Accessisibility Standards for Persons with Disabilities

Ministry of Ports, Shipping and Waterways, with regards to provisions of the Rights of Persons with Disabilities (RPwD) Act,2016, has formulated Accessisibility Standards for the persons with Disabilities, for ports Sector and the same is uploaded herewith.

In this context, General Public are requested to kindly furnish the comments/suggestions/observations, if any, within a period of 3 weeks from today i.e. 30/3/2022. Comments/ suggestions/observations received after expiry of 03 weeks will not be considered.
The Comments/ suggestions/observations, if any, may be sent to the following officer:-

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GUIDELINES FOR ACCESSIBILITY STANDARDS IN PORT SECTOR

Preface

Keeping in view the changing Role of the Port and Shipping sector in todays' time, it may not be enough to provide a legal regime for Accessibility Standards. It is equally important to make the service providers aware of the importance and advantages of including Accessibility Standards in their operations to expand their customer base. In this background, the guidelines in this report attempt to touch both (i) the vital aspects of Accessibility Standards in all possible places in the Ports, as well as (ii) disability inclusive sensitisation of staff.

This report attempts to first establish the relevance of Accessibility Standards for Port sector, the extent to which the extant legal regime has application to services in Ports, perspective building of those perusing these guidelines by succinctly introducing the stakeholders and structures in Ports followed by guidelines to be adhered to for ensuring Accessibility Standards.

The guidelines provided here are illustrative in nature and not exhaustive. They intend to meet the immediate requirements of Accessibility to ensure that the facilities are made usable by the persons with disability and reduced mobility. Besides these guidelines, the sector specific detailed guidelines made by Experts such as the guidelines on Accessibility Standards prepared by Tourism and Travel Department, Transport Department, Hotel Industry, Commercial and Industrial Department may also be, to the extent relevant, relied upon and used at different places in the Port, Harbours and Piers. To this extent, these guidelines are not conclusive; but are open to continual improvement.

These guidelines can be used as broad guiding principles for planning of Accessibility Standards at the time of construction of Cruise and Passenger Terminals, Transport Hubs in the Ports and harbours as also in retrofitting the existing structures. To ensure that these guidelines remain practical for implementation, salient features of the guidelines have been discussed with the Nodal Officer for Cruise Tourism and the other Stakeholders.

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CHAPTER ONE

PORT SECTOR

1.1 Overview: Transport plays a key role in territorial possession and economic development, irrespective of its mode. The ports play vital role turning the barrier of sea in to a bridge for transportation of cargo and passengers providing opportunity to businesses for the economic growth of the Country. Maritime Transport is also a mode for achieving socio economic integration and cost efficient movement of cargo and passengers. The Indian Ports and the Maritime Sector of India provides huge opportunity and contribute substantially in the area of transportation.

India happens to be the 16th largest Maritime Country in the world with a coastline of 7,517 kilometres, 12 Major Ports and 205 notified Intermediary / Minor Ports. Around 70% of the India's trade by value and 95% of trade by volume is handled using Maritime Transport. The huge coastline on the three sides of the country provides huge potential to be monetized for movement of coastal cargo and passengers. The Ministry of Ports, Shipping & Waterways has taken several measures to improve operational efficiency of Ports through mechanisation, deepening of draft, speedy evacuation, last mile connectivity, deep draft, creation of new six Mega Ports under the National Perspective Plan Sagarmala, Maritime India Vision, etc.

1.2 Relevance of Accessibility Standards in Ports:

In recent time, India has emerged as a Cruise Destination on international map attracting many foreign Cruise calls and tourists, besides witnessing an unprecedented surge in domestic cruise tourism. A Study conducted at national level by an expert Bermello, Ajamil & Partners in the year 2017 projected the cruise potential of India to the tune of 4 million passengers and Mumbai as the Cruise capital with largest share of the projected traffic.

	2016	India's Potential	Potential of Mumbai
Number of passengers	0.2 million	4 million	3.2 million
Number of passenger ships	166	955	700
Passengers per ship	1200	4100	4570
Economic potential	INR 712 Crores	INR 35500 Crores	INR 28400 Crores
Employment potential	5000	250000	200000

While this be so, Cruise tourism in India is still a nascent industry. As projected, there is a huge opportunity to capture the market because geographically India is strategically located between Western Europe and Asia and every ship to Europe has to pass through it. The Ministry of Ports, Shipping and Waterways is well poised to revamp the country's current Port infrastructure, set up dedicated terminals to cater to the needs of tourists and undertake riverfront development on a massive scale in coordination with the Ministry of Tourism to propose and develop more cruise tourism terminals in the country.

A national plan for development of cruise tourism in India is drawn with large scale investments to develop International Standard Cruise Terminals at Ports of Mumbai, Mormugao, New Mangalore, Cochin, Chennai, Vizag, Kolkata etc. Country's biggest international cruise terminal is under construction at a cost of 500 crore at Mumbai and is likely to be operationalized by June 2022. A new terminal at Cochin is dedicated to nation by Hon'ble Prime Minister in February 2021.

(Picture Courtesy: https://journalsofindia.com/sagarika-cruise-terminal-at-cochin-port)

At the National level, to have a coordinated and synchronized promotion & development of cruise industry, a Task Force is formed by the Government of India, consisting of Secretary (PSW) and Secretary (Tourism) for overall country-wide promotion of Cruise Shipping with Members from Ministry of Home Affairs, Customs, Cruise Lines, CISF, Bureau of Immigration, IWAI, Indian Ports Association, Ports, Tour operators etc. Cruise & Tourism Committee is in place in each Port and discusses issues of development of various tourist spots such as Forts, Beaches, and Temples etc. as a cruise destination. Representative of State Tourism Board, State Maritime Boards, Cruise Lines, Tour Operators, etc. are also members of Committee.

Besides this, the country has also taken keen interest through its national vision plan to invoke the alternatives of water transportation using passenger boats, Ro- Ro, ferries, hovercrafts, etc. across the country to provide cheaper and accessible means of transportation to a larger section of population.

MoU on the Passenger and Cruise services on the Coastal and Protocol routes between India and Bangladesh is signed on 08.04.2017. For its operationalization, an SOP was signed on 25.10.2018 during the SSLT between India and Bangladesh. Both the country started their inaugural cruise services Dhaka – Kolkata - Dhaka and Kolkata – Pandu - Kolkata via Indo Bangladesh Protocol (IBP) Route during March-April, 2019.

