Generic Guidelines for Accessible Monuments under ASI (GAMASI)

(TO BE READ IN CONJUNCTION WITH ASSET SERVICE LEVELS GUIDELINES DOCUMENT OF SCHEME GUIDELINES)

Ministry of Tourism
Government of India
A universal design strategy essentially needs to be applied to every part and the whole of the heritage site, while formulating the recommendations for enhancing Universal Accessibility in the site and enhancing visitor experience for ALL. The aim is to achieve the following goals wherever practicable:

- Pre-visit information available in accessible formats and providing information about the accessibility of the site and services
- Staff and guides trained in disability and equality awareness
- Well designed and legible signage
- An accessible principal entry point
- An accessible external landscape
- Simple and intuitive way finding and orientation
- Access for everyone to all parts of the heritage site or, where this is not possible, alternative access provided
- Interpretive information available in a variety of formats
- Accessible visitor facilities and public conveniences
- Emergency evacuation for everyone

**KEY DESIGN CONCEPTS**

- Protection of cultural significance of heritage site - a priority while designing sensitive solutions.
- “Accessibility” A historical layer of heritage to meet the contemporary needs.
- Reversibility of design solutions to achieve physical and intellectual access.
- Service design (visitor movement and management plan) as key factor in enhancing experiences.
- Application of universal design principles for social sustenance.
- Minimizing environmental pollution for well being of the heritage site and all types of visitors.

**APPROACH**

Protection of cultural significance of heritage site - a priority while designing sensitive solutions.

“Accessibility” A historical layer of heritage to meet the contemporary needs.

Reversibility of design solutions to achieve physical and intellectual access.
GUIDELINES FOR ACCESSIBLE WEBSITE, INFORMATION /COMMUNICATION AND SERVICES

INFORMATION AND COMMUNICATION

- The website should provide information about the heritage site and should comply with web accessibility standards.
- The heritage site should also have a mobile app for detail information about the site and facilities, and a QR code to access a mobile app / website related to the site.
- All publications/brochures should be available in alternate accessible formats such as: Braille, large Print, audio, pictorial (wherever possible), easy-to-read, available in Hindi & English, accessible electronic formats that can be shared over email or mobile platforms.
- Printed service related documents such as forms, menu cards, etc. should be in accessible formats.
- Assistive technology such as loop hearing systems, audio orientation tools, interpretative videos or audio tours with captioning or sign language, wheelchairs etc. should be available. Staff and guides should be trained on using the same.
- Identify the single point of contact at the office for any queries for assistance for disabled persons.
- The heritage site should preferably provide access to WIFI to the visitors at nominal cost.

The provision of physical and intellectual accessibility information on the website/mobile app of the heritage site will be vital to help PWD’s to plan their visit. Information could include Text, graphic, audio and video information on the following:

- Information and history of the heritage site.
- Modes of accessible transport/travel to reach the site.
- Accessible facilities available on the site for PWDs.
- List of accessible and inaccessible parts of the heritage site and provisions for alternative experience.
- On-site available information such as leaflets, guides and trails.
- Maps, Photographs, videos and virtual tours of the monument/site.
- Assistive technology/devices available on site for PWDs.
- Provision and links to a mobile App, containing a fully accessible self-guided tour (using ASL/LSQ, audio, images, text and video), interactive map, online ticketing and information to help plan and execute a visit.
- Links to information on other relevant buildings, sites or service locations.

Website information should use plain language with simple and logical navigational tools and provide flexibility to allow greater user control over the website.

There is guidance available on the design, layout and types of websites for good accessibility and websites should have at least Level AA conformance to the Web Content Accessibility Guidelines.

For those who may not have access to a computer or the internet, pre-visit information needs to be provided in a variety of accessible formats. These may include large print and easy to read leaflets. Pre-visit information may also be provided via telephone or through local information centers such as libraries, tourist offices or local authority offices.
### STAFF AND GUIDES TRAINING AND SERVICE

- Disability sensitization sessions should be part of the staff and guides induction program.
- Staff and guides should be trained to assist persons with disabilities, including persons with learning disabilities.
- Staff and guides should be trained in basic Indian sign language.
- Staff and guides should be aware of the accessible facilities that are available and know how to operate them.
- All accessibility equipment should be checked regularly and maintained well.
- There should be a procedure for a client with disabilities to lodge a complaint or make suggestions.
- Guide dogs should be allowed in the premises (Wherever feasible).
- There should be a plan to improve accessibility over a set timeframe.
- Trained live assistance should be available in premises for all disability constituencies where it may be required.
- There should be an equal opportunities policy within the organization to promote the employment of staff and guides with disabilities.
- Policy should include commitment to reasonable adjustment of workplace environment to accommodate new staff and guides and clients with disabilities.
- All Guides operating in the heritage site should have standard uniforms for easy identification by visitors.
- Organization should have disability focal person in charge who manages the concerns of employees and clients with disabilities.
GUIDELINES FOR ACCESS ROUTE TO PREMISES AND SITE ENTRANCE GATE

TYPES OF RECOMMENDED KERB RAMPS WITH TACTILE GUIDELINES

RECOMMENDED SIGNAGE

TYPES OF RECOMMENDED GRATINGS ON OPEN GUTTER
GUIDELINES FOR TACTILE GUIDING PATH, WARNING TILES AND TREE GRATINGS AND GUARDRAILS

TACTILE GUIDING PATH AND APPROACHING SIDEWALK TO THE BUILDING

TACTILE GUIDING PATH DETAIL AROUND MANHOLE/ TREE/ PLANTER

ARRANGEMENT OF GUIDING BLOCKS FOR PERSONS WITH VISUAL IMPAIRMENT

WARNING TILE

GUIDING TILE

EXAMPLE OF INTERSECTION

EXAMPLE OF L-SHAPED INTERSECTION

EXAMPLE OF T-SHAPED INTERSECTION

Type 2

Specification
- Each Tree Surround consists of 4 nos panels of 750mm X 750mm X 40mm/10mm Thickness or 900mm X 900mm X 40/10mm Thickness
- Overall dimensions: 1500mm X 1500mm X 40/100mm Thickness or 1800mm X 1800mm X 40/100mm Thickness
- Suitable reinforced for long use and to prevent damage during transportation & handling.

WARNING BLOCKS AROUND TREE

2100 mm/min (82-3/4 in.)

680 mm max
(26-3/4 in.)
GUIDELINES FOR ACCESSIBLE PARKING

- Provision of a large common parking lot at the entry point to the site as per site specific requirements. Provision of at least 3 accessible parking bays.
- Restriction of vehicular movement within heritage site limits after the parking area, to create vehicle and pollution free zone. Provision of accessible battery operated coaches and boarding points for transfer from parking lot to monument entrances especially for PwD’s and elderly.
- The parking should be well demarcated, There should be clear information accessible to all, discouraging the misuse of accessible parking bays.
- The signs indicating that a bay is designated an accessible parking bay should not be only at ground level as this may create a problem finding the bays at popular sites in a busy high season or if misused.
- Each accessible parking bay should be of dimension (3600 x 5000 mm) including alighting space of 1200mm and should be clearly demarcated on floor and signposted as indicated in the adjoining detail.
- Signpost of international symbol of accessible parking should be provided at 2100mm height and of 600 x600mm size for easy visibility from drivers seat.
- The parking bays should have firm and leveled surface.
- Accessible parking bays should have side and rear transfer zones for removal and set up of a wheelchair from the boot of a vehicle or for use of a rear- or side- mounted wheelchair hoist.
- Parking area should be well lit and, where practicable, covered/ shaded.
- There should be well defined step free and barrier free route with a tactile guiding path to the main accessible entrance or point of interest from the parking bays in keeping with the character of the site.
- All free barriers like signposts, light posts, electrical poles, trees, barricades etc. and level differences found in the parking areas should be preferably removed or guarded to enable safe access for visitors with vision impairment.
- Trees in parking to be provided with a grating cover and guardrails
- Accessible directional, multilingual, braille and tactile signage to be provided as per standards on the floor and on the wall / post.
- All security guides/ guards should be sensitized and well informed about reserved parking for PWDs.
GUIDELINES FOR ACCESSIBLE PARKING

RECOMMENDED SIGNAGES

ACCESSIBLE PARKING BAY WITH WHEEL STOPPER

RECOMMENDED PARKING BAYS

<table>
<thead>
<tr>
<th>Total number of parking spaces in open car parks or car park buildings:</th>
<th>Required minimum number of accessible spaces:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 25</td>
<td>1</td>
</tr>
<tr>
<td>26 to 50</td>
<td>2</td>
</tr>
<tr>
<td>51 to 75</td>
<td>3</td>
</tr>
<tr>
<td>76 to 100</td>
<td>4</td>
</tr>
</tbody>
</table>

RECOMMENDED LAYOUTS FOR ACCESSIBLE PARKING BAYS
GUIDELINES FOR BATTERY OPERATED COACH STOP

EXAMPLES OF ACCESSIBLE BATTERY OPERATED COACHES

REPRESENTATIVE EXAMPLE OF BATTERY OPERATED COACH STATION
GUIDELINES FOR TICKET AND SERVICE COUNTER

RECOMMENDATIONS

• Tactile guide path should lead from the entrance to the ticket / service counter, and from the counter to major circulation route.
• Audio aid should be provided at the counters for information transmission to hearing impaired persons. Two way mike system is ideal for effective communication in high noisy areas.
• An induction loop system should be installed at the service counters.
• Turnstiles if provided at the entry should have minimum one access route with openable gates and a clear space of min. 800mm in-between for wheelchair users to pass through.
• A multi-media information panel and/or tactile pictographic map and a tactile scaled model of the heritage site should be provided adjoining the ticket/ information counter at an accessible height.(refer to section 6 and 15)
• Information handouts with site map, in accessible formats (multilingual and braille) should be provided at the ticket / service counter or in accessible stands near them.
• An accessible drinking water fountain should be provided near the ticket counter.
• Accessible directional, multilingual and tactile signage to be provided as per standards.
• Directional signage leading to basic visitor facilities like drinking water fountain, toilets, cafeteria (if available) must be provided at the ticket / service counter.

