

BRIHANMUMBAI MUNICIPAL CORPORATION

No. ChE/ 314 /Roads & Traffic dt.26.05.2023

Sub: "Universal Footpath Policy".

- Ref:**
- 1) Planning and design guidelines for street furniture manual, Part - I.**
 - 2) Footpath design released by Institute for Transportation and Development Policy.**
 - 3) Harmonised Guidelines and Standard for Universal Accessibility in India - 2021**

Preamble:

BMC had finalized amended 'Pedestrian First'-footpath policy on 28.12.2016 to ease and facilitate the safe pedestrian movement. Greater Mumbai is one of the most populous cities in India with 1.25 Crore residents as per 2011 census (World's 5th largest city) & the current estimate population of Mumbai city in 2023 will be 1.715 Crore and its share in Maharashtra population is about 11% or about 1% of India's population. Owing to its geographical constraints it has no space to expand horizontally. It is therefore growing vertically in the form of sky scrapers, multi-storeyed buildings; thereby increasing density of population day by day. The density of population in BMC area is 28,185 per sq Km and is constantly on the rise. Mumbai being the state capital and also known as economic capital of the country there is heavy floating population in the city from the neighbouring districts using public or private transport. The number of public and private vehicles in Mumbai is increasing every day at the rate of approximately 650 new vehicles registered in the city. The density of vehicles is 2150 per Km. Motor vehicle statistics on road upto 2022 has crossed 4.30 million. The density of population and of the vehicles is leading to complex traffic scenario where the end-users are forced to walk on the streets in absence of mandatory footpaths at many places. The existing footpath is now proving to be inadequate to accommodate increased number of end-users who are forced to walk on the streets. It has therefore become necessary to focus attention on the

need to provide safe, continuous, uninterrupted and dedicated passage for mobility of end-users so as to avoid conflicts between vehicular and end-users movement thereby minimising the risk of any untoward incidents.

Walking is fundamental to urban life. It is healthy & pollution free form of mobility & recreation. The increase in number of vehicles increases travel time rather than reducing it. Hence the commuters prefer to travel the short distance by walking. It is observed that many people prefer to travel a distance of about 1~2 KM & even more on foot rather than any transport system for fitness/ health purpose. Moreover, there is considerable contribution of senior citizens, expectant mothers & children who are using the footpath daily. The very concept of providing footpath in urban areas is to avoid conflict between motorized traffic and end-users with a view to provide safe passage to the walker and facilitating uninterrupted vehicular movement at the same time. However it is also a matter of fact that the cosmopolitan nature of the city is morphing in to a characteristic urbanized culture where the footpath space is more and more being shared among various activities rather than exclusively for end-users use.

At a global level landmark initiatives for the Rights of Persons with Disabilities have brought the world together towards inclusion of Persons with Disabilities by all means. The purpose of the present Convention is to promote, protect and ensure full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity. Persons with disabilities include those who have long term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.

Against this backdrop, it has become necessary to have policy guidelines to bring in uniformity in construction, maintenance and use of footpaths in various parts of the city. The guidelines include engineering design, planning aspects and use of end-users facilities on road sides including End-users facilities at special locations like schools and transit areas.

The basic principle of footpath planning is to reduce end-users conflicts with vehicular traffic to minimum and optimum usage. Efforts need to be made to create such conditions that end-users are not forced to share the carriageway

with the vehicles and walk in unsafe circumstances and that the motorists respect the right of end-users.

Footpaths are to be regarded as part of transportation system which is connected and continuous, just like roadways and railways. They should not be intermittently placed wherever convenient; but instead should be provided consistently along the road carriageway. In order to be effective, the sidewalks as far as possible and practicable should be provided on both sides of the road above the level of the carriageway; separated by kerbs. Height of the kerb at the edge should however, not exceeds the height of a standard public step/riser i.e. 150mm. It is anticipated that every individual irrespective of age, gender, ability, health condition or socio cultural diversity enjoys equal opportunity to independently move, function, participate and perform the chosen activities of daily living and other life pursuits with dignity and independence. A barrier-free footpath should provide universal access to **end-users** that **not only includes pedestrians but also Persons with Disabilities, senior citizens, Pregnant women and mothers using strollers for their toddlers**. The role of a built environment can't be overemphasized in playing an enabling and empowering role to provide access to living with safety, convenience and with a sense of inclusion.

Policy Guidelines:

Physical characteristics of footpaths

- The end-users facilities shall comply with following physical characteristics:
 - **Footpath surface:** An even surface without cracks or bumps for comfortable walking. All surfaces should be stable, firm, and slip resistant.
 - **Footpath Width:** The footpath should be wide enough to accommodate end-users flow at any given point of time.
 - **External utilities/ Obstructions:** The obstruction can be an electric pole, tree, garbage bin, post box and hoardings. The location of garbage bin, electric pole and any other feature like signage etc. should be on one side of the footpath so as to give a clear walkway to the end-users.

