Samarthyam
National Centre for Accessible Environments

AIF
AMERICAN
INDIA
FOUNDATION

Accessible India Campaign
Accessible India - Empowered India
Department of Empowerment of Persons with Disabilities

Department of Empowerment of Persons with Disabilities
Ministry of Social Justice and Empowerment
Government of India

ACCESS FOR ALL

Access is creating and maintaining environments in which people can participate in ways, which are equitable, dignified, maximize independence, conserve energy, are safe and affordable.

CONTENTS

Exteriors (Outside) 01

Common to Exteriors and Interiors 04

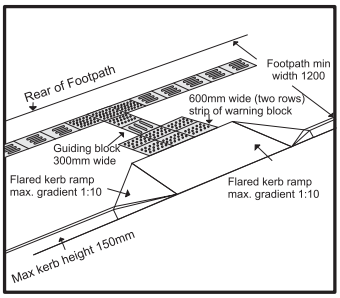
Interiors (Inside) 08

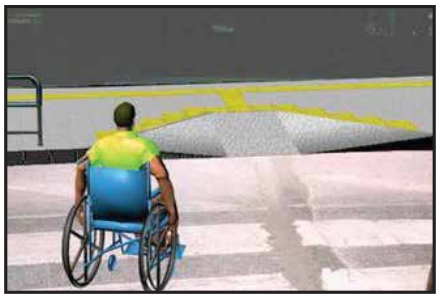
General 14

EXTERIORS (OUTSIDE)

KERB RAMP

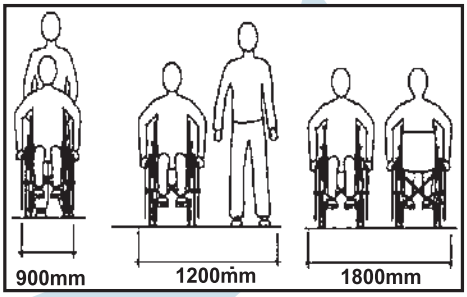
- Width should not be less than 1200mm. If width (x) is less than 1200mm, then slope of the flared side shall not exceed 1:12.
- Useful for a smooth transition, specially at pedestrian crossings and in the vicinity of building entrances.
- Footpath should be dropped to be flushed with roadway, at a gradient no greater than 1:10 on both sides of necessary and convenient crossing points.
- Warning strip to be provided on the kerb side edge of the slope, so that persons with vision impairment do not accidentally walk onto the road.





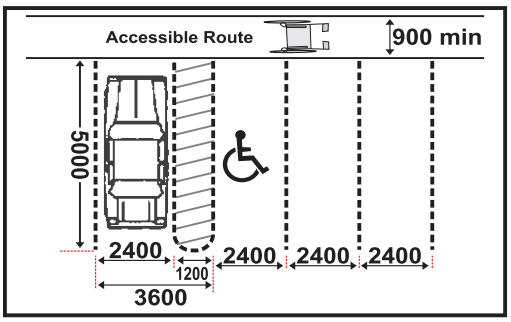
FOOTPATH

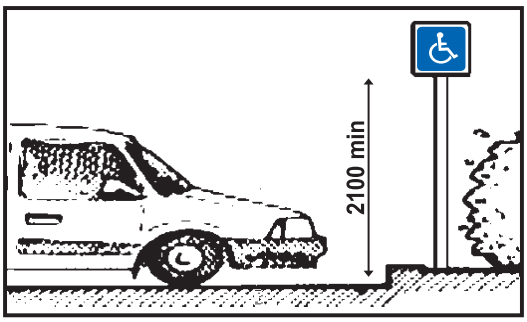
- Must be easy to follow, obstruction-free for the convenience of all users.
- Surface should be smooth and level, continuous, firm, non-slip and even.
- Height of the footpath should not be more than 150mm from the road level.
- Consistency in heights and continuity of the footpaths should be maintained.
- Every change in level on the footpath (a step, curbs or road-works) should be made clearly visible through the use of bright contrasting colours.
- Width of the footpath should not be less than 2000mm and minimum clear unobstructed path should be 1200mm.
- Street furniture should be placed outside the path of travel, preferably along a continuous line and should be easy to detect.
- Resting Places should be provided along travel routes.
- Protruding elements should be avoided.
- Bollards should be 1000mm high, painted in contrasting colour stripes with clear minimum gap of 1000mm.