ACCESSIBLE TICKET COUNTER DETAIL

DETAIL AT TURNSTILES/ CHECKPOINTS

RECOMMENDED SIGNAGES

QR CODE
GUIDELINES FOR TICKET AND SERVICE COUNTER

- Provision of a separate sheltered accessibility facilitation / service counter for PWDs / elderly visitors must be made, preferably attached to the main ticket / information counters.
- Accessibility facilitation counter should consist of a step free space which shall serve as a one-stop help desk for PWDs / elderly.
- Trained staff and guides / guides, assistive devices and mobility equipment shall be made available for PWDs on free / rental / chargeable basis from this counter.
- Assistive devices that can be provided can include assistive hearing systems like audio guides.
- Mobility equipment for internal movement of visitors, available at the counter must include sufficient number of wheelchairs and power sticks with suspension (depending on tourist footfall) to borrow or secure for the duration of their visit with a deposit refundable on leaving the site.
- Traditional mobility aids like palkhi / doli can be made available near the accessibility facilitation counter for PWDs / elderly to negotiate the difficult terrain to reach the heritage site.
- Staff / guides at the heritage site should be formally trained for providing service to PWDs and preferably trained for sign language interpretation.
- Display and important information about the heritage site should be presented in tactile models / graphics, written text and braille and audio messages activated by large push buttons.
**Walkways/pathways**

- Provision of continuous accessible pathways for PWD’s throughout the external/landscaped areas of the site.
- Improvements to existing ramps, addition of handrails to long ramps.
- The accessible path should preferably lead to all important attractions and vantage points in the site.
- All pathways should be firm and slip-resistant.
- Pathways and corridors should be wide enough for wheelchair users. Provision of Safety kerbs around unguarded fountains.
- Provision of gratings on open drains.
- Linkages and transitional spaces should not form obstacles to users.
- If a pathway leads to a spatial change or a change in level, directional cues such as signage, kerbs, handrails, fences, hedges, or other continuous elements etc. should be provided at strategic locations to maintain travel continuity for the user. This is particularly important for visually impaired users to continue along the travel path to reach their destination.
- Kerb ramps with tactile warning and color contrast to be provided to bridge level differences less than 150mm along pathways.
- Edges of pathways should be clearly defined by using different colours / textures. Street furniture, trees, lighting and dustbins should be located on one side of pathways.
- Texture, color and pattern of the change in floor surfaces, as well as the lighting effect on the floor surface, should not be too sudden as to cause hazard to users. Junction between the different floor surfaces should be leveled; any gaps or expansion joints between different materials should not exceed 13mm wide.
- Continuous tactile guide path should be provided on all the pathways right from the entrance to all major facilities, information counters, Braille maps/directories, ramps, steps and lifts, for independent navigation of PwVI. (refer to more recommendations on following page)
GUIDELINES FOR EXTERNAL PATHWAYS / CIRCULATION AND LANDSCAPE AREAS

- Grating provided if any at the entrance gate should have spaces not greater than 13 mm wide in one direction to avoid trapping of crutches or wheels, and be placed so that Channel grating slots should not be parallel to the traffic direction as illustrated in fig. in section 2.
- Provide a raised zebra crossing at the same height as that of accessible pathway to cross the vehicular road (refer to detail in section 2).
- Tapping rails should be provided for visually impaired visitors where tactile guiding path cannot be provided.
- Paths and routes should be monitored and maintained particularly in the high season.
- Alternatives to loose gravel can be sourced for paths and routes into the natural landscape. Access to rougher / undulating or less firm terrain can be provided over short distances with different types of board walk or rollable tactile mats (as shown in adjoining fig.).
- Boardwalks can be covered in wire mesh to reduce slipping in damp areas.
- If carpets or carpet tiles are used on a floor surface, they should be securely attached to it. Long, thick rugs should not be laid in areas likely to be frequented by persons with mobility and sight impairments.
- Low-level bollards are hazardous and should be avoided.
- Bollards if provided should have a colour or luminance contrast feature and should have clear distance of 1200mm between them (refer to adjoining detail).

**Signage**

- Accessible directional, multilingual and tactile signage to be provided as per standards.
- Signage for way finding and orientation should be provided at key junctions to clearly indicate directions. Visual, audio and tactile information should be provided as appropriate (refer to section 14 on signage or details).

**Tactile surfaces**

- All tactile guiding paths should continue from one area to the next along the travel route to maintain the continuity. If there is a change in the use of way finding tool, adequate notice should be provided to alert users to the change.
The tactile guiding tiles/surface indicator (TGSI) should be robust, corrosion resistant, wear resistant, having high contrast value and should also be discernible by sense of sound.

Directional, location and hazard warning tactile surfaces should be correctly laid to convey correct information (refer to details given in section 2).

Following two types of tactile guiding surface indicator (TGSI) should be provided to guide and alert PwVI (refer to details given in section 2).

**Directional tile**: It consists of raised parallel bars to guide people along the direction of a tactile path.

**Warning tile**: It consists of raised truncated domes arranged in a square grid parallel to the sides of the tile to alert people of potential hazards such as top and bottom of stairs, door openings and at pedestrian crossings.

Places to install tactile tiles:
- In front of an area where traffic is present.
- In front of an entrance/exit.
- To and from a staircase or multi-level crossing facility.
- In open space to orient PwVI.
- Tactile warning tiles should be provided where there is a change in levels, e.g., at top and bottom of stairways and ramps.
- Tactile surfaces should be laid at a distance from wall surfaces to facilitate left handed or right handed persons with guiding sticks.
- Tactile surfaces should preferably be apart from pathways for wheelchair users to avoid conflict between the two user groups.
- Avoid any door swings into the tactile surfaces.
- Contrasting colors can make the tactile surface noticeable but care must be taken while choosing colors to avoid them from becoming visually obtrusive.

**Rollable tactile flooring mats** (heavy duty) are recommended as a tactile floor system particularly on historical flooring, with clear visual and tactile contrast markings to warn and guide people in public places and to help increase individual mobility and safety (refer to details given in section 8).

**Waste bins**
- Waste bins should be provided at strategic locations and at maximum 30m distance in between.
- Waste bins should be accessible to all users and be permanently located to one side of any path or walkway so as not to encroach on walkway width.
- Waste receptacles should be securely mounted on firm level pads.
- Waste bins should be clearly identified by suitable signs and colors, while blending with the ambience of the heritage site.
- Where lids are provided on waste receptacles, they should be easy to operate with one hand and have big openings mounted no higher than 1065 mm from grade.
**Trees and plantings**
- Tree branches and plantings at sides of pathways should be trimmed to avoid obstructing the users.
- Ends of tree stakes should be properly trimmed to avoid hurting people.
- Plants and flowers with fragrance and bright colours are preferable as sensory stimulation to visitors. Flower beds can be preferably tilted for enjoyment by children and wheelchair users.
- Trees in between pathways to be provided with a grating cover and guardrails.

**Resting Point And Street Lighting**
- There can be benches and chairs with arms and backs at rest points along paths and routes. Where provided, they should be set back from the paths and routes so there is no obstruction of/to other users.
- The areas adjacent to rest points should be wide, flat, and smooth to facilitate ease of movement for wheelchair users.
- Shelters, appropriate to the site’s character, can be provided at rest points.
- A side space should be provided to benches to allow the companion to sit next to a wheelchair user. A clear space should be provided to allow a wheelchair user to access and turn at the rest place.
- Lighting posts or columns should be conspicuously marked at eye-level.

**Bench design**
- The fixed bench shall be free of hazardous sharp edges or protruding hardware.
- Accessible benches shall have seats that are 500-600mm in depth 1200mm minimum in length.
- The height of the front edge of the seating surface should be between 400 – 450mm above the adjacent grade or floor space.
- A back support should be provided along the full length of the accessible bench. Then back support shall extend from a point 50mm maximum above the bench to 450mm minimum above the bench.

**Shoe Racks**
- To be provided in an identifiable and accessible location near the entrance steps, not obstructing the circulation path, with a convenient height and standard signage.
GUIDELINES FOR INTERNAL CIRCULATION

People with disabilities should be able to circulate within a heritage building in a manner consistent with the general public where the historical, structural and natural integrity of the site allows. To create an accessible built environment, the connection spaces between the various buildings and facilities must also be accessible in order to form a complete travel chain. The travel chain should be continuous such that all users, regardless of their capabilities, can reach their final destination as well as the various points along the way without undue difficulty.

