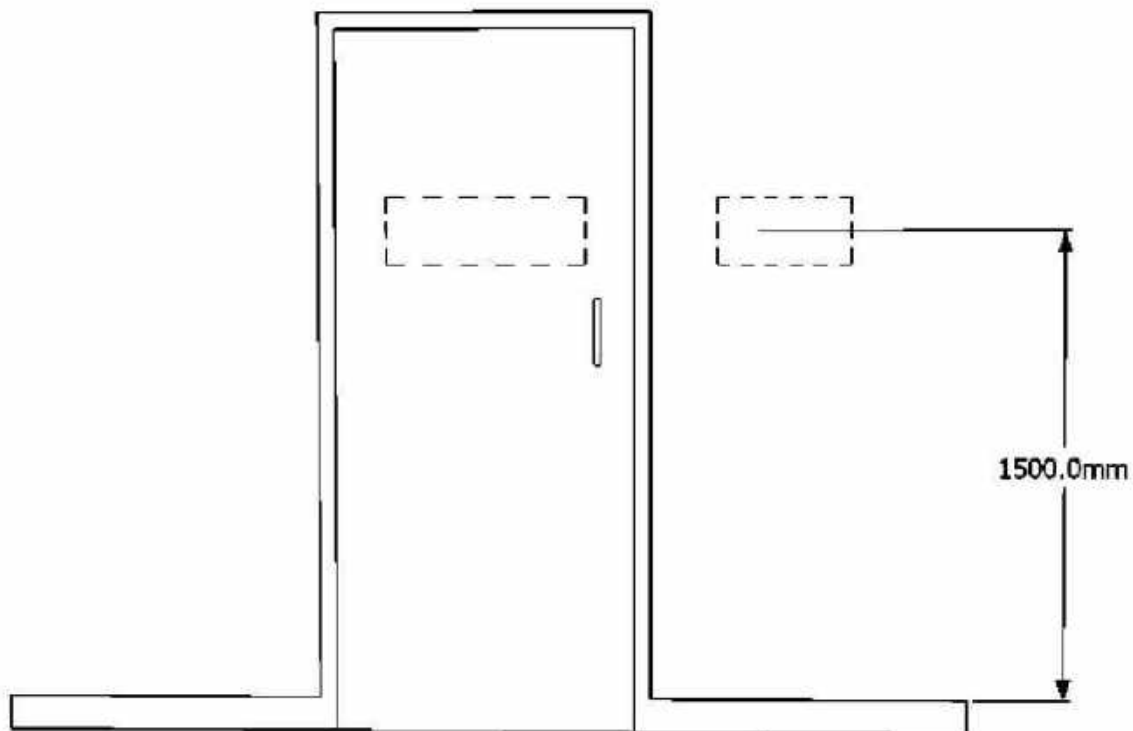


Figure 42. Image at above shows the mounting height for signs mounted on door and walls to be 1.50

persons with disabilities.