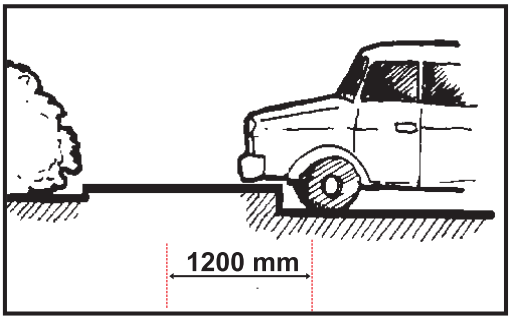


PARKING

- Parking should be within 30 meters of the main entrance of the building.
- Two accessible parking lots with overall minimum dimension 3600mm x 5000mm, should be provided.
- It should have the international symbol of accessibility painted on the ground and also on a signpost/board.
- There needs to be directional signs guiding people to the accessible parking.
- Wheel stoppers to be provided, to avoid vehicles to occupy space on the pedestrian pathway.



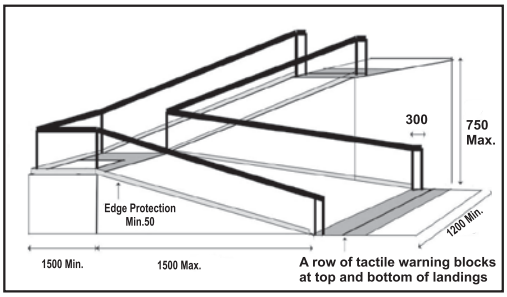


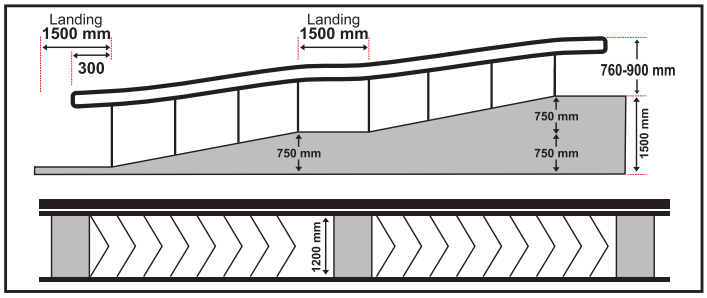


COMMON TO EXTERIORS & INTERIORS

RAMPS

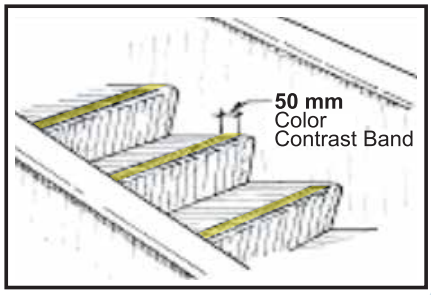
- Gentle slope: 1:15 maximum.
- Landing: every 750mm of vertical rise.
- Width: 1500mm or above.
- Handrails to be on both sides and at two levels - 760mm and 900mm. Both ends to be rounded or grouted and extend 300mm beyond top and bottom of ramp.
- Surfaces (ramp + landing) should be slip resistant.
- A ramp should be accompanied by a flight of easy going steps.
- Warning strip should be placed at 300mm before and after the ramp edges.