- Provision of continuous step free path for PWD’s to reach to all the internal spaces of important heritage attractions in the site that can be made accessible without compromising with their heritage value.
- All inaccessible but important spaces to be identified and a virtual representation / virtual tour of the same to be provided as an alternative experience. A multi media interpretation centre / information panel to be created at a strategic location to ensure physical and experiential continuity for the user.(refer to section 15 for details)
- All accessible walkways inside the buildings should be firm and slip-resistant.
- Provision of ramp at level differences wherever feasible. Provision of Wheelchair cum Dolis at entrances where ramps cannot be provided.
- Linkages and transitional spaces should be barrier free and should not form obstacles to users.
- Provide a tactile guiding path in the floor leading to all the accessible areas.
- If a pathway leads to a spatial change or a change in level, directional cues such as signage, handrails, or other continuous elements etc. should be provided at strategic locations to maintain travel continuity for the user. This is particular important for visually impaired users to continue along the travel path to reach their destination.
- Slopes / beveled edges with tactile warning and color contrast to be provided to bridge level differences less than 150mm along walkways.
- For accessible vertical circulation / negotiating level differences of more than 1m in the building for PWD’s, hydraulic / platform/ stair lift to be provided if possible without affecting the historic integrity of the site.
GUIDELINES FOR INTERNAL CIRCULATION

- Texture, color and pattern of the change in floor surfaces, as well as the lighting effect on the floor surface, should not be too sudden as to cause hazard or discomfort to users. Junction between the different floor surfaces should be leveled; any gaps or expansion joints between different materials should not exceed 13mm wide.
- If carpets or carpet tiles are used on a floor surface, they should be securely attached to it. Long, thick rugs should not be laid in areas likely to be frequented by persons with mobility and sight impairments.

Tactile surfaces
- Continuous tactile guide paths should be provided to all accessible internal areas, facilities, information counters, Braille maps/directories and lifts.
- Where tactile guide paths are provided, they should continue from one area to the next along the travel route to maintain the continuity. If there is a change in the use of way finding tool, adequate notice should be provided to alert users to such change.
- Tactile warning strips in contrasting colors should be provided where there is a change in levels, e.g., at top and bottom of stairways and ramps.
- Directional, positional, location and hazard warning tactile surfaces should be correctly laid to convey correct information.
- Tactile surfaces should be laid at a distance from wall surfaces to facilitate left handed or right handed persons with guiding sticks.
- Avoid any door swings into the tactile surfaces.
- Tactile surfaces should preferably be segregated from pathways for wheelchair users to avoid conflict between the two user groups.
- Contrasting colors can make the tactile surface noticeable.
- Sufficient side space and headroom should be provided for the wheelchair user to get on and off the car, and for picking up and setting down the wheelchair.

- Rollable flooring mats with tactile guidance surface indicator (heavy duty) are recommended as a self guiding tactile floor system particularly on historical flooring, with clear visual and tactile contrast markings to warn and guide people in public places and to help increase individual mobility and safety.
GUIDELINES FOR INTERNAL CIRCULATION

**Resting Points and Waste bins** (refer to section 4 for details)
- There can be benches and chairs with arms and backs at rest points and waste bins along paths and routes at maximum distance of 30m in between.
- Resting benches and waste bins should be positioned so as not to obstruct the passageways.
- Tactile guiding path must lead to the resting benches wherever provided.
- A side space should be provided to benches to allow the companion to sit next to a wheelchair user. A clear space should be provided to allow a wheelchair user to access and turn at the rest place.
- Waste bins should be of a big opening for easy dumping of litter with one hand.

**Signage**
- Signage for way finding and orientation should be provided at key junctions to clearly indicate directions. Visual, audio and tactile information should be provided as appropriate.
- Accessible directional, multilingual and tactile signage to be provided as per standards. (refer to section 14 for details).

**Color Contrast**
- Contrast color should be provided between:
  - Columns in circulation area,
  - Critical surfaces (walls, ceiling and floor),
  - Signage and background sign frame / wall,
  - Step edges and risers / treads on steps,
  - Handrails and background walls,
  - Doors and surrounding walls,
  - switches / sockets and background wall,
  - Toilet fixtures, accessories and background walls.
GUIDELINES FOR TOILET FACILITIES

RECOMMENDATIONS

• Accessible toilet blocks near the main entrance and exit of the heritage site to be improved as per guidelines given below.
• A full range of user-friendly provisions should be made to reach the toilet blocks including tactile guide path, floor plan with illustrations in written text and Braille, and large information signs.
• Accessible toilets should have the universally adopted symbol for wheelchair access displayed outside.
• Improvement to existing General toilets.
• Location of general / accessible toilets to be marked on all tactile pictographic maps.
• Unisex accessible toilets are preferable for the caretaker to assist the wheelchair user. Recommended clear floor space -2000mm x 2200mm minimum.
• Where provision of independent unisex accessible toilet blocks is not feasible, Accessible toilet cubicles should be provided within the existing ladies and gents toilets by reconfiguring internal layout to achieve an ideal size of 2000mm x 2200mm. An example of desirable layout is shown in the following pages.
• Drinking water fountains of two mounting heights should be provided and preferably located near the toilet blocks but away from the toilet entrances.(refer to section 10 for details)
• A step free, levelled tactile guiding path to be provided in the floor from corridors / walkways leading to the accessible toilet blocks.
• The main entrance door / opening to the toilet and internal cubicles should be minimum 900mm in width.
• There should be no level differences inside all toilet blocks. Existing level differences to be removed or beveled to facilitate easy wheelchair movement.
• Facilities should have wide and level layouts with good colour contrasts providing enough space for wheelchairs and other mobility aids.
GUIDELINES FOR TOILET FACILITIES

- Improvements to the existing toilets, including changing of damaged plumbing, sanitary, electrical and water supply fittings and appliances

**In the Accessible Toilet –**
- There should be signage using the international symbol of accessibility to identify the accessible toilets. Signage should be multi-lingual and tactile.
- Floor surface material must be non-slippery but should not trap dirt or water.
- Effective floor drainage should be provided to maintain a dry floor surface.
- Floor drain covers should be fixed flat on the floor surface without any projections to prevent people from tripping over.

**WC and urinals**
- WC or toilet compartments should have enough floor space and 900 mm wide step-free doors for wheelchair users to enter and exit.
- The WC should be preferably wall hung and in a position as to permit easy approach by wheelchair users.
- The seat of the WC should be at the correct height for the wheelchair users.
- WC compartments should have support rails / grab bars at a position and height suitable for wheelchair users and other persons with physical disabilities. Upward-folding grab bars are recommended to allow lateral transfer from the wheelchair.
- Water closet (WC) should be mounted at a height between 450mm – 480mm.
- There should be 900mm of clear transfer space next to the WC.
- The WC should be installed in a corner with centerline of the WC at a distance of 450mm to 500mm from the adjacent wall.
- Flushing equipment should be easy to operate and lever type.
- A horizontal grab bar should be installed on the adjacent wall, at a height of 200mm from the WC seat.
- The grab bars should be installed near WC at the transfer side and for at least one urinal, at a height between 750 – 850 mm. Grab bars should be non-slippery.
- Platforms / level difference / steps near urinals to be removed.
- At-least 1 urinal height to be lowered to 650mm keeping children in mind.
- A switch near the WC (one at 300mm and the other at 900mm from the floor level), which activates an emergency audio alarm (at the attendants desk, etc.)
A toilet paper dispenser should be so installed as to be easily used by a person with physical impairments sitting on the toilet.

Fittings, such as soap dispenser, electric hand dryer and mirror, should be low enough for a wheelchair user to use comfortably.

The accessible Toilet cubicle / WC doors should have double swing (should open outside also) and lever handles.

Locks to toilet doors or cubicle should be a type that can be opened from outside in case of emergency. Lock lever should be of the type that can be easily opened by person with weak grip power.

Accessible directional, multilingual and tactile signage to be provided as per standards.

**Wash Basin And Mirrors**

- The accessible washbasin should be mounted at a height between 750–850mm. The washbasin should be installed at a distance of at least 400mm from the side wall. There should be clear knee space of at least 650-750mm height x 750mm width x 200mm depth under the wash basin.
- At-least 1 basin height to be lowered to 650mm keeping children in mind.
- The wash basin should have lever type taps. Basin taps should be placed at the centre of the basin.
- Mirror to be provided and installed at a height of 900 mm.
- Mirror inside accessible toilet should be slightly tilted towards the floor for use by the wheelchair users.

- Basins can be provided with counters or a flat surface for placing things.
- U-shaped folding grab bars are proposed on the both side of the wash basins.

**Provisions for Visually Impaired Persons In General Toilets**

- A braille map at entrance wall to the toilet is useful to tell the location of basins, cubicles, urinals, hand.
- Guidance should be provided to lead the visually impaired persons to get out of the toilet.
- At least one urinal can be floor-mounted to facilitate tapping by the visually impaired person’s foot or guiding stick.
GUIDELINES FOR TOILET FACILITIES

Provisions for Persons with Physical Disability in General Toilets
• At least one western WC to be provided in every general toilet block.
• Grab bars should be provided to one urinal, one basin and inside one toilet cubicle.
• At least one basin and mirror and one urinal should be mounted at a lower level.

Provisions For Baby Care And Children in General Toilets
• Baby care facilities should also be provided within the toilet blocks.
• At least one basin and mirror and one urinal should be mounted at a lower level for children as shown in adjoining fig.
• One water closet is preferably to be with a lower seat height for children.
• A basin, a small counter top, hooks or notches for holding handbags, and a waste bin should be within arm's reach from the nappy-changing mattress.
• Breastfeeding rooms should also be provided near but segregated from the toilets.