- **Encroachment:** The informal commercial activities such as vending stalls, hawkers, feeder pillar boxes of electricity & telephone utilities etc. and parking of vehicles are common but undesirable features existing on the footpaths in Mumbai. Sometimes the extent of such activities rise to a level that the footpath facility becomes inaccessible/ non-usable by the end-users. For assuring increased comfort, uninterrupted access, optimum footpath width; encroachment of all forms on footpath shall be removed by following due process of Law. Parking fundamentally includes division of footpath which is dangerous for the end-users and because of vehicular movement, hence the license/ permission granted for parking permitted on footpath shall not be renewed hereafter except in isolated and rare cases where the permit may be renewed for maximum 15 days after recording the reasons in writing with prior approval of concerned Addl M.C. by retaining the minimum required width of 1.2M for end-users. No temporary permission shall be granted to erect any structure on footpaths henceforth without the prior approval of concerned Addl M.C./M.C by retaining the minimum required width of 1.5M for end-users.
- **Potential for Vehicle Conflict:** The footpaths need to be distinctly segregated from the roads, where fast moving vehicles ply. The two ways to protect the end-users (Pedestrians, Persons with Disabilities, senior citizens, Pregnant women and mothers using strollers for their toddlers) from vehicle conflicts is; the raised footpaths and the guardrails/Railings.
- **Continuity:** The continuity of the end-users facility is very important for the pedestrians as well as Persons with Disabilities, senior citizens, Pregnant women and mothers using strollers for their toddlers. Frequent kerb cuts along a street both impede traffic flow and create more conflict points between vehicles and end-users, thus reducing the effectiveness of footpaths; frequent undulations make the footpath uncomfortable to use by the end-users especially. Persons with Disabilities, senior citizens, Pregnant women and mothers using strollers for their toddlers, forcing them to share the carriageway along with the vehicles. The provision of kerb ramps is essential for continuity of the footpath.

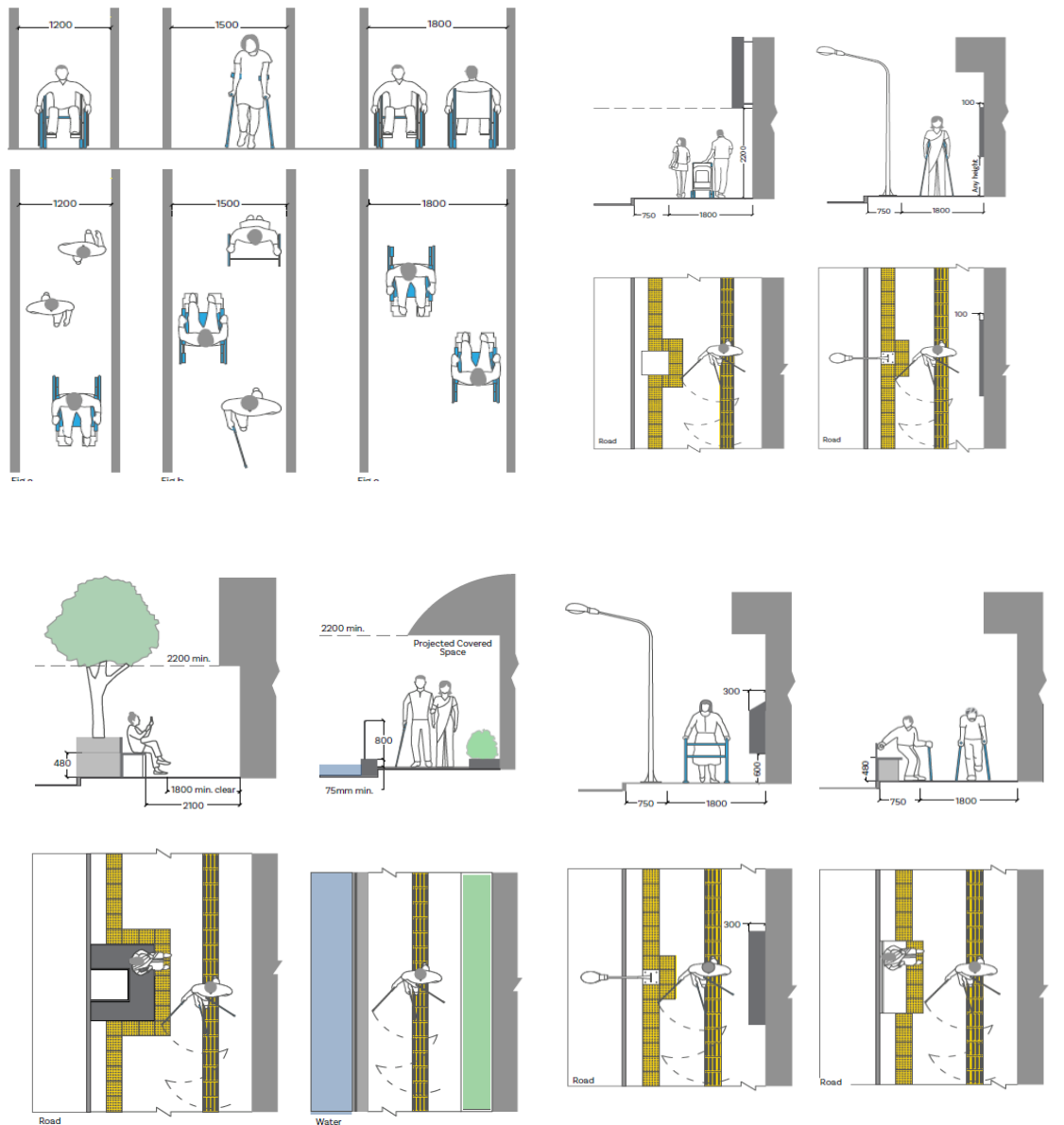
Width of footpath:

The width of a footpath is fundamental to the effective functioning of the end user. Without optimum width footpaths it will not help move enough end-users and will discourage them from accessing it. Keeping in view the fact that uninterrupted safe passage is provided for the end-users namely Pedestrians, Persons with Disabilities, senior citizens, Pregnant women and mothers using strollers for their toddlers and they are not forced to share the carriageway with moving traffic, as the end-user has the first right on the walkway i.e. the footpath. At the same time it is a fact that electric DP boxes, electricity poles, fire hydrants, telecommunications/piped gas, raised inspection boxes, stalls allotted to differently abled or to others by Government or BMC under various schemes, licensed street hawkers etc have become inherent character and integral part of urban living which are installed on public spaces. These structures existing on the footpath for several numbers of years and are declared as tolerated/protected by the policy of State Government. In addition to this certain streets may have to be declared as vending zones in compliance of court orders. In such cases there is a need to shift them on one strip of the footpath in such a manner that safe continuous passage of adequate width is available for end-users movement.