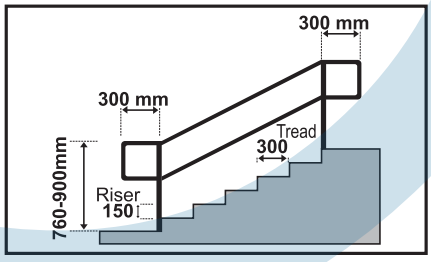




STEPS AND STAIRS

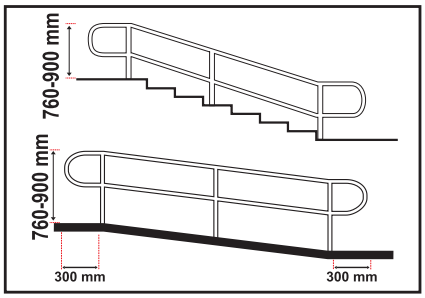
- Uniform risers: 150mm and tread: 300mm
- Stair edges should have 50mm wide, contrast colour band.
- The maximum height of a flight between landings to be 1200mm.
- Landing should be 1200mm deep, clear of any door swing.
- The steps should have an unobstructed width of at least 1200mm.
- Have continuous handrails on both sides including the wall (if any) and at two levels - 760mm and 900mm.
- Warning strip (pavers) should be placed 300mm at the beginning and at the end of all stairs.
- Nosing should be avoided.

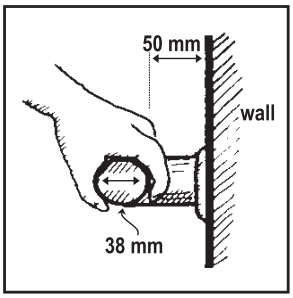




HANDRAILS

Handrails should be circular in section with a diameter of 38mm, at least 50mm clear of the surface to which they are attached, at two levels - 760mm and 900mm from the finished floor, extend by at least 300mm beyond the head and foot of the flight and ramp, in the line of travel and grouted in the ground or in the wall.



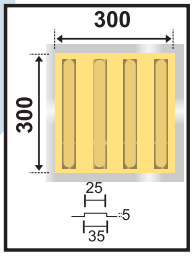


TACTILE SURFACE

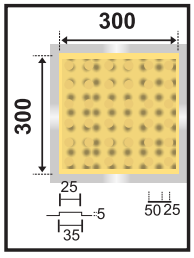
Ground surface of a different texture allowing for guiding/warning tactile signal for persons with visual impairment.

Line-type blocks indicate the correct path / route to follow.

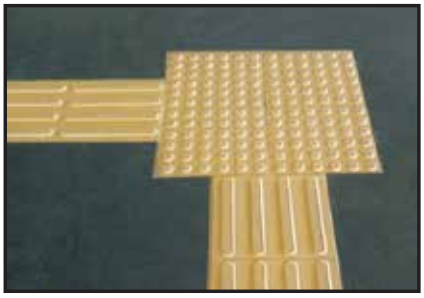
Dot-type blocks indicate warning signal, to screen off obstacles, drops-offs or other hazards, to discourage movement in an incorrect direction and to warn of a corner or junction. Should be placed 300mm at the beginning and end of the ramps, stairs and entrance to any door.



Guiding block



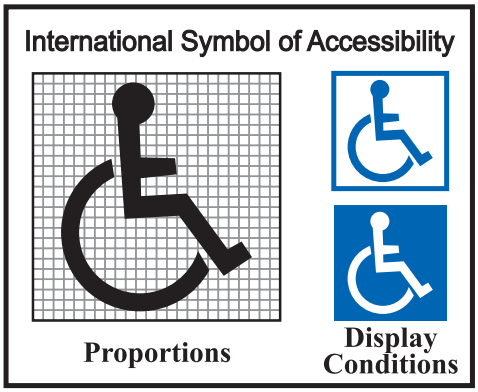
Warning block



SIGNAGE

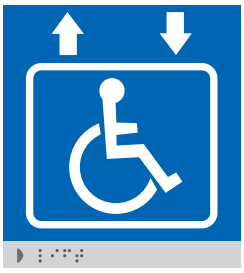
- Signage include direction and information signs, signs naming the building, signs of locality, street names, room numbering, maps etc.
- All signs should be visible, clear (easy to see and understand), concise (simple, short and to the point) and consistent (signs meaning the same thing should always appear in the same manner), non shiny and properly lit at night. Information should be supplemented with pictogram which benefits everyone, including persons with speech and hearing impairments.