Grab bars
• A grab bar should be of preferably in SS, 32 mm diameter/width and strength such that it may easily be grabbed and used as a support.
• Grab bars should be in a color that contrasts with the surrounding area.
• Grab bars should be installed to resist a force of at least 1.3 KN (130 KG) applied vertically or horizontally.

In Heritage sites with large expanse, compact models of self sufficient, self cleaning, unisex Accessible toilet Cubicles should be provided at strategic locations within the site. An example of such a model is shown in adjoining fig.
Spout Location and Control:

- Drinking fountains should have spouts positioned at the front of the unit. The spout shall direct the water flow in a path almost parallel to the front of the unit.
- For wheelchair users, spouts not higher than 800mm from the floor is recommended.
- Best practice is to provide a clear floor space at least 750mm by 1200mm for wheelchair users. Knee space and toe space should be provided underneath the fountain. A toe space of minimum 230mm from the floor and knee space of 700mm from the floor to the underside of fountain are required.
- Controls should be front mounted or side mounted near the front edge and easily operated with one hand.
- Flow of water should be at least 100mm high so as to allow the insertion of a cup or glass under the flow of water.
- For drinking fountain having a round or oval bowl, the spout must be positioned so the flow of water is within 75mm of the front edge of the fountain.
GUIDELINES FOR PUBLICATION COUNTER

RECOMMENDATIONS

• Publication counters should be at the suggested location in the Visitor’s Facilitation Centre and in the museum. Existing Publication counter to be retained and modified as per standards given below.

• Tactile guide path should lead from the entrance to the publication counter, and from the counter to major circulation route.

• The accessible approach pathway / route leading to the service counter should be without any platforms or steps or level differences. If level differences / steps to access the service counter are unavoidable, ramps/ slopes / beveled edges with tactile warning and color contrast should be provided as per standards.

• High and low counters should be provided. Counters should be provided with an upper writing surface for users in the standing position at 900mm high as well as a lower counter top with a maximum height of 750mm and knee space should be provided for wheelchair users. If feasible, the length of the lower counter top is recommended to be 900mm although the minimum requirement is 750mm.

• Space in front of the publication counter should be provided for queuing and waiting.

• A multi-media information panel to be provided adjoining the publication counter at an accessible height. Information should be presented in tactile graphics, written text and Braille; audio messages activated by large push buttons.

• Accessible directional, multilingual and tactile signage to be provided as per standards.
### I DISPLAY CONTENT

Exhibitions must make exhibit content accessible at multiple intellectual levels and present it through more than one sensory channel.
- Offer a programmatic path for traveling through the exhibition.
- Present information to all the senses.

### II DISPLAY FURNITURE

- Design cases and pedestals so they display objects within viewing distance of people who are short, seated, or standing.
- Design cases and vitrines so they are as shallow as possible, allowing all visitors to see objects up close and from above.
- Design wall-mounted cases so that their lower edges are at or below 685 mm (27 in.) above the floor.
- Long, horizontal cases that have legs only at the four corners (more than 305 mm [12 in.] apart) should be designed so they have a cane-detectable barrier at no higher than 685 mm (27 in.) above the floor.
- Maintain a predictable border on both sides of circulation routes.
- Design cases so they are distinguishable from wall openings.
- Design vitrines and plexiglass barriers so they are easily detectable.
- Seating must be provided in each exhibition. 50% of the seats must be accessible. Single-gallery exhibitions must have seating nearby, in a corridor or in an adjacent gallery space.
- Provide accessible seating in gallery spaces.
- Provide seats that are not tripping hazards or obstacles.
- Provide seating that can be used by people who use wheelchairs as well as by their companions.

### III PUBLIC PROGRAMMING

- Provide seating areas that are accessible to people using wheelchairs.
- Locate spaces for wheelchair users so that they adjoin, but do not block, an accessible route that also serves as a means of egress in an emergency.
- Disperse seating for wheelchair users throughout the space.
- Spaces for wheelchair users can be filled temporarily by removable chairs when not needed by people with disabilities.
- Design areas so that floor surfaces at and around accessible seating areas are level, stable, firm, and slip-resistant.
- If a person enters the wheelchair location from the side, the spaces must be at least 1525 mm (60 in.) long.
- If a person using a wheelchair enters the space from the front or back, the spaces are at least 1220 mm (48 in.) long.
- The width of a space for one wheelchair user is at least 760 mm (30 in.). Space required for two wheelchair users together is at least 1675 mm (66 in.) wide. One such pairing is desirable; however, there is no requirement that spaces for wheelchair users be paired.
- Provide a permanent assistive listening system if the area seats 50 or more people or, if the number is smaller, either a permanent or a portable assistive listening system may be provided.
- Provide assistive listening receivers in number equal to 4% of the total number of seats (but no fewer than two receivers).
- Provide signs indicating the availability of the assistive listening system and the procedure for borrowing receivers. The signs must meet accessibility requirements.
- Design handrails and lighting so that they assist people in finding and following the route into and through a darkened program area.
- Design the space so that seating does not become a tripping or bumping hazard. Spaces
IV MUSEUM DISPLAY ITEMS

A. Items in exhibitions (e.g. artifacts, graphics, props) must be visually accessible to people.
   • Mount small items (to center line) at no higher than 1015 mm (40 in.) above the floor.
   • Design simple backdrops for items.
   • Construct the top of a case at a maximum of 915 mm (36 in.) above the finished floor for items that are mounted flat on a pedestal or
     deck. For larger items, maintain the minimum case height possible.
   • Construct exhibition barriers (e.g. railings) at a maximum height of 915 mm
   • Create color contrast between the items and the background, particularly when the items are displayed in lower light levels.
   • Place small items in the front portion of a case, with larger items behind.
   • Avoid shadows falling directly on items.
   • When not prohibited from doing so by conservation requirements, provide at least 100 lux of light on an object.

   If displaying sensitive materials that require a maximum of 50 lux, then:
     • Position the items to allow the visitor to approach them as closely as possible
     • light the environment with even light (i.e. do not spotlight the object and provide low-level ambient light in the gallery)
     • provide the highest contrasting background to make objects stand out in the case
     • present the objects in an alternate format, such as a reproduction or a brochure, that can be viewed in a brighter location
     • Provide photographs within an exhibition space to give accessibility to objects that require a high mounting position and/or low
       lighting.
     • When objects are being selected for inclusion in an exhibition, consider those that may be touched or reproduced for tactile
       examination.
     • Select tactile objects so that they provide a coherent explanation of the exhibition topic
     • Whenever possible allow objects to be touched by all visitors, not just those who have low vision or are blind.
     • Include touchable objects, such as models and reproductions, within the actual exhibition space.
     • Provide audio description for those objects that cannot be touched or that offer little information through touch.
     • Items must not be placed in locations such that they create a hazard to visitors.
     • Mount objects so that they are not tripping hazards.
     • Ensure that platforms for objects are not tripping hazards.
V LABEL DESIGN AND TEXT

A. Essential information in exhibition label text must be accessible to people who have difficulty reading English.
  • Avoid the use of colloquial and complex English, jargon, and technical language in text panels unless such language is explained within the text or in supplementary handouts.
  • Use the active voice in text panels; limit sentence label length.
  • Use a line length for text that facilitates reading.
  • Provide a short overview paragraph at the beginning of introductory and thematic label panels.
  • Carefully link sentences and paragraphs.
  • Provide line drawings, silhouettes, and photographs that complement label text to aid comprehension for those with reading difficulties.

B. Label design must present main exhibition copy legibly for all visitors. Such exhibition label information must be available within the galleries in alternative formats (e.g. Braille, audio) for people who cannot read print.
  • Use typefaces that are readily legible.
  • Do not set text in all caps.
  • Avoid use of script and italic type for essential information.
  • Provide alternative forms of labels (e.g. Braille, audio, large print) within the exhibition space.
  • Select type size appropriate to the viewing distance.
  • Provide sufficient leading.
  • Provide consistent letter spacing and word spacing. Justify the left margin and keep a ragged right margin.
  • Provide high contrast between text and background.
  • Print only on a solid background.
  • Diminish glare on all label surfaces.
  • Avoid distorting type.
  • Mount labels so that visitors can get very close to read them.
  • Keep in mind the natural line of sight when mounting labels.
  • Define labels with color or a raised surface.
  • Mount wall labels at a height that is comfortable for both those seated and standing.
  • Mount label rails so that the top of the label is at approximately 1015 mm (40 in.) above the floor.
  • Locate labels in consistent locations throughout an exhibition.
  • Provide sufficient light to read labels.
  • Avoid shadows on labels.
VI AUDIOVISUALS AND INTERACTIVES

- Provide all audio narration in a print format.
- For non-narrated audio programs, provide visitor-operated volume controls. People who are hard of hearing can hear music at above-average volume. Interactives and audiovisuals that do not have soundtracks must carry labels stating that fact to assure deaf and hard-of-hearing people that they are not missing information. Audiovisual programs and computer interactives that present information with images and print must be audio described.