As a broad principle, the footpath width shall be divided in three distinct zones, i.e. a dead zone of 0.5 M adjacent to the property/shop line, second is end-user zone and third furniture zone.

- **The end user zone:** It shall be minimum 1.50M horizontal and 2.20M vertical clear dedicated space for the safe passage of end-users. No objects i.e. branches of trees, shop awnings, weather shed etc. shall obstruct the end-user space. As a rule, the end-user zone of minimum width 1.50 M shall be provided. However, there may be some restrictive and compelling cases, in such cases end-user zone of less than 1.5M may have to be provided as per site conditions. Similarly width of foot paths leading to major railway and bus stations need to be increased suitably in order to cater to the heavy end-user movement especially during peak hours. Minimum Footpath width of 1200mm for one-directional movement of wheelchair user and width of 1500mm for two-directional movement of all end-users simultaneously.

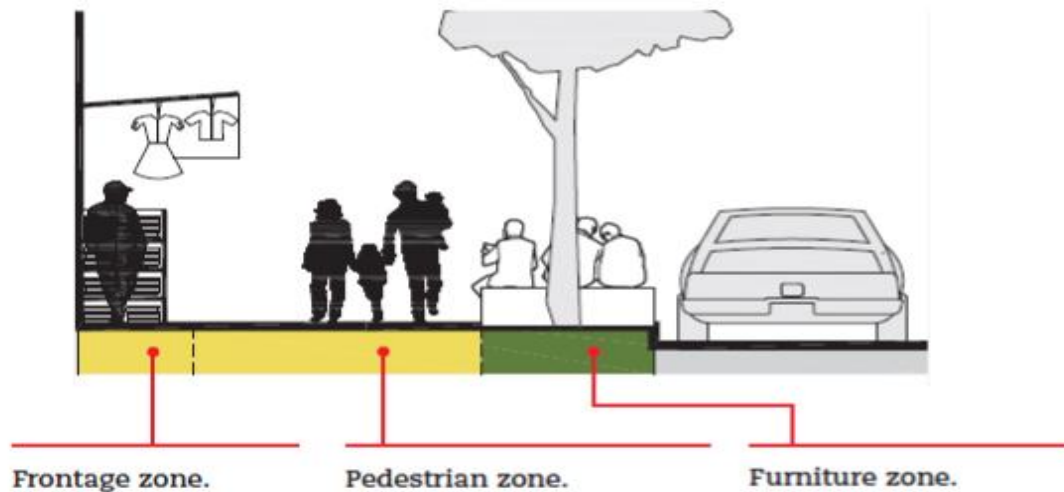
Minimum Footpath width of 1800mm for two-directional movement of two wheelchair users simultaneously.



- The full width of footpath shall be maintained consistently, even behind bus shelters and in front of shops to have free movement of wheel chairs/accompany of assistants for the use of Persons with disabilities.

Where the effective width is constricted by, for example, existing trees or walls, bottlenecks; footpaths may reduce to 1.2 M but for only short distances. If the constriction is on account of encroachment, electric poles, cabins etc; same shall be promptly removed and minimum 1.8M width

footpaths shall be provided. No utility ducts, utility poles, electric, or telecom boxes signage or any kind of obstruction shall be placed within the walking space and same shall be promptly removed to furniture zone.



- Frontage Zone :** The frontage zone can vary from a minimum width of 0.5 m along a compound wall to 1.0 m in commercial zones (IRC:103-2012, 6.1.5.3)
- Pedestrian Zone :** The pedestrian zone provides continuous clear space for walking. The clear width must be at least 1.8 m in order to accommodate two wheelchair users at the same time (IRC:103-2012, 6.1.3) and must be entirely free of obstructions (IRC:103-2012, 6.1.10.2).
- Furniture Zone:** Manholes, trees, benches, utility boxes and other potential obstructions should be placed outside the path of travel along a continuous line (IRC:103-2012, 6.1.10.2, 6.11.4).

- **Furniture zone:**

All the street furniture, fire hydrants, electricity boxes, light poles, trees, utility poles, telecom boxes, various sign and signage, dustbins for the moving end-users shall be placed along this 1.0 M wide furniture zone. The hawkers too in the vending zones shall be accommodated in the furniture zone. After exploring all the options if it is noticed that there is no space to construct a public toilet except than on footpath then in such case by retaining minimum clear width of 1.2M for end-user zone, the toilet may be allowed on footpath with approval of

Municipal Commissioner. Considering the three zones to be provided on footpath, total width of footpath in ideal circumstances and along all the roads having width 90 feet and more shall be minimum 3.3 M. On all the roads having width less than 60 feet, minimum end-user zone of 1.5 M shall be provided. Roads having width between 60 feet to 90 feet, considering user zone of the area, width of footpath shall be worked out. For a fair idea on the three zones on footpath, sketch from IRC 103/2012 is enclosed.