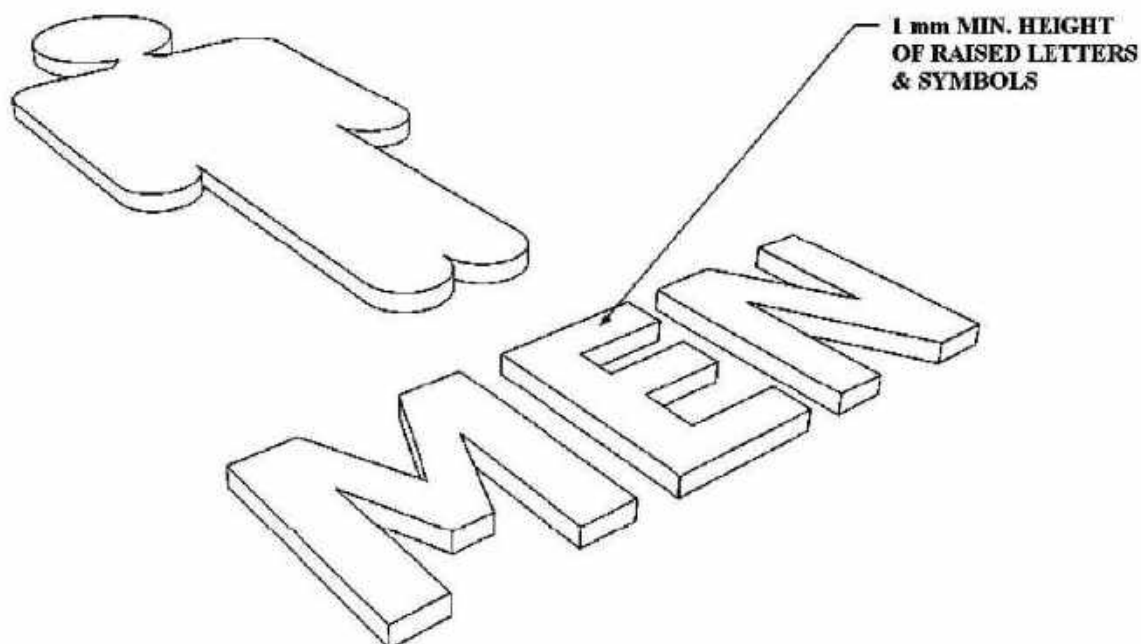


Figure 43. Image above shows letters and symbols raised by 1mm to be tactile for persons with visual impairment

7. Signs (graphics, text, and Braille) on walls and doors should be installed at a maximum height of 1.50 M from the finish floor to the center of the sign.
8. Signs shall incorporate graphics, text, and Braille.
9. Signs and labels for public rooms, areas, and places should have tactile symbols, letters or numbers that should be embossed with a minimum height of 1 mm; Braille symbols shall be incorporated in signs indicating public places and safety routes.

10. Tactile Maps

Character Proportion

- 10.1. Tactile letters and numbers on signs shall have a width to height ratio between 3:5 and 1:1 and a stroke width to height ratio between 1:5 and 1:10
- 10.2. Raised and Brailed Characters and Pictorial Symbol Signs (Pictograms)

- 10.2.1. Letters and numerals shall be raised 1 mm, upper case, Sans Serif or Simple Serif Type and shall be accompanied with Grade 2 Braille.
- 10.2.2. Raised characters shall be at least 16 mm high, but no higher than 50 mm.
- 10.2.3. Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram. The border dimension of the pictogram shall be 150 mm minimum in height.
- 10.3. Finish and Contrast
 - 10.3.1. The characters and background of signs shall be eggshell, matt or other non-glare finish.
 - 10.3.2. Characters and symbols shall contrast with their background – either light characters on a dark background or dark characters on a light background.
- 11. Tactile Ground Surface Indicators
 - 11.1. Positional, directional, and warning tactile blocks must be provided to warn people with visual impairments that they are approaching:
 - 11.1.1. Stairways, other than fire exit stairs
 - 11.1.2. Escalators
 - 11.1.3. Passenger conveyors or moving walks
 - 11.1.4. Ramps other than fire-exit ramps, curb ramps, swimming pool ramps
 - 11.1.5. In the absence of suitable protective barriers:
 - 11.1.5.1. overhead obstructions less than 2.00 M. above floor level
 - 11.1.5.2. areas where pedestrian and vehicular traffic intersect.

- 11.2. Tactile warning indicators should have a 50% contrasting gray value from adjacent floor finishes.

Toilets and Baths

1. Accessible public toilets shall permit easy passage of a wheelchair and allow the occupant to enter a toilet compartment, close the door and transfer to the water closet from either a frontal or lateral transfer.
2. The minimum number of accessible toilet compartments on each floor level or on that part of a floor level accessible to persons with disabilities shall be one (1) where the total number of water closets per set on that level is 20 and two (2) where the number of water closets exceeds 20.
3. Accessible toilet compartments shall have the following:
 - 3.1. A minimum area of 1.70 M x 1.80 M
 - 3.2. One (1) flip-up grab bar to be mounted on the wide side of the compartment adjacent to the water closet and be at a height between 280 mm and 300 mm from the top of the water closet seat and extend not more than 100 mm in line with the front of the water closet. One (1) vertical bar to be provided on the side wall close to the water closet and located between 350 mm and 450 mm from the front edge. Center line of water closet (top view) is 750 mm from finish to wall to grab bar.
 - 3.3. A turning space of 2.25 sqm with a minimum dimension of 1.50 M for wheelchair users shall be provided outside water closet cubicles.
 - 3.4. The height of toilet seat shall be 450 mm.
 - 3.5. Water closets and lavatories should use colors of lighter contrasting grey value to tiles to aid people with low vision impairment.
 - 3.6. A lavatory shall be installed at 460 mm distance from center line to adjacent wall. Lavatories shall be mounted at a height of 800 mm from the finish floor with a vertical clear leg room space not lower than 650 mm.