- External: Should be mounted 2100 mm, above the floor level, to be easily distinguishable from 2-3 meters distance. The smallest letter type should not be less than 15mm.
- Internal: Should be mounted on the wall, between 1400 mm and 1600 mm from the floor level.
- The individual characters between 15mm - 50mm tall, raised by 1-1.5mm, bold & colour contrasted with their background and also in Braille.
- Accessible places and facilities should be clearly identified by the International Symbol of Accessibility.



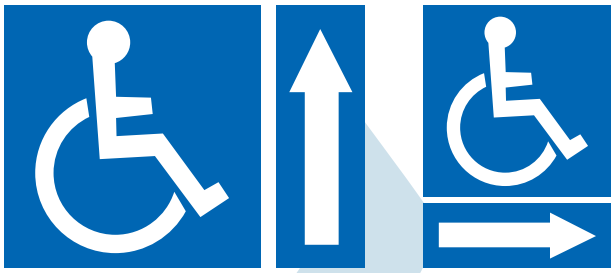
Ramp

Telephone



Lift

Parking

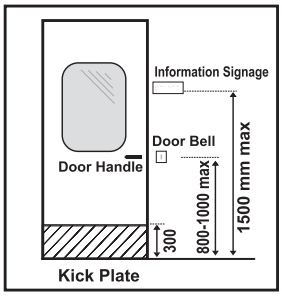


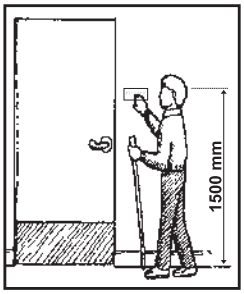
Directional Signs

INTERIORS (INSIDE)

DOOR

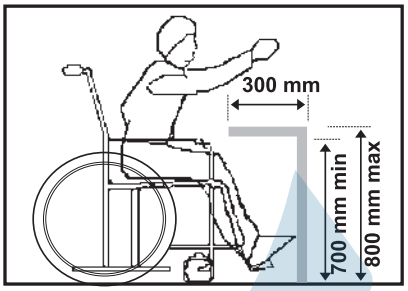
- Should provide a clear opening of 900mm min.
- Be fitted with lever action locks and D shape handles of circular section, between 800mm and 1000mm from floor level.
- Also be fitted with vision panels at least between 900mm and 1500mm from floor level.
- Be colour contrasted with the surrounding walls and should not be heavier than 22N to open.
- A distance of 400mm to 600mm should be provided beyond the leading edge of door to enable a wheelchair user to maneuver and to reach the handle.
- Kick plates are recommended 300mm from the bottom, to resist wear and tear.





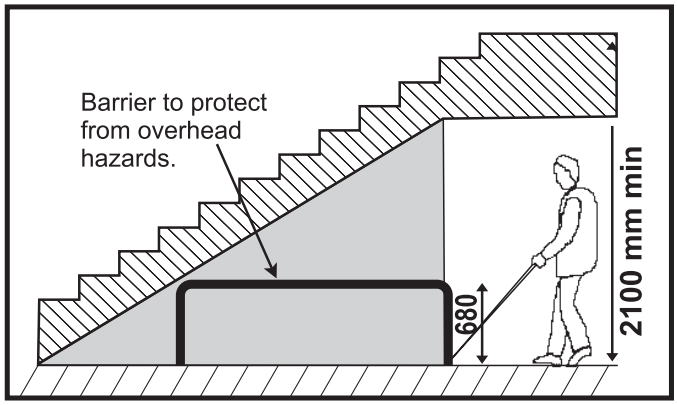
PUBLIC DEALING COUNTERS

- Should not be more than 800mm from the floor, with a minimum clear knee space of 700mm high and 280mm - 300mm deep.
- Lighting should be positioned to illuminate the receptionist and the desk top without creating glare.
- Lighting should not create shadows over the receptionist, obscuring facial detail and making lip reading difficult.
- Reception area acoustics should be carefully planned and controlled as a high level of background noise is confusing and disorienting to persons with hearing impairment.
- Staff manning the counters should know sign language.