Inland Waterways Authority of India is also the Project Development Consultant for implementing the Kaladan Multi Modal Transit Project in Myanmar on behalf of the Ministry of External Affairs, Government of India. The objective of the project is to provide an alternate route to Mizoram from Kolkata / Haldia Ports through Kaladan River in Myanmar.

Consequently, this segment of transportation and tourism has assumed importance in recent years in the Port and shipping sector and, therefore, needs to be appropriately dealt with in the guidelines. This transition of the Ports from purely cargo handling terminals to Cruise terminal of international standards warrant setting up of standard guidelines on Accessibility Standards.

In this perspective, it is important to bear in mind that persons with disability, reduced mobility using transportation by sea or inland waterways on cruise, ferries and passenger boats have certain set of rights like Right to Information, Right to Care and Assistance, Right of Non-discriminatory Access to transport. Fulfilment of these rights of the users of water transport facilities puts responsibility on the carriers, the travel agents, the tour operators, the terminal planners and operators to follow certain standard guidelines to ensure that persons with disability or reduced mobility are not deprived of their rights.

To enable the Persons with Disabilities to live independently and participate fully in all aspects of life, Ports need to take appropriate measures to ensure accessibility to Persons with Disabilities on an equal basis with others to the physical environment, to transportation, to information and communications, including information and communication technologies and systems and to other facilities and services. These measures shall include identification and elimination of obstacles and barriers to accessibility and ensure (i) accessibility standards for built facilities like ports, jetties, depots, boats, cruise – ships, house boats, yachts,

(ii) accessible services viz ticket booking, route maps schedules, special assistant bookings, security checks, parking space, etc.

(iii) accessible formats of information dissemination like Braille, formats, digital information boards etc. and

(iv) emergency evacuation provisions amongst others.

13 Legal framework for Accessibility Standards applicable to Ports & Ships:

On 13th December'2006, the United Nation, adopted the convention on Rights of Persons with Disabilities and the Republic of India, a signatory to the said convention, ratified it on 1st October'2007. Accordingly, the Parliament of the Republic of India enacted on 27th December 2016, "The Right of Persons with Disabilities Act, 2016". These guidelines are made keeping in mind the relevant provisions made in the Rights of Persons with Disabilities Act 2016 enacted in India to give effect to the UN Convention on the Rights of persons with disability and for matters connected therewith and incidental thereto.

These guidelines takes into consideration the definition of "communication" given in section 2(f) of the Act which includes means and formats of communication, languages, display of text, Braille, tactile communication, signs, large prints, accessible multimedia, written, audio, video, visual displays, sign language, plain language and so on. The guidelines also deal with disability inclusive sensitization to deal with discrimination as defined under Section 2 (h) in relation to disability. It also emphasises the use of Information and Communication Technology in the form of web based services, electronic and print services, digital and virtual services as defined under Section 2(h).

These guidelines attempt to address the issues concerning person with disability as defined under section 2(S). Under Section 2(W), the Act defines Public buildings, which amongst others, includes buildings used for workplace, commercial activities, leisure or recreational activities and waterways. Similarly, the public facilities and services under section 2(x) include, amongst others, delivery of services to the public at large, leisure or recreational services and transportation. Water transport as a part of transport is included in the definition of transportation system under section 2 (zd) of the Act. This mostly cover the passenger travel facilities, cruise terminals, harbor cruising facilities, waterways transportation, which is one of the segments where services are provided by the ports. The Act has also conceptualized universal design and it's usage without the need for

adaptation. To this extent, the standards developed by the Ministry of Urban Development in the form of Harmonized standards have been referred to in these guidelines.

Besides this, the Act also calls upon to take measures to promote and protect the rights of persons with disabilities to participate in recreational activities equally with others under section 29. Sub clause (g) ibid, provides for developing technology assistive devices and equipments to facilitate access and inclusion of persons with disabilities in recreational activities. The activities undertaken from the cruise terminal like day-time cruises, short distance overnight cruises, cultural and entertainment programs on board the ships fall in the category of recreational activities and to this extent the facilities have to provide for Accessibility Standards both on Shore and on Board.

Since the legislation also deals with special provisions for persons with benchmark disabilities, providing for reservation of posts, both in government as well as in private sector by way of incentives to employers, even the office buildings and workplace have been considered within the framework of these guidelines.

The Act has also made it mandatory to observe accessibility norms while granting permission to build any structure and prescribe time limit for making existing infrastructure and premises accessible.

Although, under section 41 dealing with access to transport, facilities for persons with disabilities at water transport terminal is not included in section 41 (a), the guideline here, to the extent relevant, have adopted the standards from the harmonized standards developed by the Ministry of Urban Development so that the water transport terminal conform to the Accessibility Standards relating to parking spaces, toilets, ticketing counter and other aspects dealing with facilities at such terminals.

Summary of recommended guidelines on Relevance of Accessibility standards in Ports:

(i) The ports play vital role in transportation of cargo and passengers. India is the 16th largest Maritime Country in the world with 12 Major and 205 notified Intermediary / Minor Ports.

(ii) Of late, India has emerged as a Cruise Destination on international map and is witnessing an unprecedented surge in domestic cruise tourism.

(iii) A national plan for development of cruise tourism and water transportation in India is drawn with large scale investments to develop International Standard Cruise Terminals.

(iv) At the National level, to have a coordinated and synchronized promotion & development of cruise industry, a Task Force is formed by the Government of India.

(v) Cruise & Tourism Committee is in place in each Port with representatives of State Tourism Board, State Maritime Boards, Cruise Lines, Tour Operators, etc.

(vi) India enacted on 27th December 2016, "The Right of Persons with Disabilities Act, 2016". The Act calls upon to take measures to promote and protect the rights of persons with disabilities to enable the Persons with Disabilities to participate in all aspects of life. Hence, ports need to ensure accessibility to Persons with Disabilities on an equal basis with others.

CHAPTER TWO

GUIDELINES ON ACCESSIBILITY STANDARD RELATED INFORMATION & SENSITIZATION

(source: Dictionary on disability, MoSJ& E)

(source : wikihow.com)

2.1. Importance of different modes of information:

It needs to be appreciated that the reduced mobility could be on account of more than one factors. For instance, a person hard of hearing may not be able to grasp information that is made available by way of announcements. For them, an alternate mode of information dissemination is required. Similarly, a person with visual impairment may not benefit from the visual clues and for such persons, announcements are important. In other words, the operators of the port terminals and ships need to provide Accessible Information in multiple formats through different sources, only one source of information may not suffice.