**Present written instructions in**

1. 70% contrast
2. sans serif or simple serif type
3. type that has a minimum 4.5 mm x-height
4. lighting at a minimum of 100 lux
- Present all instructions in both an audio and printed format.
- Interactives must be within reach range of people who are short or those who use wheelchairs as well as of those who are standing.
- Lower the reach height for controls that must be located over obstacles.
- Eliminate reflection and glare for those who are seated or short as well as for those who are standing.
- Provide tactile characters and Braille on or directly below the controls to indicate the function of the controls unless they form a standard computer keyboard (i.e. in QWERTY format).
- Provide touch-sensitive areas in predictable locations (e.g. on all of the four corners of the screen).
- Provide touch-sensitive areas that are at least 75 mm in diameter.
- For activities that require speaking into a specific area, provide equipment that is adjustable for height.
- For activities that require listening at a specific area, provide equipment that is adjustable for height.
- For activities that require viewing in a specific area, provide equipment that is adjustable for height.
- Prevent sound from overlapping between interactive areas.
- Interactive elements must be operable by people who have limited muscle and hand control and by those who have only one hand. For controls and operating mechanisms to be accessible, these devices must

1. be fully operable with only one hand
2. require no tight grasping, pinching, or twisting of the wrist (e.g. lever handles)
3. require no more than 5 lbs. of force to operate
4. be at least 75 mm in their smallest dimension
5. be covered with non-slip surfaces (e.g. rubber or ridges on a trackball)
- Provide a place to rest one's hand while using the controls.
- F. Use of interactives must be from a location accessible to people using wheelchairs or other assistive devices (e.g. canes, crutches); interactives must not be blocked by furniture or other obstacles.
- Locate the interactive so that everyone can get to it.
VII COLOR

• Choose colors so that floors are visually separated from the walls and furniture.
• Select light gallery colors if object conservation requires low lighting.
• Design well-lighted spaces with limited imagery and few objects in several places within an exhibition.
• Avoid patterned carpets and floor tiles on uneven surfaces and in low-lit areas.
• Select background colors that contrast with the items in a case.
• Select label color combinations that provide sufficient contrast between print and background.

VIII EMERGENCY EGRESS

• Provide areas of rescue assistance if the number of accessible exits is insufficient.
• Plan for emergency egress from areas where lifts have been used for access.
• Provide signs with the international symbol of access at accessible emergency exits. Inaccessible exits are required to provide directions to those that are accessible or to areas of rescue assistance.
• Make available at key points within the museum an exhibition floorplan that meets accessibility requirements for printed materials.

IX LIGHTING

• Limit changes in light level within a gallery and between galleries.
• Provide sufficient light on the circulation route.
• Avoid creating pools of light and shadow that create false impressions of depth and height on floor surfaces.
• Provide sufficient light on the objects.
• There must be sufficient light on labels to make them readable by all visitors.
• Avoid shadows on label text or objects.
• Provide even, high-quality light in selected areas of galleries.
GUIDELINES FOR TOUCH TOUR

A touch tour is an opportunity for tactile exploration. Information about the times and meeting places for touch tours should be made available in advance to the blind and partially sighted visitors. This can be done through a seasonal CD offering information about future audio described productions in your venue. In addition, the information about the dates and times of audio described performances and details of the touch tour should be available on printed material such as flyers and brochures as well as the theatre website.

The meeting place for the touch tour should be under cover and accessible to the audience at least fifteen minutes before the start of the tour. The blind and partially sighted audience members will appreciate having access to toilets.

There should be enough ushers to guide patrons safely, and these people should be trained in visual awareness and guiding skills.

TIPS FOR GIVING A GUIDED TOUCH TOUR

1. When welcoming and meeting a group, in addition to your standard introduction you should give a verbal description of the space you are in to help orient people.
2. As you move from one gallery space to another, give brief verbal descriptions of the spaces you pass through, even if they are not on the tour. A few words are enough and will give visitors a sense of the scope of the exhibition or museum.
3. Limit guided touch tours to 3-5 objects.
4. Keep the tour group small, 3-6 people at most. While one or two people are exploring by touch, give background verbally to others waiting.
5. While visitors explore a work, encourage dialogue and responses.
5. While visitors explore a work, encourage dialogue and responses.
6. When choosing objects for the tour, be aware of the pedestal height and the object scale relative to the viewer. It’s best if visitors can reach all parts of the object. If not provide tactile diagrams.
7. In a guided touch tour, like a verbal-description tour, you must allow additional time for visitors to process tactile experiences.

Any interactive program is appropriate for tactile experiences. Docents and lecturers can be trained to include a tactile-friendly work on their public tours. Keep in mind that introducing a tactile element requires more time for your tour or program.

tactile diagrams can complement a touch tour, for example when a sculpture is too large for a visitor to access completely through touch. In the galleries, tactile diagrams of paintings can focus and enrich verbal description.
GUIDELINES FOR SOUND AND LIGHT SHOW

RECOMMENDATIONS

- Addition of light and sound show at strategic location with accessible infrastructure.
- Accessible directional signage to be provided leading to the sound and light show.
- An accessible pathway of 1500mm width (min) with tactile guiding path to be provided leading to the sound and light show and should continue around the seating area thus giving access to each row.
- Space of 800mm x 1300mm to be reserved for a wheelchair user either in the bottom row or the top tier. If at the top, a ramp to be provided as per standards to reach the space.
- The ticket counter of the sound and light show to be made accessible as per standards.

EXAMPLE OF RESERVED WAITING SPACE IN THE TOP AND BOTTOM TIERS AND A RAMP TO ACCESS THE SAME

SPACE REQUIRED FOR WHEELCHAIR PARKING

EXAMPLE OF A PLATFORM LIFT TO REACH THE STAGE OR THE TOP TIER

EXAMPLE OF RESERVED WAITING SPACE
GUIDELINES FOR SIGNAGE/WAYFINDING
Wayfinding features should be made accessible and be designed in a manner that complements the character of the heritage site.

RECOMMENDATIONS
• Providing signage boards to all the monuments and structures inside the protected area matching the ambience of the monument.
• Providing informatory boards and directional signage boards at all important intersections on approach roads, highways, Bus station, Railway station, airport (if applicable) and other important locations.
• Provision of Cultural Information board (CIB) at all heritage structures, Directional Information board (DIB) on all approach pathways and Protection Information board (PIB) near all hazards/barriers.
• Provision of accessible directional, information signage, tactile scaled model and floor plan adjoining the tomb and each archaeological structure in the site.
• Signs should be located where they are clearly visible.
• External signs should be placed in logical and visually unobstructed locations, while ensuring that growth of adjacent foliage will not interfere with visibility.
• Signage should be in contrasting colours in distinct relief to allow visually impaired persons to obtain the information by touch.
• Simple symbols and contrasting colours which are universally recognized should be used, e.g. green for safety or go, yellow or amber for risk or caution, and red for danger.
• Efforts should be made to locate signs where the reader does not obstruct circulation paths.
• Pictorial signs should be located at major junctions throughout the heritage site for easy way finding.
• Prominent and uniform visible signage using the international symbol of accessibility, identifying accessible entrance and exit, reserved car parking, presence of toilets for persons with disabilities, drinking water fountain, stairs, lifts and availability of special services to be provided at all strategic locations.
• Directional signs indicating the location of accessible facilities like drinking water fountain, toilets and emergency exits to be provided.

- The signage size to comply with not less than 60 mm for doors, 110 mm for corridors and 200 mm for external use.
• All visual signage in the building to be uniform and with high color contrast. Reflection can be avoided by using matt surfaces.

• All signage should be multi lingual, provided in English, Hindi and local language and provided with Braille and Tactile supplements.

**Wayfinding And Signage Strategy**

• Wayfinding and signage strategies should include the following:-
  I. Information about services and facilities.
  II. Direction to facilities and functional spaces, service counters, exits and key areas.
  III. Identification including building/room signs and room numbers, facilities and equipment, stair signs and floor numbers.
  IV. Safety notice such as warnings, prohibitions.
  V. Hazards, fire exits and refuges.

• Words, pictorial signs and symbols should be used consistently within the same site and building.

• Such facility should be identified by international symbols of accessibility.

• Wayfinding information can be provided in a range of alternative formats. These include, for example, large print maps, tactile directories with audio-described directions or raised letters on signs.

• Wayfinding signage should use large sans serif text set in good visual contrast to a matt background.

• Wayfinding signage should use simple language, with upper and lower case letters and should be supported by internationally recognised pictograms or symbols.

• Inaccessible routes shall have directional signage to indicate the route to the nearest accessible entrance.

• Where illumination of a sign is needed, the light source should be shielded from the viewer to prevent glare.

---

**TYPICAL SCHEDULE OF COLOUR CONTRAST FOR SIGNAGES**

<table>
<thead>
<tr>
<th>Background</th>
<th>Sign Board</th>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Brick or Dark Stone</td>
<td>White</td>
<td>Black, dark green or dark blue</td>
</tr>
<tr>
<td>Light brick or light stone</td>
<td>Black/dark</td>
<td>White or Yellow</td>
</tr>
<tr>
<td>Whitewashed walls</td>
<td>Black/Dark</td>
<td>White/Yellow</td>
</tr>
<tr>
<td>Green Vegetation</td>
<td>White</td>
<td>Black, dark green or dark blue</td>
</tr>
<tr>
<td>Back-lit sign</td>
<td>Black</td>
<td>White or yellow</td>
</tr>
</tbody>
</table>

**SIGNAGE COLOURS AGAINST DIFFERENT MATERIALS**

**BRAILLE IMPRINT LOCATION ON SIGNAGES**
GUIDELINES FOR SIGNAGE/WAYFINDING

Signage Disposition
- Signage should be adequately provided at eye catching locations at an appropriate height and with an appropriate size.
- All Braille and tactile signage to be placed between the height of 900 mm and 1500mm, with ideal location at 1050 mm above the finished floor level, located alongside the door at the latch side.
- Directional signage should be provided at wayfinding decision points.