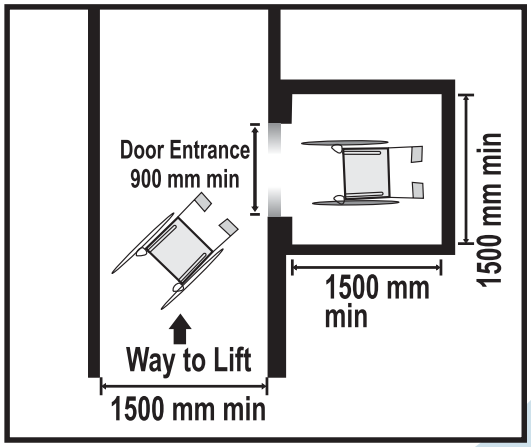
CIRCULATION AREA

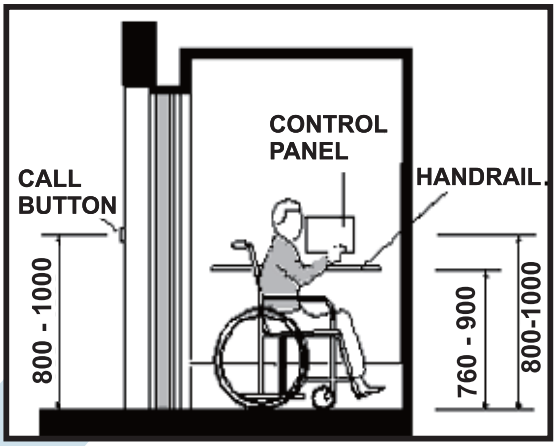
- Corridors should have an unobstructed width of 1800mm and to be well lit.
- Level differences should be beveled.
- Thresholds and gratings should not be more than 10mm.
- Protruding objects (more than 100mm from the wall) to be placed either in a niche or above 2100mm from the floor.
- Open spaces below ramps, escalator and stairs should be blocked out completely by protective guard rails, raised curbs or marked with a tactile surface.



LIFT

- Floor: Minimum space for wheelchair users 1500mm x 1500mm.
- Doors: 900mm wide and closing mechanism to be adjusted to give adequate entry time.
- Control Panel: Inside the lift to be on both the sides.
- Call Button & Control Panel: At reach of 800mm-1000mm at least 450mm from any corner.
- Key plans, orientation signs and push buttons in lifts should have a text in Braille and raised letters.
- Audio and visual indicator, rear view mirror & kick plates should be fitted.





WATER CLOSET (WC)

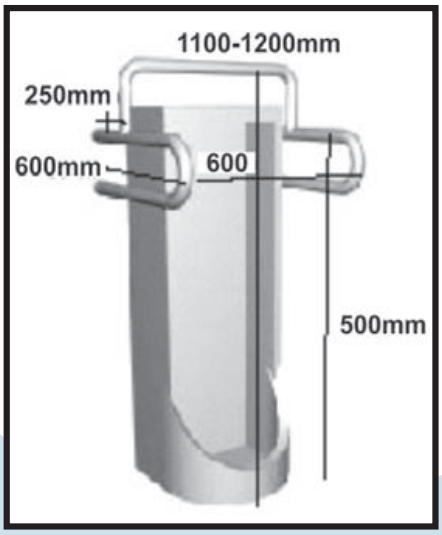
- An unobstructed space 900 mm wide, should be provided from the edge of the WC to the washbasin/wall, to facilitate side transfer, together with a clear space of 1200 mm in front of the WC.
- WC centerline be located between 460mm to 480mm from the adjacent wall.
- The top of the WC to be 450mm to 480mm from the floor.
- Have a back support.
- Grab bars should be provided. On the transfer side U-shaped movable type and on the wall side L-shape grab bar is preferred.

WASHBASIN

- Be of dimensions 520mm and 410mm, so mounted that the top edge is between 700mm-800mm from the floor. It should have a knee space of at least 760mm wide by 200mm deep, by 650mm - 680mm high.
- Lever type handles for taps are recommended.
- Mirror's bottom edge to be 1000mm from the floor and the mirror may be inclined at an angle.