2.2 Why is information dissemination important for Port and shipping?

Over the period of time, Ports in India have evolved through different models from being a comprehensive traditional ports handling cargo to the landlord Ports operated by private parties as logistics platform, where not only the cargo handling from the ships is carried out but other ancillary activities to promote commerce and trade such as assembling of parts, distri parks, special economic zones etc. are also carried out. In all such areas Accessibility is to be provided not only to the persons engaged in cargo handling operations, but to a variety of workforce and customers who provide various ancillary services for effective functioning of logistics platform. Besides this, of late, Ports and shipping, especially in the areas surrounded by the cities, are entering into new domain like cruise tourism, harbour tourism, different modes of passenger transportation using waterways, heritage tourism, lighthouse tourism etc. While international cruise tourism cater to the needs of international tourists the passenger and transport terminals may provide facility for short distance water transportation to the residents in and around the area. Likewise, the destinations developed for lighthouse tourism, heritage walks through historic premises of the port may have many citizens of all age groups calling on the Port besides the conventional class of Port workers like cargo handling labour, transport loaders unloaders, crane operators, etc. Provision of clear, concise and accessible information through multiple sources to these class of people coming to the Ports and ships would build confidence in them that if they approach the port facility, their safety will be properly taken care of, given their limitations. Building of this confidence will lead to the expanding of customer base for the operator resulting in more profits.

2.3. How to provide the information:

It is desirable that information is made accessible on a wider platform at minimal cost for the benefit of all. Consequently, means of providing information are to be used thoughtfully. Before that, it is also equally important to know as to what should be the format of information. Any information need to satisfy the following aspects.

(1) Information has to be clear: Clarity implies that information is legible and easily understandable. Use of simple and everyday language without Jargon would make the information clear.

(2) The Information need to be precise: Though information has to be complete, it has to be precise and to the point. Use of standard symbols can help reduce use of sentence and words to make the information concise. Too much information or write up can lead to confusion.

(3) Accuracy of the information: The information provided has to be accurate to ensure that it does not lead to stress. Also, information at different locations has to be consistent, so that there are no delays or resultant distress.

(4) Information should be timely: While talking about Passenger terminals, cruise terminals, Transport hubs in the Port, it may be necessary to provide advance information through website, printed material, and also information at terminals as the persons with reduced mobility may like to have the information at their disposal before they embark upon their intended journey.

(5) What can the information contain: The contents of information would depend upon the stage of time at which the information is provided. For instance, the information provided beforehand about a cruising facility may contain the information about the routes, the time of departure, the travel time information on various requirements such as purchasing of ticket, booking of seats, payment options, concessions available, information about the facilities available at the terminal, onboard the vessels like lifts, toilets, shops, etc. details about the assistance that is available or that can be made available in case of need. At the Terminal, Port, Pier or harbour information about arrivals, departures, instructions on how to get help,

services available, contact information and helplines in case of disruptions, signages showing arrivals, departures, delays and long delay and so on can be provided.

(6) At what places the information need to be available: The cardinal principle is that the information should to be easy to locate and can be through different modes, like websites, leaflets, signages and so on, which are conspicuously displayed in and around the facility to ensure continuity of the information till the user reaches the facility.

2.4. The format in which the information need to be provided:

This is as important as the information itself. Besides the persons with disability, reduced mobility and persons with visual impairment, many people over 40 yrs of age may need reading glasses to read the information, if provided in smaller font. Hence, looking at the age group of the people that call on the facility, it is advisable to choose the larger font size. Similarly, keeping the cultural background of the people calling on the facility in mind, the information may also be provided in different languages separately. Information in leaflets may not only be in large text size but also in Braille to facilitate people with vision impairment. Audio information through announcements also need to be in multiple languages understood by the users of the facility as also in more than one formats, for instance, the safety instructions given on Board the Aeroplane by the airhostess using body language, signs, gestures, demonstration, audio announcement in two languages and written leaflets. Similar format can be adopted onboard the vessel at pre departure point. By the side of written information displayed in the terminals, signages should also be provided for people coming from different parts of the world, who do not understand a particular language. In such a situation care need to be taken to ensure that the signage used is internationally acceptable and approved. Besides this, information on exact travel route, Maps, timetable, distance, etc can also be provided using mobile apps through e-mails, SMS and blue tooths in both audio-visual and readable format.

2.5. Information provided through the website:

Mostly, the Information provided through the website is in a very conventional form. In the form of written text to be accessed using mouse. This may present difficulty to the persons with reduced mobility or physical impairment in navigating the mouse. To meet the requirements of accessibility for such persons, additional software for screen reading can also be installed in the websites and information in audio format can also be given on the

website. For example, while searching meaning of a word on Google website, the meaning of the word appear in written format with a sign of loud speaker or microphone on the screen, which when touched pronounces the word exactly. Information given in the forms like maps, routes, distances etc can also be provided in text format as well as in audio format. There are professionals to check and carryout website accessibility audit. They can check and provide the level of accessibility of the website designed. Besides this, there are internationally accepted set of standards such as Web Content Accessibility guidelines, which may be followed.

2.6 Digital Accessibility:

The web portal need to be made accessible irrespective of device in use, technology or ability so as to provide maximum accessibility and usability to the visitors.

Efforts should be to ensure that all information on the portal is accessible to people with disabilities. For example, a user with visual disability can access the portal using assistive technologies, such as screen readers and screen magnifiers.

Following accessibility options can be provided on the web page to maximize accessibility:

- **Changing the Text Size**

Changing the size of the text refers to making the text appearing smaller or bigger from its standard size. Following options can be provided to set the size of the text that affects the readability:

- Largest: Displays information in the largest font size.
- Larger: Displays information in a font size larger than the standard font size.
- Medium: Displays information in a standard font size, which is the default size.
- Smaller: Displays information in a font size smaller than the standard font size.
- Smallest: Displays information in the smallest font size.

Process to change the text size can be explained on the website as under:

1. Select Accessibility Options. The Accessibility Options page is displayed.
2. From the Text Size section, select the appropriate text size.
3. Click Apply.

- **Changing the Colour Scheme**

Changing the colour scheme refers to applying a suitable background and text colour that ensures clear readability.

Following options can be provided to change the colour scheme:

- High Contrast: Applies the black colour as the background and suitable colours to the text on the screen to improve readability.
- Standard Contrast: Brings the screen back to its original appearance.