Maps and Directories
- Adequate maps and directories, with graphical and text display, braille and audio types, at both entrances and inside spaces can help users to recognize their present position and assist in orientation and wayfinding.
- Maps can be of a series of scales to convey different information.
- Accessible routes to major functional areas for the disabled user groups should be indicated, including positions for dropped kerbs, ramps, and lifts.

Graphical Details
- Contrasting colors should be used for the signs against its background.
- Pictorial signs should be provided in addition to words and letters.
- Words and letters should be of adequate size, height, boldness and suitable fonts for legibility.
- Graphics and wordings should be informative and easy to comprehend.
- Upper and lower case lettering are considered more legible than capitals alone.
- Text should be kept short and simple and use recognised symbols for standard features.
GUIDELINES FOR SIGNAGE/WAYFINDING

Directory and Floor Plan
- Directories and floor plans, where provided, should be located at the main entrance to a building or in a designated place on the floor of entry, and at other strategic locations on different floors and levels. Although they should be located at a prominent position, they should not obstruct the general pedestrian flow.
- Bottom level of directories should be at a maximum height of 900mm from floor level. They may be free standing or wall mounted and with ‘You are here’ indicated. For free standing ones, they should ideally be slightly inclined from the horizontal, in line with the building’s orientation.

Visual Directory and Map:
- The directory should show the layout plans in simplified form indicating individual rooms, entrances and circulation areas, toilets and other accommodation.
- Floor levels should be represented in graphical form and reflected in the directory. For good legibility, the information surface of the directory should be faced with non-reflective and glare resistant material.
- Characters and symbols should contrast with their background.

Tactile Map:
- Tactile maps should be considered at major locations showing directions to the building. In buildings where finding locations independently on a routine basis is a necessity, tactile maps or prerecorded instructions containing information on locations of main entrances, toilets and other major facilities can be very helpful to visually impaired people.

SIZE OF SIGNAGE

<table>
<thead>
<tr>
<th>Viewing Distance</th>
<th>Size of signage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 7 meters</td>
<td>60 mm x 60 mm</td>
</tr>
<tr>
<td>7 meters – 8 meters</td>
<td>100 mm x 100 mm</td>
</tr>
<tr>
<td>Exceeding 8 meters</td>
<td>200 mm x 200 mm to 450 mm x 450 mm</td>
</tr>
</tbody>
</table>

SIZE OF LETTERS OF SIGNAGE

<table>
<thead>
<tr>
<th>Viewing Distance</th>
<th>Height of letters</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 3 meters</td>
<td>15 mm</td>
</tr>
<tr>
<td>6 meters</td>
<td>20 mm</td>
</tr>
<tr>
<td>8 meters</td>
<td>25 mm</td>
</tr>
<tr>
<td>12 meters</td>
<td>40 mm</td>
</tr>
<tr>
<td>15 meters</td>
<td>50 mm</td>
</tr>
<tr>
<td>25 meters</td>
<td>80 mm</td>
</tr>
<tr>
<td>35 meters</td>
<td>100 mm</td>
</tr>
<tr>
<td>40 meters</td>
<td>130 mm</td>
</tr>
<tr>
<td>50 meters</td>
<td>150 mm</td>
</tr>
</tbody>
</table>

SIGNAGE AT SERVICE COUNTERS
GUIDELINES FOR SIGNAGE/WAYFINDING

TACTILE SIGNS

RECOMMENDED FONTS

San serif fonts

ABCD

Decorative fonts

ABCD

Italic fonts

ABCD

Serif fonts

ABCD

HEIGHTS AND LOCATION OF SIGNAGE

900-1600mm for braille

HEADING 2

LOCATION OF SIGNAGE IN CIRCULATION SPACES

Pictogram Background Field Minimum 6" Height

Raised and Brailled Characters and Pictograms

WOMEN

UNISEX

MEN

Well-mounted sign. Locate on latch-side of door, clear of door swing.

Lettering raised 1/32".

Lettering Height 5/8" min to 2" max.

Corresponding Grade II Braille

Door-mounted Sign

ID SYMBOLS FOR SANITARY FACILITIES

DETAILS OF SIGNAGE ON DOORS / TOILET DOORS

VIEWING DISTANCES

Size:

Landscape: 300 x 100mm

Portrait: 200 x 300mm

Viewing distance:

up to 10 meters

Size:

Landscape: 450 x 150mm

Portrait: 350 x 400mm

Viewing distance:

up to 15 meters

Size:

Landscape: 600 x 200mm

Portrait: 400 x 600mm

Viewing distance:

up to 20 meters
GUIDELINES FOR INTERPRETIVE INFORMATION
People with disabilities should have the opportunity to learn about, experience and understand the unique historic, archaeological or natural character and significance of a heritage site from the interpretive information available on site.

RECOMMENDATIONS
• Provision of a sound and light show at the proposed location.
• Provision of an interactive mobile App / website accessible by a QR code should be made available, containing a fully accessible self-guided tour (using ASL/LSQ, audio, images, text and video), interactive map, mood meter, online ticketing and information to help plan and execute a visit for smart phones users.
• The QR code must be printed on the entry ticket to the monument /site, on all tactile pictographic maps and interactive display panels.
• For those who don’t use smart phones, portable audio guides should be designed for visitors particularly with visual impairment incorporating audio description along with the conventional narration. The audio guide should include the voices of the heritage site staff and guides who describe each gallery and provide highlights of exhibits and architecture.
• In addition to the above, on site audio-visual presentations should be available in accessible versions and should incorporate health and safety and accessibility information.
• On site interpretation resources should be integrated throughout the journey sequence and located where they are most accessible. It must be ensured the continuous tactile guiding path in the site also leads to all the interpretive panels / resources. (refer to adjoining fig.)
• On site interpretation resources should be multi-faceted and provide opportunities for sensory interaction.
• Alternate formats for interpretive resources / panel should be readily available. The type of alternate format is dependent upon the type of exhibit and the preferred format of the requestor. Every attempt should be made to provide the type of alternate format requested.
• Alternate formats include but are not limited to: braille, large print format (minimum 18 point sans serif), transcript, digital or web format, touchable objects, audio description of visual content, captioning, etc.

RECOMMENDED QR CODE ON TICKETS AND DISPLAYS

TACTILE GUIDING PATH TO TACTILE MAP

AUDIO GUIDES

Braille and tactile floor plan (installed on the wall or on a stand)

Tactile warning tiles/block with raised dots of nominal 23mm diameter at base

Tactile directional tiles / blocks with parallel raised bars
GUIDELINES FOR INTERPRETIVE RESOURCES

- Interpretive panels should be at an appropriate angle and height, have the correct script and should be designed with the necessary contrast between text and background.
- Interpretive resources should include signs, tactile models, sculptures, and interactive displays that can be approached and touched. Such provisions are particularly useful to visually impaired users in formulating a mental map of their surroundings.
- Table-top interpretive panels / exhibits (such as relief maps) featuring interactive components and/or controls to manipulate shall include knee and toe clearance as per the requirements for the tables and counters. Controls must be within reach ranges and should be accessible.
- Where the historical, architectural or natural heritage of the site allows, there should be a good visual contrast between backgrounds and any interpretive resources attached to them or placed in front of them.
- Overall information about the heritage site should be preferably presented on a large directory mounted on a tilted plane near the accessible entrance / ticket counter of the site. The multi-media directory should have large colored map and picture plates, audio devices activated by large buttons, as well as information in large text and Braille. The directory should be designed to be accessible to all visitors.
- Where access is restricted or impossible to achieve, a virtual representation or virtual tour of the heritage site should be provided.
- Touch screen technology is not accessible to PWVI, hence should be avoided.
- Some staff and guides members and all guides should be trained in the use of Indian Sign Language interpretation for speech and hearing impaired.
GUIDELINES FOR INTERPRETIVE INFORMATION

RECOMMENDED DETAILS FOR INTERACTIVE DISPLAYS

A. Vitrines (Display Cabinet Or Case)
   1. Vitrines should permit up close viewing by people who are seated or standing based on a top down or eye level view.
      a. Top-down view: items meant to be looked down upon shall be mounted not higher than 750mm from the floor. Case cover should be kept low enough to the items to permit close inspection. If an item is too large to be looked down upon, consider mounting at an eye-level view.
      b. Eye-level view: items meant to be viewed near eye-level, where the case is free standing or recessed into the wall, shall be mounted no higher than 1000mm from the floor. Case cover may be as tall as necessary.
   2. Consider constructing vitrines at an angle to increase access for all audiences.

B. Audiovisual
   • Exhibits with audiovisual equipment, including touch screens should be selected / design appropriately based on universal design principles. It is recommended to refer to and comply with the detail guidelines outlined by California State Parks Accessibility Guidelines (2015 edition) section 3 – audiovisual programs for the same.
   • Panels with text and/or graphics that may be associated with the audiovisual program shall meet the guidelines outlined in parts II and III of this section.