- **Surface quality:**

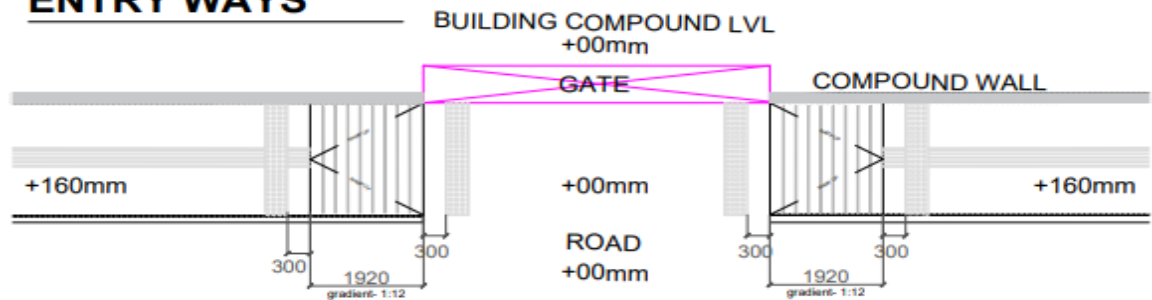
Firm, even paved surfaces are important to people using sticks or crutches or wheelchairs, or people walking with difficulty. Therefore chamber frames and covers over storm water drains that cannot be kept out of the footpath, should be aligned in such a manner that it merges at par with the surface of footpath. Paving shall have an even surface to prevent tripping and be laid to even cross falls to allow proper drainage and prevent the formation of puddles. The gap between paving slabs or any vertical deviation between slabs should not exceed 5mm.

The level difference between carriageway and top of footpath slab shall be maximum 150MM. The kerbs shall be accordingly fixed and flushed with top of slab. In no case, the kerbs shall be jutting above the top level of footpath slab.

- **Property Entrances:**

Footpaths must be continuous even at property entrances for uninterrupted pedestrian movement. The height of the footpath should remain the same. Warning tiles must be laid on either side of the property entrance in order to warn visually challenged persons about possible vehicle movement (IRC 103-2012, 6.4.3). Bollards should be installed to prevent vehicles from parking on the footpath, leaving a clear width of at least 1.2 m (IRC:103-2012, 6.12). At every property entrance, an appropriate material should be used to avoid damage due to vehicle movement. Footpaths that maintain a constant level through property entrances are convenient for pedestrians to use. Vehicles use a ramp (slope 1:5), helping to reduce speeds.

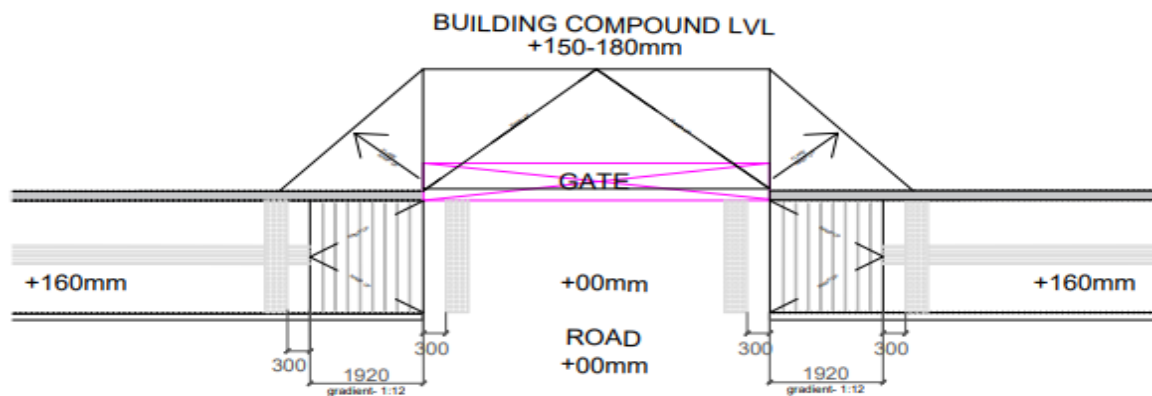
ENTRY WAYS



CASE 1: BUILDING COMPOUND AT LEVEL OF THE ROAD

100% accessible, with ramp of 1:12 gradient

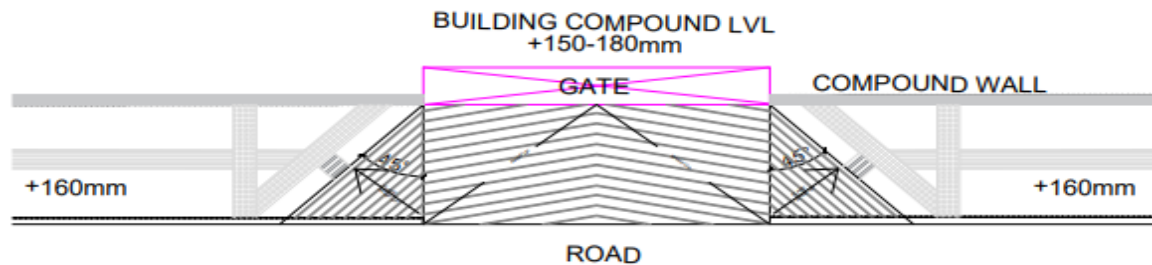
scale- 1:50



CASE 2: BUILDING ENTRY LEVEL HIGHER THAN THE ROAD

The building entry way ramp to be constructed inside the compound as per MCGM regulations