Process to change the colour scheme can be explained on web page as under:

1. Select Accessibility Options. The Accessibility Options page is displayed.
2. From the Contrast Schemes section, select the appropriate contrast.
3. Click Apply

- **Changing the Text Spacing**

Changing the spacing of text refers to increasing the white space between two words from the default white space to improve readability for users with visual and learning impairments. Following options can be provided to set the white space between words that affect readability:

- Default: Allows to set the white space between two words to standard width.
- Wider: Allows to increase the white space between two words than the standard width.
- Widest: Allows to further increase the white space between two words than the standard width.

Procedure to change the text spacing can be explained on website as under:

1. Select Accessibility Options. The Accessibility Options page is displayed.
2. From the Text Spacing section, select the appropriate text spacing.
3. Click Apply

- **Icons:**

Text on the website can be supplemented with icons, wherever appropriate to enable users with learning disabilities understand the information easily. Icons can be provided along with text labels for key navigation options as well as important features, such as print, email etc.

- **Contrast Sensitivity**

People with vision impairments such as retinitis pigmentosa, glaucoma, diabetic retinopathy, and cataract have low colour contrast sensitivity.

When designing the webpages, care be taken to

(i) Make sure to have a high contrast between the foreground and background, such as yellow letters on a black background.

(ii) Avoid using thin fonts.

(iii) Avoid using any JavaScript or CSS features that will prevent visually impaired users from increasing the contrast.

(iv) Avoid using combinations like green text on red background and vice versa as they are hard to read.

- **Accessible Video and Multimedia**

Videos and other multimedia elements play a critical role in increasing the user-engagement on website. While blind and visually-impaired users can't see visuals, deaf users and those hard-of-hearing can't hear audio. One can use an audio description to describe images, gestures, and changes in settings, among others. It will help blind users to understand the video. But audio description can be kept short to avoid making it a meaningless experience for the user. Well synchronized text captions can also be provided with the video and audio tracks for users, who are deaf or hard-of-hearing.

- **Minimize the Use of Tables**

Usually, screen readers will inform blind users of how many rows and columns a table has. However, it is often challenging for screen readers to read the tabular data in the same flow that matches the visual order. Hence, minimize use of tables on websites. However, if you must create a table, use the correct headers for each row and column.

2.7. Disability inclusive sensitization of the staff:

This is a particularly important aspect to be borne in mind by the service providers, as the effective use of the services by persons falling in this category depends on the sensitivity with which the staff respond to the needs of the persons arriving at the facility to avail the services. The staff interacting with persons with disability needs to be given to understand that, such persons are not to be looked upon as victims or object of pity or charity. They are the people who are capable of making their own decisions and leading meaningful and independent life. They need to be asked before rendering any help as to whether any assistance is required by them. This is important because not that every person with disability may use the help, all the time and making this kind of an assumption may lead to displease the persons with disabilities. Also, depending upon the requirement of persons with different types of disablement, sensitization has to be done differently. For instance, while talking to the people, who are confined to wheelchair, it may be good to sit in a chair and talk so that conversation is taking place from a similar height. Similarly, while interacting with a person who is hard of hearing, use the body language and expressions on the face may make the communication more effective and meaningful. Staff need to be taught to use different modes and manners of communication depending upon the requirement like speak slowly, speak clearly, repeat if required, write on a memo pad and show and so on.

Summary of recommended guidelines on information:

(i) The Maritime Passenger transport operator should provide information in multiple formats accessible at different points i.e, before setting out, at the Ports and harbours, on the vessel, after leaving the vessel.

(ii) The passenger transport operators, in the minimum, to ensure that safety and emergency information, timetable and websites are accessible to all.

(iii) Operators should also ensure that specific information is available on the terminal on how to get assistance to the passengers with reduced mobility or disability.

(iv) The maritime passenger transport operators to ensure that the staff employed by them are sensitized and trained to be able to provide accurate and clear information to the passengers with disability or reduced mobility.

(v) The web portal need to be accessible irrespective of device in use. Accessibility options can be provided on the web page to maximize accessibility to include changing the Text Size, Changing the Colour Scheme, Changing the Text Spacing, Contrast Sensitivity adjustment. Text on the website can be supplemented with icons. Audio description to be used to describe images, gestures, and changes in settings. Use of tables on websites to be minimized.

CHAPTER THREE

STAKEHOLDERS AT PORTS.

3.1 Types of stakeholders in the Ports:

In general parlance, Port is the interface between water transport and land transport. Ports handle cargo and provide range of services to passengers. Cargo handled at Ports may be classified as Break bulk, Dry bulk, Liquid bulk and container. On the other hand, passengers at Ports may be divided into two broad categories viz. domestic passengers and international passengers.

For handling such cargo and passengers, various agencies and persons actively participate, who may broadly be called "Stakeholders". Such stakeholders may be classified into three broad categories viz.

i) Stakeholders responsible for cargo handling (including vessel movement);

ii) Stakeholders responsible for providing services to the passengers;

iii) Other stakeholders who are not directly involved in handling of cargo and/or passengers.

It is proposed to include port state control officers and classification society surveyors who in general conduct mandatory inspections/survey/ audits required under various maritime conventions

3.2 Roles of different stakeholders in the Ports.

Role of different stakeholders need to be clearly understood to frame Accessibility Standards.

i) <u>Stakeholders responsible for cargo handling (including vessel movement)</u>

Types of stakeholders in this category and role assigned to them is as under -

Types of stakeholders associated with cargo handling	Role
a) Marine officers and marine crew members belonging to the port and different contractors of the port	• Pilots (either regular or contractual employee of port) navigate the vessel from sea/ harbour to berth/jetty and vice versa. • Marine crew members help the vessels navigate the lock (if any), get moored to the bollards etc. • Crew members of tug assist the vessels in shipping movement.
b) Crew members of merchant vessels	They man the vessels visiting ports. Since they may obtain shore pass and visit the city, they should be taken into consideration while framing accessibility standards for ports.
c)Cargo handling workers	They handle cargo, both on-board the vessels and on shore. They may belong to Port, Stevedores, Shore Handling Agents, etc.
d) Employees of mobile cargo handling equipments	They handle different mobile cargo handling equipment deployed in the port. They may belong to port, contractors of port, stevedoring and shore handling agents etc.

e) Stevedoring and shore handling agents	They provide cargo handling workers to work on-board the vessels and/or on shore. Apart from cargo handling workers, they deploy supervisors, commercial clerks etc.