C. Tactile Scale Models
   • In order to appeal to a variety of senses, tactile and hands on exhibits may be better teaching tools that reach broader audiences than purely graphical exhibits and should be considered whenever possible.
   • Provide models, either life-size or to scale, of rare or fragile objects that may be touched. If the object is very large, a reproduction of a part of it should be available so that visitors can get an idea of its relative size.
   • Scale models should be provided with sensory features such as tactile surfaces and Braille.

ITEM MOUNTING HEIGHT IN VITRINE, EYE LEVEL VIEW

ITEM MOUNTING HEIGHT IN A VITRINE, TOP DOWN VIEW

MULTI-MEDIA INFORMATION PANEL RECOMMENDED NEAR TICKET COUNTER AND AS A PROVISION FOR ALTERNATIVE EXPERIENCE OF INACCESSIBLE AREAS IN THE SITE

TACTILE PICTOGRAPHIC MAP AND INFORMATION FLYER STANDS RECOMMENDED AT SITE ENTRANCE
GUIDELINES FOR INTERPRETIVE INFORMATION

• The maximum size of the scale model must be designed according to the space that the two hands can easily reach together. A comfortable hand position would include an area approximately the size of an A3 sheet, although maps may be bigger or smaller based on the different types of information to be represented. The distance separation between the elements represented, such as the symbols of a map, must be carefully designed. A minimum separation of 3 mm is needed between elements so they can be discriminated with the sense of touch.
• Provide magnifiers for visitors to examine photographs, artifacts and mounted exhibit items.

D. Assistive Listening Devices
• Audio visual presentation, sound & light shows and assembly areas, as well as conference and meeting rooms should provide assistive listening devices for persons with hearing impairments.
• Various types of assistive listening systems are available in the market. They include audio-induction loops, radio frequency systems and infrared transmission devices.
• Induction loops for the hearing impaired should be installed where this does not compromise the historical, architectural or natural heritage of the site.
GUIDELINES FOR EMERGENCY EVACUATION

Heritage sites should have a plan in place, backed up by trained staff and guides, to cater for the safe egress of people with disabilities from the site and to assist them in the event of an emergency departure.

RECOMMENDATIONS

- Emergency evacuation strategies, that include provision for people with disabilities, should be developed for the entire site.
- Emergency evacuation strategies should consider the particular difficulties faced by people with disabilities – on recognition time, response time and movement time.
- There should be a step free or ramped accessible evacuation route minimum 1200mmm wide, identified leading to the exit or the ramp or to the refuge area.
- Where the site covers more than one level, Evacuation Chairs should be provided with staff and guides trained in their correct use.
- There should be sufficient levels of trained people on site to manage an evacuation strategy.
- Emergency exits, access and escape routes should be clearly signposted with directional arrow signs.
- Escape signs should be well lit and have tactile surfaces.
- Emergency exit routes should be on level ground with no obstacles.
- Evacuation plans should be prominently displayed. The plan should be of right size and easy to read.
- The evacuation plans and building maps should be available in tactile Braille formats.
- Sufficient number of fire extinguishers should be provided at the height between 1000mm and 1500mm.
- Emergency alarm both audio (hooter type) and visual (flashing bulb) to be provided at strategic location. Use of vibrator on desk can be made for hearing and speech impaired staff and guides.
- The alerting buttons should be between 600-1200mm from the floor and should have a high contrast with the wall.
- Refuge areas can be provided within protected stair enclosures.
- Directional sound systems can be installed as they can be tailored to identify particular building features such as stairs or emergency exits and indicate the vertical direction to be taken on stairways.
- Discreet and sensitive smoke detection systems, known as aspirating detectors, can be installed as they can dramatically reduce the time to detection, allowing additional time for escape.
GUIDELINES FOR EMERGENCY EVACUATION

EMERGENCY EVACUATION USING EVACUATION CHAIR

RECOMMENDED SIGNAGES ON EVACUATION ROUTES

INTEGRATED DISASTER MANAGEMENT SYSTEMS

HEIGHT & SIGNAGE FOR FIRE EXTINGUISHERS

EVACUATION SIGNAGE

SMOKE DETECTORS

HEAT DETECTORS

CONTROL PANEL

MICROPHONE

PULL STATIONS

LINK TO FIRE DEPARTMENT

INTEGRATED DISASTER MANAGEMENT SYSTEMS
STANDARD SPECIFICATIONS

a) STEPS AND STAIRCASES

RECOMMENDATIONS

• A tactile guiding path to be provided in the floor for navigating till the steps / stairs for PwVI.
• Provide warning tiles in floor 300mm at beginning and end of steps/ stairs, landing also to have row of warning strip.
• Contrast colour edge strips / grooves of minimum 50mm should be provided on nosing of treads.
• Handrails to be provided on both sides of the steps and along entire stretch of stairs and landing.
• Handrails should be in SS, circular in section and 38-50 mm dia.(refer to section 17 c for details)
• In addition to the handrails provided on both sides of the staircases, intermediate handrails should be provided for staircases with a width wider than, say, 3600mm for external staircases or 2400mm for internal staircases. The intermediate handrails should be capable of being used from both sides.
• Only Central handrails can also be provided, and side handrails avoided for stairs and steps of excessive widths.
• It would be of further benefit if the handrail is extended beyond the top and bottom steps.
• When handrails are not continuous, they should return to the wall, floor or post, so that they do not become obtrusions.
• Cordon off the underside of staircases, where the headroom is 2000mm or less from the finished floor level, with a guard rail or design in such a way to stop people from walking underneath that part of the staircase. Generally, people with a guide stick can detect an area of obstruction up to 685mm high from the ground level.
• The use of stair lifts in existing building should be the last option to be considered only if all other means, such as ramps, lifts, alternative routes, lifting platforms and provision of alternative facilities, are not feasible (refer to 17e section).
• Accessible directional, multilingual and tactile signage to be provided as per standards.(refer to section 14). Floor wise key plans are proposed next to steps.
**STANDARD SPECIFICATIONS**

b) RAMPS- Access should be made available for all people to approach, enter or leave a building and to use the facilities independently. A walkway with a gradient not steeper than 1 in 20 or a ramp of gradient not steeper than 1 in 12 would form an accessible route.

**RECOMMENDATIONS**

- A semi permanent, demountable Ramp should be located at all public entrances used by everyone, preferably where there is minimal change in grade and shelter.
- The minimum clear width of a ramp shall be 1200mm. Similar to walkways, width of a ramp should be at least 1500mm for a wheelchair to turn or at least 1800mm to 2000mm for 2 wheelchairs to pass.
- A ramp should be of gentle gradient, with a landing maximum every 9 meters/ 750mm rise.
- The steepest allowable gradient / slope for a ramp is usually 1:12 (8%), but gentler slopes should be used whenever possible to accommodate people with limited strength.
- All ramps should be detailed with raised kerbs on open edges and railings on both sides for wheelchair users and visually impaired individuals.
- Ramp and landing surfaces should be slip-resistant.
- A tactile guiding path in the floor to be provided for navigating till the ramp for PwVI.
- Provide warning tiles in floor 300mm before and after ramp and landings.
- Ensure provision of required clear headroom space at head and foot of ramp.
- Handrails to be provided on both sides and along entire stretch of ramp and landing at 900 mm and 760 mm height.(Refer to handrails section).
- Greater changes in elevation require larger and longer ramps or switchback to meet accessibility scoping provisions and may require an intermediate landing and a steeper slope.
- Ramp landings must be large enough for wheelchair users, usually at least 1500mm x1500mm, and the top landing must be at the level of the door threshold.
b) RAMPS

- Ramps can be faced with a variety of materials, including wood, brick, and stone. Such that its design is compatible with the heritage site.
- Where ramp meets a historic step there can be slight differences in level as a result of uneven wear of the step. It is important to highlight these on the ramp with a contrast colour (as shown in the adjoining fig.).
- Slopes not steeper than 1:20 or ramps not steeper than 1:12 should be used to replace the 150mm step at all entrances/exit to buildings wherever feasible.
- Temporary / folding ramps can be used as a acceptable interim solution to improve accessibility.
- A light-weight portable ramp can be used to overcome a two step threshold, where only occasional wheelchair access is required. This solution requires active management with staff and guides and volunteers trained on the handling and use of the ramp (as shown in the adjoining fig.).
- Accessible directional, multilingual and tactile signage to be provided as per standards.
- Location of ramps to be marked on all tactile pictographic maps.