scale- 1:50

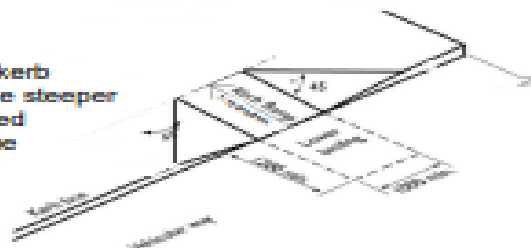


CASE 2- ALTERNATE SOLUTION

Kerb ramp at the entry way, not completely accessible

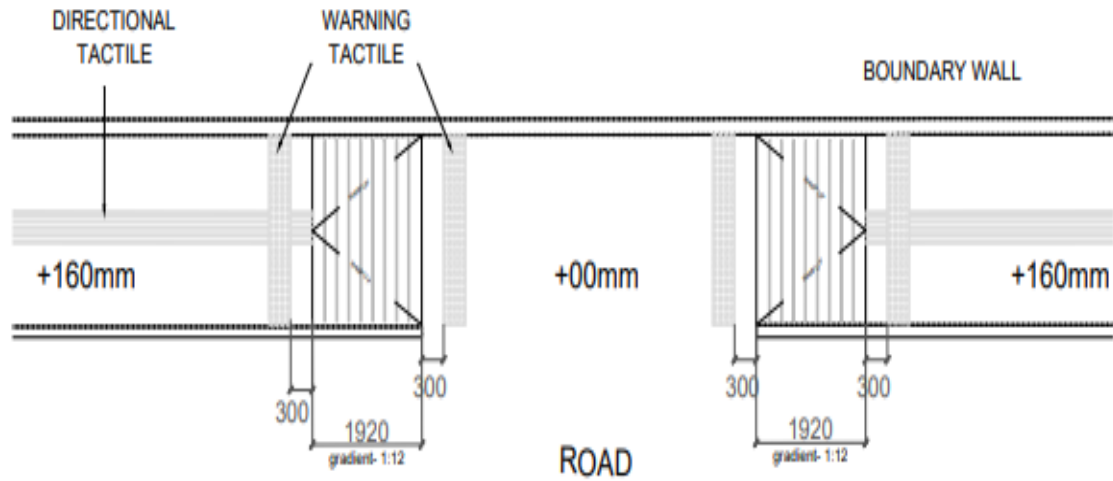
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The gradient of a kerb ramp should not be steeper than 1:12; the flared sides should not be more than 1:10.



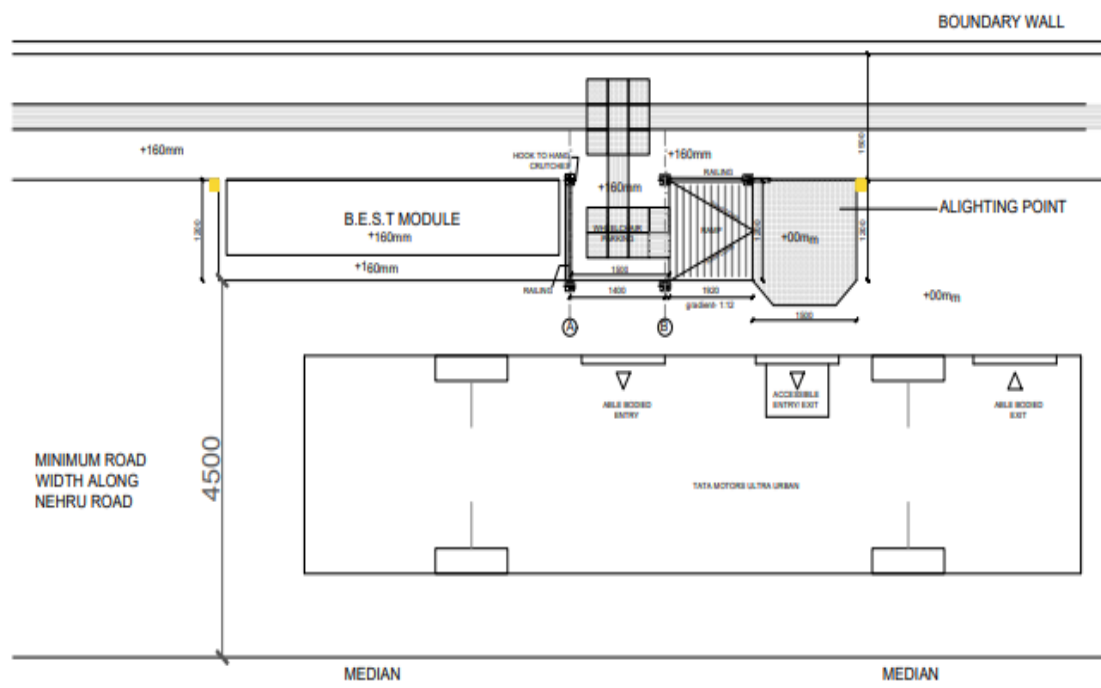
RAMPS

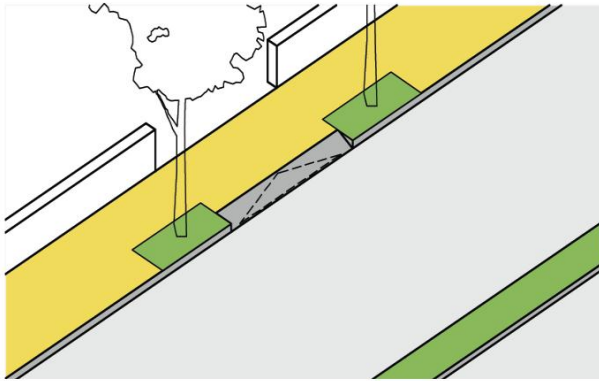
ALL THE RAMPS TO BE MADE CONSIDERING THE GRADIENT OF 1:12



Accessible Bus Stop: At footpath level

Bus Stop for road width > 4500 mm





Tactile Guiding Surface Indicators (TGSIs):

Tactile Guiding Surface Indicators (TGSIs) Tactile paving should be used on access routes to provide warning and guidance to people with visual difficulties. The need for TGSIs is critical and requires to be laid out with a holistic integration with built environments. Partial and incorrect laying of TGSIs may cause inconvenience and may be hazardous for persons with visual impairments. Actual tiles are preferred versus stamped tactiles as they are more durable.



1. TACTILES DONE IN STAMPED CONCRETE (LESS DURABLE)

Types TGSIs:

1. This is one form of tactile indicators which, in essence, provides the blind or visually impaired a physical cue. It is detectable either underfoot or by the use of a white cane. Tactile ground surface indicators are only one source, amongst many, of orientation information. Unlike some other tactile

indicators which are basically generic in nature, tactile ground surface indicators have a specific function and impart specific information about the immediate surroundings.