f) Clearing and forwarding agents	They deploy manpower to undertake port and customs formalities in order to cart in/out export/import cargo.
g) Other personnel of ports	They supervise cargo handling operations, undertake commercial works etc.
h) Customs personnel	Customs officers, on behalf of Ministry of Finance, Govt. of India, process Bill of Entry and Shipping Bill for import and export cargo, respectively. They also collect Customs Duty on behalf of Govt. of India.
i) Importers and Exporters	Importers and Exporters visit port in connection with their business.
j) Drivers and helpers of trucks/trailers	They drive truck/trailers carrying import/export cargo in/out of the Port.

ii) Stakeholders responsible for providing service to the passengers

The roles of different stakeholders in this category are enumerated below:-

Types of stakeholders associated with handling of passengers	**Role**
a)Domestic and international passengers	Passengers may be with or without disabilities. They require smooth access to passenger terminal, immigration counter (if required), different shops, cafeteria, customs counter, toilets (wash rooms), drinking water facilities, staircases, parking, information counter, reception and vessel. As the cruising is a leisure time activity, besides the persons with disability, most of the persons using the 'cruise travel' are people in the higher age-group and may have reduced mobility, vision hardship, audibility hardship.
b)Suppliers of materials to passenger ships/cruise vessels	Suppliers of different kinds of supply material to passenger ships/cruise vessels.
c) Cab drivers	Cabs are required to visit Port, to drop or pick up passengers.
d) Travel agents	They arrange tour and sight-seeing for mainly international passengers.
e) Shops including duty free shops	Personnel manning such shops are required to access different areas of port in connection with their business.
f) Persons visiting port to see off/receive passengers	The requirement of persons visiting port to see off/receive passengers is akin to that of the passengers.

iii) Other stakeholders who are incidentally involved in providing services to the Passengers:-

The roles of such stakeholders are enumerated below:-

Types of stakeholders not directly involved in handling of cargo and/or passengers	**Role**
a) Port employees	Port employees, though not directly involved in rendering passenger services, coordinate and supervise the work at Terminals.
b) Contractors of different departments / divisions of port	• Civil contractors engaged by ports and terminal operators undertake civil construction and repair works in the port. • Contractors engaged by Mechanical Engineering Department repair different equipments. • Electrical contractors maintain electrical installations within the port. • Service providers for IT visit ports in connection with installation/repair/ maintenance of software and hardwares. • Personnel of facility management service providers, who sweep, clean office premises, toilets etc. within docks.
c) Personnel of security agencies deployed in port	Different security agencies like CISF, State Security Board, Port's own security personnel (if any), Police, and private security guards are deployed in and around port area to provide security cover.
d) Hawkers/ cruise shop owners, sales persons	In some ports, hawkers' licences are issued to hawkers & cruise shop owners. They supply different merchandize to cruise passengers, crew members, and travellers at the Terminals.
e) Visitors	Visitors come to meet & greet, see of, receive their relatives, friends at the terminals.
g) Crew members of entertainment industries	After obtaining permission, crew members of documentary/commercial films, TV serial etc also visit port for shooting.

All the aforesaid stakeholders may have some persons, who are with disabilities / reduced mobility. At the same time, there may be some persons, especially, among passengers, who are elderly or persons who are vulnerable due to varied reasons (Infants, new mothers, pregnant women, and victims of accidents, ill and infirm) and hence, require assistance in movement. Besides this, as per the Rights of Persons with Disabilities Act, 2016, Government ports are mandated and Private employers are encouraged to appoint not less than 4% of the total number of vacancies in the cadre strength in each group of posts meant to be filled with persons with benchmark disabilities of which –

a) 1% with persons with blindness and low vision;
b) 1% with persons who are deaf and hard of hearing;
c) 1% with persons who suffer from locomotor disability including cerebral palsy, dwarfism, muscular dystrophy and who are leprosy cured, acid attack victims.
d) 1% with persons who suffer from autism, intellectual disability, specific learning disability, mental illness, multiple disabilities of all the disabilities referred to above including deaf-blindness in the posts identified for each disabilities.

Thus, the port and other Private employees consist of persons with disabilities and while framing accessibility standards, the same should be kept in view.

Against this backdrop, for the present, while framing Accessibility Standards for Ports, special care is to be taken in respect of stakeholder in category (ii) & (iii) mentioned in Para 3.1 above, both in terms of Accessibility Standards and their sensitization and training in dealing with the persons with disabilities.

Summary of recommended guidelines on stakeholders at Ports:

(i) Port provides interface between water transport and land transport, handle cargo and provide range of services to passengers. Stakeholders in port, besides the passengers, are mainly responsible for cargo handling and for providing services to the passengers themselves.

(ii) As the Government ports are mandated and Private employers are encouraged to appoint not less than 4% of the total number of vacancies with persons with benchmark disabilities, the stakeholders in these categories may have some persons with disabilities / reduced mobility besides among the passengers.

CHAPTER FOUR

TYPES OF STRUCTURES AT THE PORT TERMINALS, CRUISE & PASSENGER TERMINALS.

4.1 Types of Structures: From the point of view of Accessibility Standards, based on the nature and use of the various buildings and structures in the Port, they can be broadly classified as follows;

- **Godowns, Sheds, Warehouse, unaccompanied baggage centres.**

  The goods unloaded from the cargo ships are removed from the wharf and stacked temporarily in transit sheds along the wharf. Similarly, the goods to be loaded on the ships are temporarily aggregated in cargo sheds in transit. These sheds are at ground level with wide doors permitting movement of forklifts and other heavy equipments required for cargo movement. They also have high ceiling enabling stacking of cargo one above the other. As they are used for cargo storage, there are no structures, steps, level changes etc inside these sheds. These sheds may have a cabin located in one corner for the Port staff with facility for drinking water and toilets.

  Godowns and warehouses as also unaccompanied baggage centres are more or less identical in structure to cargo transit sheds, sometime multi-storeyed wherein long term storage of cargo is permitted. The unaccompanied baggage centres also have the enclosure for custom officials with allied facilities.

  These sheds, godowns, warehouses are mostly visited by cargo handling workers, equipment operators, Stevedores, Custom House Agents, and delivery clerks, customs, security, personnel etc.

- **Govt./Semi Govt./ Public offices.**

  Port has official complex within and outside the dock premises. Offices inside and adjacent to dock premises may include the places like labour booking centres, buildings for offices for staff involved in vessel movements, cargo handlers, gear deployment units, crane and machinery operators and maintenance staff, fire fighting staff, etc. Besides the Public Offices, the offices of Port allied agencies like Customs, Immigration, FSSAI, etc may also be located in the Port premises to facilitate core cargo handling activities of the Port. Likewise, Port may also have offices of Custom House Agents, Stevedores, Freight Forwarders inside the dock premises.