URINALS

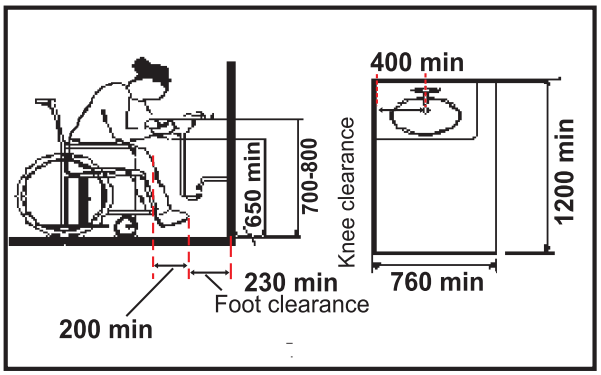
- At least one of the urinals should have grab bars, installed on each side and in the front to support ambulant persons with disabilities (for example bi-lateral crutch users).
- The front bar is to provide chest support, the sidebars are for the user to hold on while standing. Urinals shall be stall-type or wall-hung, with an elongated rim at a height maximum of 430mm above the finish floor.
- A clear floor space 900mm by 1200mm should be provided in front of urinals to allow forward approach.
- Urinal shield (that do not extend beyond the front edge of the urinal rim) may be provided with 735mm clearance between them.

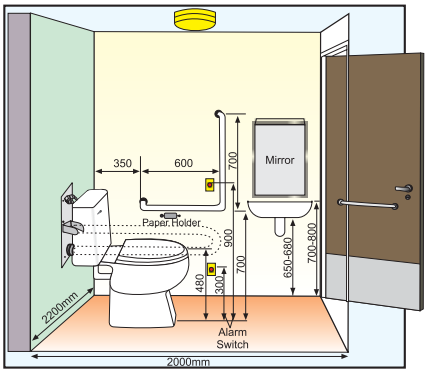


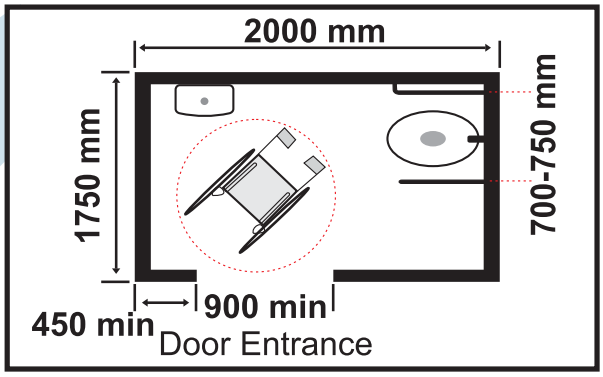
ACCESSIBLE TOILET

- A minimum of one toilet compartment should have enough floor space for wheelchair users to enter and exit.
- Minimum clear floor space of 2000 mm x 2200 mm
- Provide a door of clear opening of at least 900 mm with the door swing outwards or be folding or sliding type.
- Should have slip resistant flooring.
- Door should have horizontal pullbar at least 600 mm long inside and 140 mm long on the outside, at height of 700 mm.

PLAN OF ACCESSIBLE TOILET

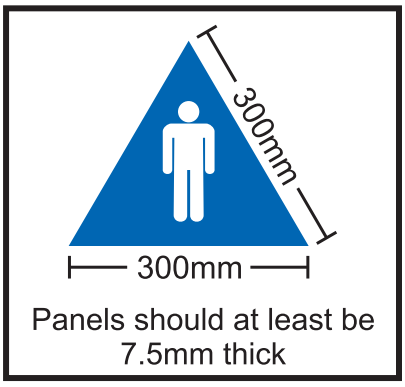


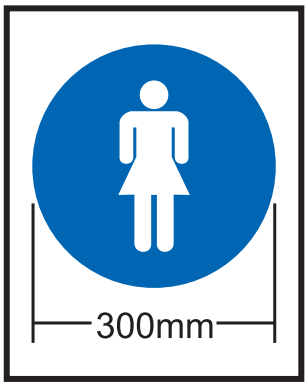




- Alarm switch/pull cord which activates an emergency audio alarm (at the reception / desk, etc.), should be provided at 900mm and 300mm above finished floor, close to the side wall near the WC and 750mm away from rear wall.
- All toilets to have pictogram (male in triangle and female in circle), marked on plates along with Braille & raised alphabets, put on wall next to door at 1400mm - 1700mm.