2. Tactile ground surface indicators act as, and are interpreted as landmarks.

There are two types of tactile ground surface indicators

- a) Warning indicators; and
- b) Directional indicators.

Tactile Warning Indicators (Dot type)

Warning indicators, as the name suggests, warn of either a hazard or a destination. A warning (dot) tactile should be placed 300 mm before and after any level change and around any street furniture/obstruction/trees in absence of tree guard.

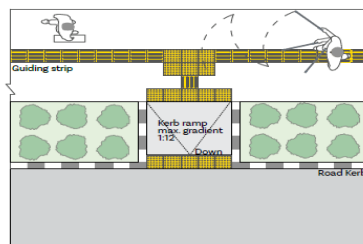
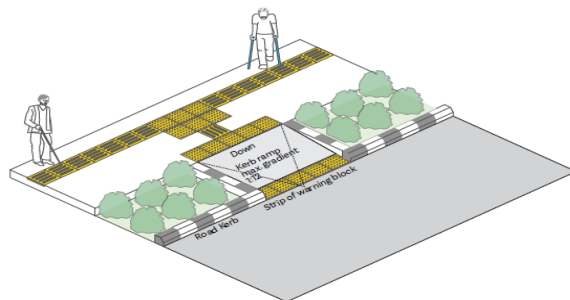
Tactile Guiding Indicators (Line type)

Tactile guiding or directional indicators are used to direct the user from one point to another along a safe path of travel. They are only required when there are insufficient cues from other sources to achieve the same result. For example, a directional indicator may be used in an open end-users plaza to indicate a clear path of travel in the absence of any other cues.

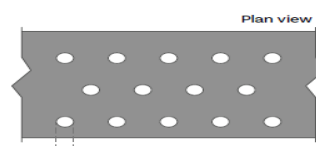
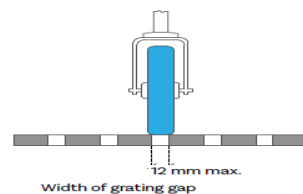
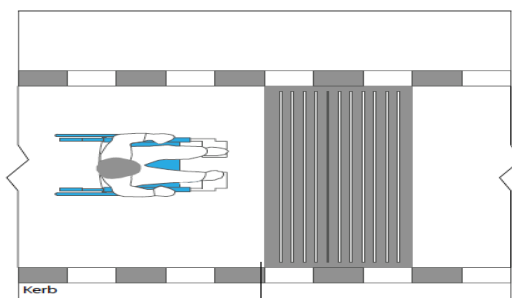
Position of TGSIs

1. The decision to apply tactile ground surface indicators will always have to be made in light of the particular circumstances applicable at any given site. In making such decisions, consideration should be given to the orientation and mobility strategies and techniques adopted by people with visual impairments and the potential hazards and barriers existing at a given location. However, there are some obvious situations where tactile ground surface indicators must be applied.
2. Warning treatment may be required at:
 - a. Hazardous locations, such as steps, stairs, railway platforms, end-users crossings, waterfront edges, etc. street furniture/trees/other obstruction

- b. Destinations to provide information about the location of amenities such as ticketing machines, service counters, phone booths, etc.
 3. Directional treatment may be required to assist with:
 - a. Direction, that is, to indicate a clear continuous accessible path of travel; and
 - b. Location, that is, to provide assistance to locate a target such as an end-users crossing, entrance to a public building, ticketing machine or phone booth.



- **Cross Falls/ Camber:** Cross fall shall be provided for quick disposal of runoff and it should be 2% maximum. Any break in the surface in footpath, should not be wider than 12 mm and should cross perpendicular to the direction of movement.



Grooves:

Grooves in flooring either as expansion or construction joints or for other purposes of retrofitting need to be well covered to ensure that either they are well covered to ensure smooth access for all. If not well identified, they may cause people to trip over. It is therefore recommended to provide adequate visual contrast for the same.

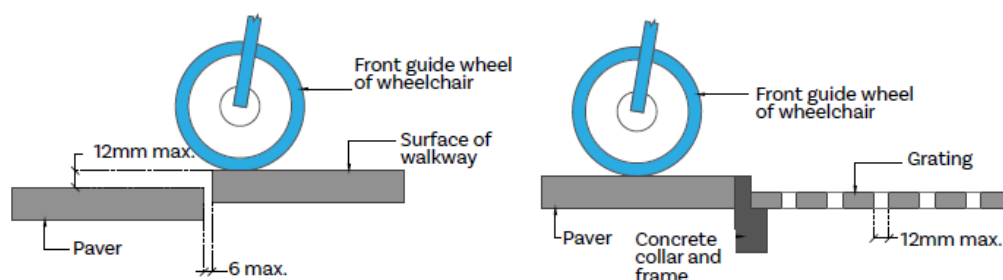
Gratings:

As far as possible, gratings and manholes should be avoided in the middle of access routes. If they are unavoidable, then it must be ensured that they are well maintained, kept at level surface and demarcated by a colour contrast for ease in mobility for persons with low vision and others.

Gaps in gratings and walking surfaces should not be more than 12mm in width (Refer Fig) and be placed such that their length is perpendicular to the dominant direction of travel. This will help prevent wheels (of wheelchairs, baby prams, baggage trolleys, etc.), walking sticks and heels from getting caught in the gaps.

Drain covers should be made of materials that are non-slip in both wet and dry conditions. Metal chequered plates, which tend to be slippery when wet, should be avoided.

- **Service chamber covers:** Service covers to manhole and inspection chambers should be of non-slip texture; flush with the footpath surface.