In consonance with Rule for 4% reservation in service for persons with disabilities, these offices need to retrofit themselves to give easy access to persons with disabilities by creating facilities like railings, ramps, lower work stations, suitable toilets, etc.

- **Cruise Terminals, Passenger Terminal, Water Transport Terminals.**

Cruise Terminals are the places in the Port, where the cruise ships arrive, stay and depart from. The berths in the Ports where the cruise ships are berthed have the terminal building in the vicinity with facilities like pathways and roads for arrival, parking, drop and pick up points, taxi stands, check in counters, baggage screening, security checking, immigration and host of other facilities like curio shops, duty-free shops, F&B, malls with commercial outlets, ATMs, money exchange counters, toilets and so on. These terminals are connected to the ships with approach roads and gangways.

The Passenger Terminals, from where Passenger boards the ferries, water taxi and other vessels with smaller dimensions, have the facilities like ticket counters, security check points, shops selling eatables, waiting area, drinking water facilities, toilets, parking , drop and pick up points and so on.

- **Waiting halls, Restaurants/Eateries.**

Waiting hall is usually a facility attached to the local Passenger Terminal along with restaurants, eateries, food courts and supporting facilities like ample seatings, drinking water outlets and toilets.

- **Heritage and Conservation Area.**

Some of the Ports are historic in origin and have many places inside the premises depicting the episodes from history of the city that has developed around the Port like Port of Kolkata, Port of Mumbai. These Ports may develop facilities for heritage walk, museums, etc. within the premises.

- **Scenic Value Areas.**

  As Ports are on the outskirts of the city along the coastline with shallow water, some areas in the Port may see growth of mangroves, development of mud flats, that may attract migratory birds. Such areas are frequented by the visitors, students, animal lovers and nature lovers.

4.2 Types of Barriers at Terminals:

The barriers at these structures in the Port may be in the form of physical barriers like stairs, or steps or a barrier to a wheel chair user. Visual information can be a barrier for a person with vision impairment, announcement made at the terminal can be a barrier for persons hard of hearing, and persons with intellectual disability. Poor signage without internationally accepted pictograms can be a barrier for a person with intellectual disability. For persons with disability or reduced mobility, the barriers in the structures at the Port especially on the Cruise Terminals, Passenger Terminals, Harbours and Piers for transportation of passengers can be broadly classified into four categories

(i) Physical barriers,

(ii) Barriers created by systems followed

(iii) Barriers in accessing information

(iv) Barriers caused by attitude of the staff at work.

The physical barriers can include steps and stairs, narrow doors, heavy doors, narrow gangways, inadequate lighting lack of seating, inadequate signages, etc.

Barriers in the systems can be like buying of tickets for travel at the terminal and no facility for online booking. Inaccurate, inconsistent and inaccessible information to all can create barriers in accessing information at the terminals. Similarly attitude of the staff working at the terminal towards people with disabilities can also lead to barriers in accessibility. To this extent, the guidelines in the subsequent chapters focus on addressing the barriers at port and terminal facilities handling passenger services as also at harbours, Piers and other places for getting on or off passenger vessels.

4.3 Outdoor Indoor features: These buildings and structures need to provide for the following features of Accessibility Standards –

Outdoor Features:

i. Accessible route/approach;

ii. Accessible Parking – Reserved parking near entrance

iii. Accessible entrance to buildings;

Indoor Features:

i. Accessible reception;
ii. Accessible corridors and tactile flooring;
iii. Accessible lifts with braille; auditory commands;
iv. Staircases with durable handrails;
v. Accessible toilets;
vi. Accessible drinking water provision;
vii. Auditory and visual signage.

The manner and extent of Accessibility Standards in these areas has been dealt with in **Chapter 5 & 6** of these Guidelines.

Summary of recommended guidelines on structures at port terminals:

(i) Ports have Godowns, Sheds, Warehouses, unaccompanied baggage centres which are mostly visited by cargo handling workers, equipment operators, Stevedores, Custom House Agents, and delivery clerks, customs, security personnel etc.

(ii) Also, there are Govt., Semi Govt., Public offices, offices of Custom House Agents, Stevedores, Freight Forwarders. These offices need to retrofit themselves to give easy access to persons with disabilities by creating facilities like railings, ramps, lower work stations, suitable toilets, etc.

(iii) Besides this, there are Cruise Terminals, Passenger Terminal, Water Transport Terminals with facilities like pathways and roads for arrival, parking, drop and pick up points, taxi stands, check in counters, baggage screening, security checking, immigration and host of other facilities like curio shops, duty-free shops, F&B, malls with commercial outlets, ATMs, money exchange counters, toilets and so on. Additionally, there are Waiting halls, Restaurants/Eateries Heritage and Conservation Area Scenic Value Areas.

(iv) The barriers at these structures in the Port may be Physical barriers, Barriers created by systems followed, barriers in accessing information, barriers caused by attitude of the staff at work. These buildings and structures need to provide Accessible route/approach, Accessible Parking.

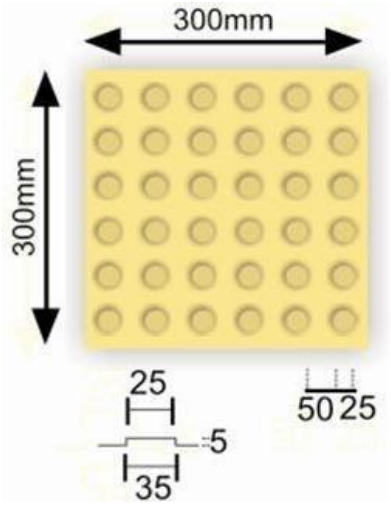
CHAPTER FIVE

UNIVERSAL DESIGN ELEMENT - ACCESSIBILITY STANDARDS AT THE PORT TERMINALS

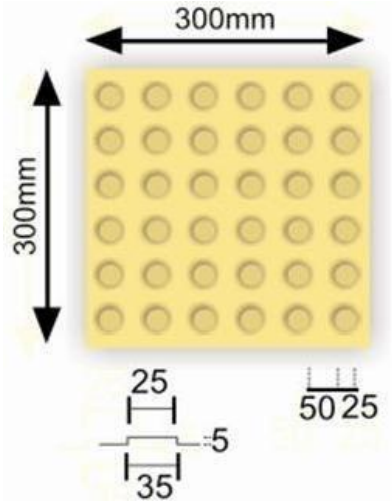
5.1 Planning

From the beginning of the design process, the planning and designing of the structures and building used for water transport terminals in the port and allied areas should consider following features.