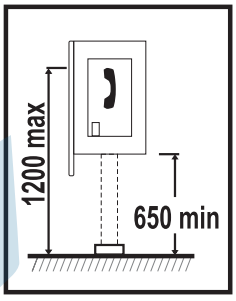
- A distinct audio sound (beeper / clapper) may be installed above the entrance door for identification of the toilets.

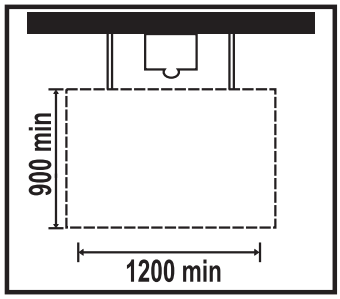




PUBLIC TELEPHONE

Maximum height of the highest part of a telephone: 1200mm. Maximum height of a telephone (knee space for wheelchair user) 650mm - 680mm. Minimum floor/ground space: 1200mm x 900mm. Guiding path to be provided to guide persons with vision impairment to public telephones.





EMERGENCY EVACUATION

- Audible firm alarms to be supplemented by flashing lights to alert persons with hearing impairment. Clear, well illuminated signage indicating escape routes is essential.
- Fire Refuge Area at the landing of a fire escape staircase, equipped with two-way communication gadgets with clear signage, flashing bulbs & audio signals should be provided to facilitate emergency evacuation.

GENERAL

OTHER POINTS TO REMEMBER

- **Induction Loop System / FM system** should be provided for persons with hearing impairment in public dealing, service and information counters, classrooms, auditoriums, cinema halls, conference rooms, etc.
- **Tactile map** should be installed near the entrance / reception to orient persons with vision impairment. The letters and signs shoud be raised at least 1-15mm from the background.
- **Switch and Socket** in contrasting colour, should be mounted between 450mm-1000mm from the floor level.

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About AIF/ABLE

The American India Foundation (AIF) is committed to catalyzing social and economic change in India, and building a lasting bridge between the United States and India through high-impact interventions in education, livelihoods, public health, and leadership development. Through the Ability Based Livelihood Empowerment program (ABLE), AIF is revolutionizing the industry paradigm in India by providing equal opportunity and access to employment for persons with disabilities, based on a simple belief – "It is one's ability, not disability that defines any individual". The ABLE program trains persons with disabilities in fundamental and specialized skill sets – and facilitates their entry into the job market through a robust advocacy platform for disability inclusion, promoting inclusive growth in India.

About Samarthyam

Samarthyam is a disabled people organization (DPO) founded in 1993 and registered as Trust in 2001. It has a Special Consultative Status with United Nations Economic and Social Council (ECOSOC) since 2015. For past 25 years, it has been pioneering rights based advocacy and gender equality (girls and women with disabilities) with focus on inclusive, accessible and sustainable environments.

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Page 1

Raghavendra Sagar, at his workplace Adecco (a unit of Accenture), in Bangalore

Partner: Cheshire Livelihood Resource Centre, Bangalore

Photo © Prashant Panjiar, 2016 for American India Foundation

Page 4

Visually impaired students undergo training at Dharmaram College Trust Centre, in Bangalore

Partner: EnAble India, Bangalore

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Page 8

M Ramesh, at his workplace Rockwell Manufacturing, in Hyderabad

Partner: ACE Social Foundation, Hyderabad

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Page 14

Dinesh Gavit, at his residence in Mumbai, uses his bike to reach his workplace Big Brand Box

Partner: Cheshire Homes India - Mumbai

Photo © Prashant Panjiar, 2017 for American India Foundation

Page 18

Sujay Kumar with his employer Nitin Dubey, VP Operations of Qikwell, Bangalore

Partner: EnAble India, Bangalore

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