### MINIMUM SPECIFICATIONS FOR RAMPS

<table>
<thead>
<tr>
<th>Level difference</th>
<th>Minimum gradient of Ramp</th>
<th>Ramp Width</th>
<th>Handrail on both sides</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 150 mm ≤ 300 mm</td>
<td>1:12</td>
<td>1200 mm</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>≥ 300 mm ≤ 750 mm</td>
<td>1:12</td>
<td>1500 mm</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>≥ 750 mm ≤ 3000 mm</td>
<td>1:15</td>
<td>1800 mm</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>≥ 3000 mm</td>
<td>1:20</td>
<td>1800 mm</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
RECOMMENDATIONS

• Railings should be simple in design, distinguishable from other historic features but not visually intrusive, with a colour blending with the ambience of the heritage site.
• Handrails should have continuous gripping surfaces, recessed brackets without interruptions or obstructions that can break a hand hold.
• Accordingly Materials, Size and shape of handrails should be smooth and should offer a firm grip.
• Handrails to be provided on both sides of all ramps / stairs as shown, with SS circular section of 38-50 mm dia., with safety covers (refer to point below), and should be at least 45mm clear of the surface to which they are attached.
• Handrails to be extended by 300 mm beyond the top and bottom of steps / ramps.
• Handrails to be provided everywhere at 2 heights – 900 mm and 760 mm both.
• Ends of handrails should be returned to the wall, floor or post so that they do not become obstructions.
• Handrails should be securely fixed and durable to avoid posing danger to users relying on them for assisted walking.
• Handrails to be given a colour that blends with the heritage site.
• Central handrails should be provided for stairs and steps of excessive widths.
• Materials for external handrails should not retain large amount of heat or coldness due to seasonal changes. A handrail safety grip tape / cover, a thermoplastic product (insulating PVC upper with PET base), is recommended to be provided on the SS handrails for better grip and protection to help prevent bare hands freezing or burning due to extreme climate conditions. The color of the grip tape can be such that blends with the architectural character of the heritage site.
• Braille, tactile or 3-dimensional signage at top, bottom ends and strategic points of handrails can provide direction and location information.
RECOMMENDATIONS

- Door location should be prominent with sufficient space for access.
- Door for wheelchair access should have a level landing area after the door swings.
- Minimum width of the door should be 900mm to allow access for wheelchair users.
- Thresholds / level differences / door mats / protruding channels at door openings to be removed / bevelled flush to the floor.
- Thresholds of doorways should not exceed 10 mm. Raised threshold and floor level changes at doorways should be levelled off with a slope on each side of a threshold. The slope may be a simple, movable ramp.
- Handles, pulls and other opening devices are to have a shape and height that is easy for a person with reduced strength and dexterity to control. All door handles to be circular in section, provided at standard height of 800 mm.
- Swing door is preferable than sliding door. When a sliding door is to be used, the handle should be usable from both sides.
- Lever handles and push type mechanisms are recommended. (When a sliding door is fully open, handles should be usable from both sides.)
- Door stoppers to be provided to all doors.
- Kick-plate of 300-400mm height are recommended for doors in high-use in order to protect the push side of doors from damage.
- The use of colour (contrast) to distinguish doors from surrounding walls is very useful for people with visual impairments.
- Glass doors must have a bright, color motif at eye level.
- Where revolving doors or turnstiles are used, an alternative wheelchair-accessible entrance must also be provided.
- Multilingual and braille Signage to be provided as per standard guidelines.
- Installing offset hinges to widen doorways if possible where ever width is less than 900mm.
- Wherever required door should be fitted with vision panels at least between 900mm-1500mm from floor level.
STANDARD SPECIFICATIONS

e) LIFT / ELEVATOR - lifts are used for vertical transportation to travel between two levels and they could be used when space is restricted.

RECOMMENDATIONS
- Lift should be on an accessible route.
- Contemporary glass lift can be a good option as it contrast well with the historic architecture and is relatively light in impact.
- The floor space of lifts should be sufficient for wheelchair users to enter the lifts, manoeuvre within reach of controls, and exit.
- The minimum internal dimensions of the elevator should be 1500 mm x 1500 mm minimum.
- Lift doors should be wide enough for wheelchair users
  I. The elevator door should be easy to identify
  II. The clear door opening width should be 1m or more
- Lift door closing mechanisms should be adjustable to give adequate entry time for people with disabilities. The installation of photo-electric sensor may be considered for controlling the closing of the lift door. Extended door open button is preferable.
- In lift lobbies, access and manoeuvring space for wheelchair users should be provided. There should be a landing 1500 mm x 1500mm in front of the lift.
- The finish of the elevator floor should be skid-resistant.
- Call buttons in lift lobbies should be at a height that is within easy reach of and for use by wheelchair users.
- The elevator controls inside and outside the lift (including alarms/speakers/phones) should be between 800 mm to 1000mm.
- Call button at foot level in addition to hand-operated level should be considered.
- Call buttons should be of sufficient size and conspicuous.
- They should have a good contrast and buttons should be self-illuminating, in raised numbers and Braille and have symbols to indicate "Open" and "Close".
- There should be an audio and video system installed in the lift indicating arrival at a floor.

Lift floor should always be level with the lift lobby floor.
- There should be signage and tactile guiding path in the floor directing to all the lifts.
- There should be handrails on both the sidewalls and the rear wall of the lift car at a height between 800 mm and 1000mm.
- High reflective wall surfaces should be avoided to reduce hallucination.
- The Emergency information given inside the lift car should be mounted at eye level and should be in both tactile and Braille.
- Mirror to be installed on rear wall of both the lift cars.
- Accessible directional, multilingual and tactile signage to be provided as per standards.
- Where it is impracticable to provide a lift or ramp, a wheelchair stair lift or platform lift may be considered as alternative.
- Location of lifts/elevators to be marked on all tactile pictographic maps.

Platform lift
- Platform lifts and inclined stair lifts, both of which accommodate only one person, can be used to overcome changes of elevation ranging from three to 10 feet (.9 m-3 m) in height.
- Platform lifts can be used when there is inadequate space for a ramp. However, such lifts should be installed in unobtrusive locations and under cover to minimize maintenance if at all possible.
- Platform lifts should be enclosed with minimum internal dimensions of 1100mm wide by 1400mm deep with a clear opening width of 900mm.
- The doors should not require the simultaneous operation of two mechanisms to open them and preferably be automatic.
- Use non-reflective and slip-resistant wall and floor finishes.
• Provide an unobstructed area of 1500mm by 1500mm in front of the platform lift entrance. This area should be level and kept clear of obstructions to allow access to the lift controls.

• When vision panels are fitted, the base of the vision panel should not be higher than 500mm above floor and should be of a minimum height of 1500mm.

**Control Button and Signal:**

• The controls should be capable of being used independently by the user and should be higher than 900mm from floor level and not more than 1200mm.

• The platform lift should incorporate audible and visual alarm as well as emergency systems. Clear audible and visual instructions should be provided.
STANDARD OFFICE SPACES

RECOMMENDATIONS
- Existing furniture to be replaced with furniture having rounded corners.
- Desks should have sufficient leg space.
- Some stationary chairs for use by person with mobility impairment instead of rolling chair with castors.
- Furniture upholstery to be in contrast color.

h) LIGHTING

RECOMMENDATIONS
- Adequate and well distributed lighting should be installed.
- Glare from excessively bright lights should be avoided.
- Circulation spaces should have adequate lighting.
- Lighting and acoustics can be set at an appropriate level so that people with sensory impairments can circulate around the site.
- Light fittings should be positioned above 2000mm from ground or floor level in accessible pathways.
- Up lighters should not be used at street or floor level where they will cause obstruction.
- Light fittings should be positioned where they do not cause glare, reflection, shadows or pools of light and dark. The illumination level is much affected by where the fittings are located. For example, if the light fittings are located near one side of the corridor wall, the illumination level on the opposite wall may be inadequate. The situation may be worsen if there are other services running along the corridor blocking the light source.
- Where illumination of a sign is needed, the light source should be shielded from the viewer to prevent glare.
- Fluorescent light fittings should be screened, maintained to avoid flicker, and located to avoid interference with hearing enhancement systems.

SWITCH BOARD IN CONTRAST WITH THE BACKGROUND

g) CONTROLS AND OPERATING MECHANISMS

RECOMMENDATIONS
- Controls / switches should be colour-contrasted, with the surrounding face plate panel and the face plate contrasting with the background wall on which they are mounted.
- The operable part of controls such as vending machines, electrical switches, wall sockets should be located adjacent to the clear floor space with dimensions of at least 900 mm x 1200mm. And at height between 600-1100mm.
- Control should be placed not less than 400mm from room corners.
- Should not required tight grasping, pinching or twisting of the wrist.
- The control panels / switch boards should be flushed to the wall, doors kept closed and wiring concealed.
- Information on controls and switches should be in relief.

RECOMMENDED CONTROL PANEL HEIGHTS
RECOMMENDATIONS

Apart from the regular maintenance items in the maintenance plan, the followings items require attention:

• Keep parking space(s) for the disabled and access unobstructed.
• Keep accessible paths, ramps and steps clean and unobstructed.
• Maintain and update directory signs to facilities and keep signage unobstructed.
• Keep spaces required for wheelchair maneuvering and tactile paths unobstructed.
• Keep proper use of accessible/disabled toilets and do not used them for other purpose.
• Maintain access routes and wheelchair spaces in all seating areas.
• Keep emergency pull cords in working order and not tied up after cleaning.
• Inspect and repair tactile surfaces and floor coverings regularly.
• Maintain color schemes, textures and finishes of materials to compliment with the architectural vocabulary of the heritage site.
• Store wheelchairs in a secure, dust free and covered space, preferably in an accessibility facilitation centre as proposed, adjoining the ticket counter / security cabin.
• Wheelchairs should be regularly inspected and promptly repaired for any defects due to use.

It is also important to maintain and test provisions:

• Maintain and test listening systems e.g. induction loop system and remote signage system.
• Maintain and check facilities for people with disabilities such as lifts and platform lifts.

GUIDELINES FOR MANAGING ACCESSIBILITY

Training and updating are also required for:

• Review and provide emergency procedures so that services can be provided in case of facilities breakdown and/or repairs e.g. lifts, call bell in disabled toilets.
• Review emergency evacuation plans for all visitors and staff and guides and check that emergency assembly areas are unobstructed.
• Provide training to staff and guides and update on disability and equality aspects for all staff and guides.
• The frequency of the reviews and enforcement procedures depends on the usage rate of the facilities.