- The walkways and foot paths should be accessible to Persons with disabilities. They should be smooth, hard and have level surfaces suitable to walk and operate wheel chair. Gratings and manholes should be avoided on the footpaths and walkways.
- The width, the length, the gradient, the rest areas provided adjacent to walkways, texture changes should follow universal standards provided for easy accessibility
- Passing over different level and grooves should be smooth and gratings should be flushed with finished ground level and should be perpendicular to direction of movement.
- To indicate correct path to persons with visual impairment, the tactile pavers having guiding (line type) and warning blocks (dot type) in proper dimension shall be used, as shown in the pictures below:



Warning block

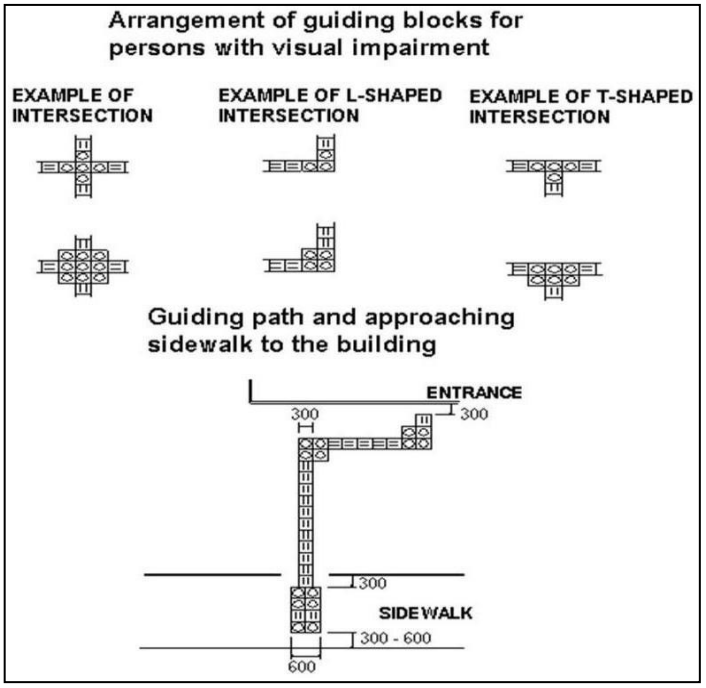


Guiding block

(source: Harmonised guidelines MoUD)

- The arrangement of the warning and guiding blocks in different intersections should be such that it will make ease of accessibility to guiding path, footpath, building entrances etc.

- The routes should be free of barriers and hazards, obstacles should be avoided and located beyond the walkways/ pathways. In unavoidable circumstances, protruding objects should contrast visually with background and should provide wheelchair access. Proper hazard protection should be provided in the form of kerb or other solid barrier so that it can be easily detected using a cane by visually impaired.
- Kerb ramps, walkways, parking areas, lighting and space allowances should conform to the standards (refer Chapter 6) provided for ease of accessibility.



layout of tactile pavers: guiding and warning

(source: Harmonised guidelines MoUD)

5.2 Surface

- The floor surfaces used should be firm, slip resistant, properly leveled and stable without any unexpected variations. Complex patterns should be avoided.
- Lines with brightly coloured tapes should be used to assist mobility of persons with low vision.

5.3 Approaches

- Approach areas, Boarding and alighting points at port buildings should comply with the standards provided in Chapter 6 of these guidelines for passengers having disabilities.

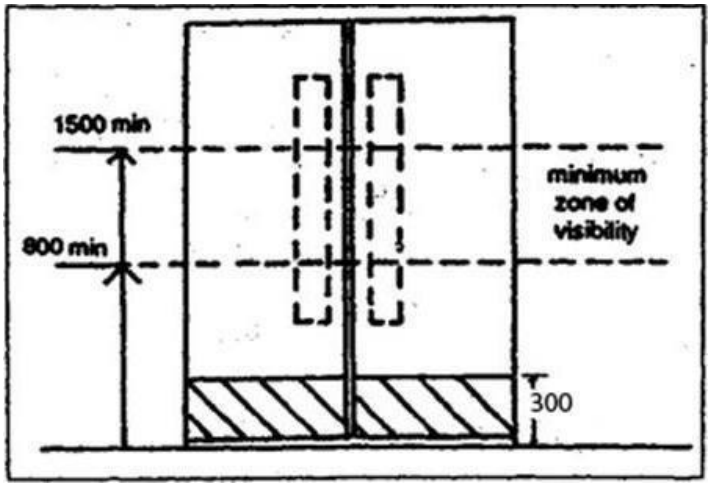
- Pedestrian surfaces, driveways, footpaths in these areas should be leveled.
- The access aisles, kerb ramps, tactile floor, identification signages should be provided at approaches and accesses to the buildings and structures.

5.4 Corridors and routes.

- Width, resting areas, seats, lighting, floor surfaces, etc in the building corridors and routes should confirm with the Accessibility Standards.
- Openings of doors and tactile guidance path in internal corridors should adhere to accessibility standards (refer: Harmonised guidelines and space standards for barrier free built environment for persons with disability and elderly persons, Ministry of Urban Development, February 2016).