- **Design:** The design of guard-rails shall be neat and simple in appearance and as far as possible vandal/pilferage proof. Two aspects that need special attention are height of railing and obstruction to visibility. The height should be

sufficient so as to deter public from climbing over it; as well as the railing should not affect visibility of the end-users.

- **Applications:** Use of end-users guard-rails shall be considered under the following situations.

- a. Hazardous locations on straight stretches: It includes locations where roads are congested and locations where vehicular movement is at fast pace.
- b. At Junctions and intersections
- c. Schools/Colleges.
- d. Bus stops, Railway stationed.
- e. Overpass and Subways
- f. Central reserves: Where there is a central reserve or median, guard- rails may be erected within it to deter the end-users from attempting a crossing.

- **Installation guidelines**

- a. Guard-rails shall help to improve end-users safety at road intersections.
- b. Occasionally, gaps in guard-rails may have to be provided to accommodate trees, pillar boxes, sign posts, electrical control boxes etc. located near the side-walk. However, these shall be suitably designed to prevent end-users or children from squeezing through to cross the carriageway.
- c. Railing barriers shall be painted periodically, especially after the monsoon, for increased life and better appearance. Broken barriers must be promptly replaced.
- d. To be clearly detectable, guard-rails shall be high enough from the kerb/median level and painted to contrast clearly with the surroundings
- e. Simple galvanized railings are not desirable unless they have contrasting markings on them.
- f. Guard-rails on the footpath should have rounded top to prevent injuries.

- **Bollards:**

Bollards are useful to separate vehicles from end-users, buildings; visually or physically.

- a. Proposed bollards should be used to demarcate end-users and vehicular zones and mainly to restrict vehicular entry in to the identified end-users zone.
- b. Bollards may be used to allow selective entry to motor bikes and cycles. Bollards should be atleast 1 meter apart in entry and exit points of footpath to allow wheelchair users to pass.
- c. Bollards shall be used where guard-rails/barriers with less visual presence are required.
- d. Bollards shall be used to mark entry points to promenades and grounds
- e. Design of bollards and system of their placement shall be such that they harmonize with the system of guard-rails and central medians.



Incorrect placement of bollard create Wheelchair access impossible.



For design and various options of railings, bollards and other street furniture like tree guards/railings etc "Planning & Design Guidelines for Street Furniture Manual, part-I" maintained by Traffic & Coordination department shall be referred.

- **Obstructions**

Obstructions on the footpath surface shall be adequately distinguished by adopting Perceptible warning markings on the ground around the obstruction.

The warning markings should extend over a width of at least 600mm outside the protruded area (obstacle)

- **Overhanging and other obstructions:**

- a. Obstacles (trees etc.) shall be placed outside the path of travel or be placed along one continuous line.
- b. Overhanging signs or vegetation should be mounted at minimum height of 2.20m.
- c. Undetectable obstacles mounted lower than 2.20 M may project a maximum distance of 100mm into the footpath
- d. Protruding elements shall be avoided.

- **Kerbs**

- a. Kerb height: Maximum height of a footpath (including kerb, walking surface, top-of-paving) shall not exceed 150 mm from the road level, which is the standard height of a public step/riser.
- b. Kerb ramps:



Kerb ramp is useful for smooth transition, to overcome changes in level between the footpath and the road carriageway, at each end-users crossing on opposite sides of the street and in the vicinity of building entrances.

- c. Standard kerb ramps are cut back in to the footpath (flush with roadway), at a gradient not greater than 1:12 with flared sides providing transition in three directions. At street intersection and turnings kerb ramps should be provided.

Gradient and Length of Ramps

Gradient of Ramp	1:12	1:12	1:15	1:20	Not Gentler Than 1:25
Maximum length of horizontal run-in meters	6	9	11	15	18

- d. Width of the kerb ramp should not be less than 1.2M.
- e. The surface finish should be slip resistant
- f. Should be designed not to allow water accumulate on the walking surface;
- g. Do not require handrails
- h. Should not project into the road surface as they may pose a danger to users and an obstruction to vehicles.
- i. Edge surfaces have to be completely level with the road.
- j. Should be located or protected to prevent obstruction by parked vehicles;
- k. Should be free from any obstruction such as signposts, traffic lights, etc.
- l. When located at road crossings or other identified paths intended for end-users use while crossing a vehicular way, they should have a detectable warning surface in the form of tactile warning indicators at both entry and exit points connecting the tactile guiding path on the walkway.
- m. Have a detectable warning surface of 600 mm depth where the colour and texture are contrasted with the adjacent surfaces.
- n. Perceptible warning strip shall be provided on the Kerb side edge of the slop.

- **Continuity and Consistency;** It is mandatory for footpaths to be continuous between junctions or where grade crossing is provided. A change in colour of pavers can emphasize and highlight the crossing area to all users.

Footpath interruptions must be avoided by minimizing cuts in kerbs. Every change in level of footpath (steps, kerbs or road works) should be made clearly visible through use of bright contrasting colours and perceptible pavers for persons with vision impairment.

The ramps should be flared smooth into the street surface.

- **Level Change:** It may be possible to adjust ground levels more broadly to eliminate the need for a ramp or steps altogether. Arbitrary changes of level should be avoided. For instance, in creating a sense of importance for a building approach, a change in the quality of paving or street furniture can have the desired effect, rather than introducing a level change.
 - a. A ramp or series of slopes shall be integrated into the level change to facilitate wheelchair users or pram/buggies and bicycles.
 - b. Where resting places are located on landings, they shall be out of the way of the line of movement. A gradient less than 1:20 does not require handrails and resting places.

End-users Crossings

End-users crossings or street intersections play an important role in determining the walkability in street environments. Safe and accessible crossings or intersections enhance mobility for all, including wheelchair users, baby prams or people with luggage trolleys. It also remains a vital element in trip chain connectivity for a seamless end-users experience.

Intermediate Islands A pedestrian speed of 0.6 m/s should be used to assess the crossing speed of pedestrians. If the time to cross the crosswalk is not enough due to the street's length, an intermediate island should be provided. The intermediate islands should fulfill the following requirements:

1. The length of the island shall be at least 1500 mm.
2. The island pavement should be the same colour as the pedestrian path.
3. Both island edges should be marked with detectable warning pavement at least 300 mm wide and the same width as the pedestrian crossing. When two traffic directions are separated by an intermediate island and have different green cycles, pedestrians should be required to wait in the central island for the green

light and guardrails shall be placed to guarantee that pedestrians stop in the island.

The offset intermediate islands should fulfil the following requirements:

1. The entrance and exit of the pedestrian crossing at the intermediate island shall be misaligned.
2. The path between the entrance and the exit shall be protected on both sides with guardrails, dwarf walls or other protection elements.
3. The island pavement should be the same colour as the pedestrian path. Both island's edges should be marked with detectable warning pavement of at least 300 mm wide and the same width as the pedestrian path matches the final flashing green light cycle and informs of the imminent finishing crossing time. It has a distinctive tone, fast and intermittent.
4. The time interval of the crossing should be programmed keeping in account the needs for persons with reduced mobilities or slowest movement. The sound shall be set to ensure the crossing time of the traffic light cycle, taking into account a maximum pedestrians' speed of 0.6 m/s. If this requirement cannot be fulfilled, it is mandatory to provide intermediate islands. These islands shall have traffic lights with their own systems of visual and acoustic signals.
5. Audio signals encourage safer crossing behaviour among children and regular pedestrians as well.

Crossing at Road Level

1. Kerb ramps at end-users crossings must be wholly contained within the area designated for end-users use.
2. Detectable warning surfaces in the form of tactile surface ground indicators used at end-users crossings and kerb ramps must be in accordance with guidelines for TGSI's.

Intermediate Islands

A end-users speed of 0.6 m/s should be used to assess the crossing speed of end-users. If the time to cross the crosswalk is not enough due to the street's length, an intermediate island should be provided. The intermediate islands should fulfil the following requirements:

1. The length of the island shall be at least 1500 mm.
2. The island pavement should be the same colour as the end-users path.
3. Both island edges (Guide Strips) should be marked with detectable warning pavement at least 300 mm wide and the same width as the end-users crossing for benefits of people with visual impairments.

When two traffic directions are separated by an intermediate island and have different green cycles, end-users should be required to wait in the central island for the green light and guardrails shall be placed to guarantee that end-users stop in the island.

The offset intermediate islands should fulfil the following requirements:

1. The entrance and exit of the end-users crossing at the intermediate island shall be misaligned.
2. The path between the entrance and the exit shall be protected on both sides with guardrails, dwarf walls or other protection elements.
3. The island pavement should be the same colour as the end-users path.

Both island's edges should be marked with detectable warning pavement of at least 300 mm wide and the same width as the end-users path.



Accessible End-users Signals:

End-users crossing should be equipped with traffic control signal. Audio signals encourage safer crossing behaviour among children; virtually disable people and regular end-users as well.

Signage

A signage system also increases person's awareness of their surroundings and aids orientation within the environment. The location of signs should ideally be part of the process of planning the building and environment. A good and successful sign system should minimize anxiety and confusion. It must be easy to understand and not place Persons with Disabilities at a disadvantage. Universal signage cuts across the regional/cultural and language barriers as even a common lay man can understand the symbols and pictograms.



For better understanding the aspects and design principles of footpath with help of visions, guidelines in form of pictorial graphics released by "Institute for transportation and development Policy and 'Harmonised Guidelines and Standard for Universal Accessibility in India – 2021' are being provided with these guidelines.

- **Maintenance:**

Regular maintenance of footpath is necessary to ensure uninterrupted accessibility. Maintenance includes preventing or replacing cracked and uneven paving blocks and those with loose joints, as they become tripping hazards and are difficult to walk on. They also cause puddles to form and can become slippery. The selection of paving materials should therefore be guided by the ease of repair and maintenance.

These should be regularly checked before, during and after rains.

Tactiles and signages to be checked 6 monthly

Ramp alignment to be checked once yearly

- **Epilogue:**

Given the drastically changing profile of urban traffic, the focus will have to be shifted to inclusive transportation planning. Earlier streets were designed keeping in mind the vehicular traffic. The current changed scenario of urban traffic in view of increasing load of vehicles as well as end-users leads us to think of the "end-users first" aspect of street design. While designing street architecture; attention shall be paid to provide a safe, comfort building uninterrupted passage to the end-users so that they are not forced to share the carriageway with vehicles risking their lives.

- All ward Assistant Commissioners are hereby directed to adhere to these guidelines strictly even while repairing footpaths. Encroachment of all kinds and parking from footpaths shall be removed by the Assistant Commissioners promptly by following due process of law.
- These are broad guidelines on construction of footpath and utilization of the space in optimized manner. For more clarification, the IRC code 103 of 2012 and Harmonised Guidelines and Standard for Universal Accessibility in India – 2021 shall be referred
- These guidelines shall be incorporated in all Municipal Road/ footpath constructions comprehensively and shall be strictly adhered to. These guidelines shall come in to force with immediate effect. This policy supersedes all previous circulars / guidelines issued in the matter.

Sd/- 20.04.2023
DyChE(Traffic)

Sd/- 21.04.2023
Ch.E.(Roads & Traffic)

Sd/- 24.04.2023
D.M.C.(Infrastructure)

Sd/- 28.04.2023
Addl.Municipal Commissioner(Projects)

Sd/- 12.05.2023
Municipal Commissioner