5.5 Doors and windows

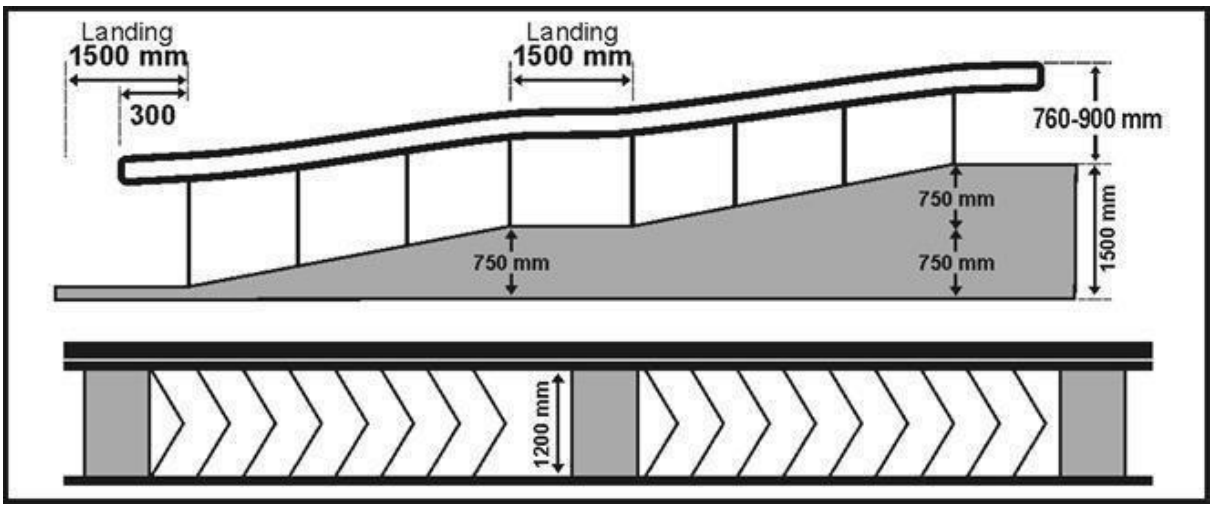
- Doors should be leveled
- Provision of auxiliary doors should be near turnstiles, revolving doors.
- Space provision near swing doors of bathroom should be appropriate
- All doors including sliding doors, swing doors, automatic doors and double leaf doors should be easy to operate
- Door opening width, wheelchair maneuvering space, door hardware, handles, period of door closure of automatic door, vision panels on swing doors, kick plates, door identification color contrast on frames, marking on glass doors should be in conformity to the accessibility standards.
- Handles / controls provided for windows, curtain, venetian blind controls should be as per standards and easily accessible. Recommended visibility zone



(source: Harmonised guidelines MoUD)

5.6 Hand rails / grab bars

- Hand rails and grab bars should be easy to grasp and comfortable to grip, provided with braille marking, slip resistant, have continuous gripping surface, contrasting with wall surfaces, adequately fixed to absorb considerable pressure, free from abrasive materials.

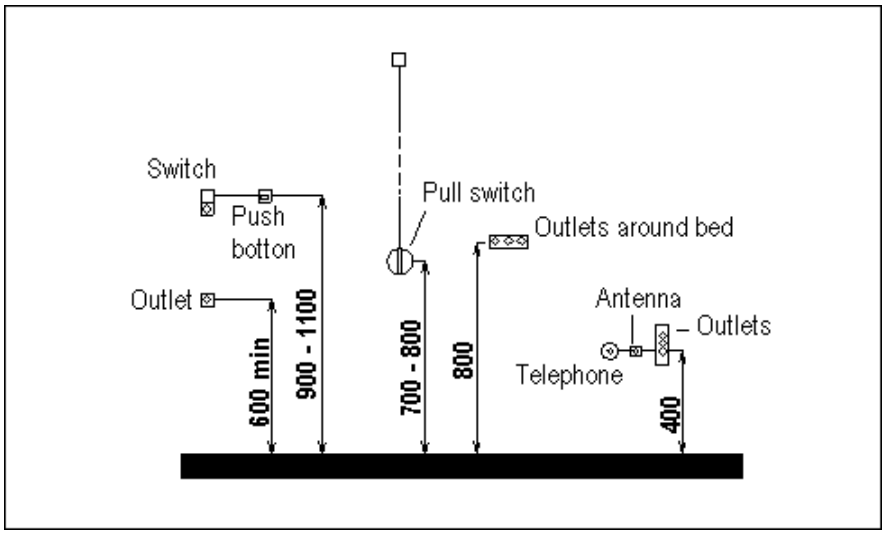


Handrails for ramps

(source: Harmonised guidelines MoUD)

5.7 Controls and operating mechanism

- Provision of clear and level floor space at controls and operating mechanism, knee clearance space for wheel chair users is necessary for accessibility.
- The operable part and controls of certain machines, electrical switches, antenna, telephone buttons, wall sockets, should be located at clear floor space, easy to grasp, grip and use by persons with disabilities.
- Faucets/ taps should be operable by one hand, no tight grasping or pitching, having lever type easily operational handles.

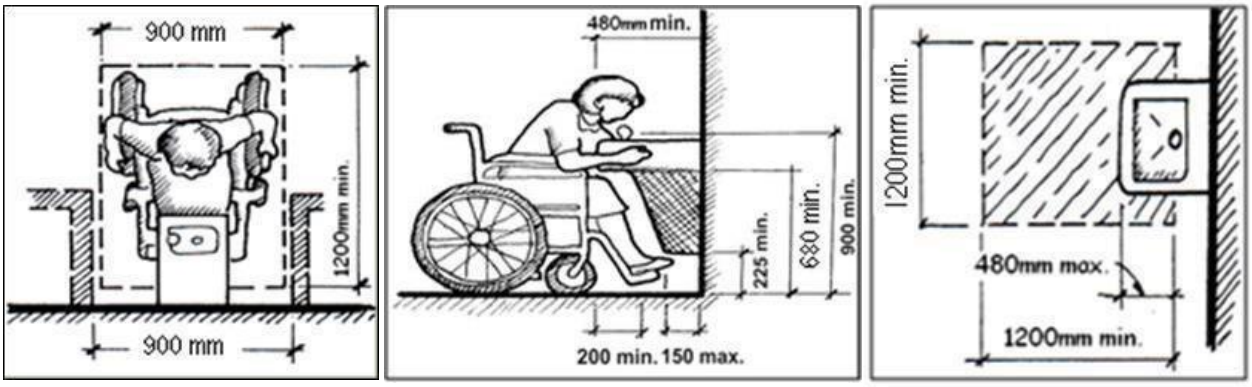


Location of electrical sockets, control, etc

(source: Harmonised guidelines MoUD)

5.8 Other facilities

- Seating spaces should have clear and level floor spaces, clear knee spaces.
- Counters and their tops should be as per specifications.
- Drinking water facility, telephone counters/ booths, parking areas, level changes, ATM machines, mail boxes, drop boxes, toilets should have clear space, appropriate marking, knee space, maneuvering space, signages, height, width etc. in compliance to accessibility standards and specifications.
- Accessible drinking water fountain



Accessible drinking water fountain *(source: Harmonised guidelines MoUD)*

Summary of recommended guidelines on Universal design elements:

From the beginning of the design process, the planning and designing of the structures and building in port areas should consider the walkways, foot paths, Kerb ramps, parking areas, lighting and space allowances for ease of accessibility for persons with disabilities.

The surfaces, approaches, corridors, routes, doors, windows, hand grabs, controls, operating mechanism and other facilities should be compliant with Accessibility standards.

CHAPTER SIX

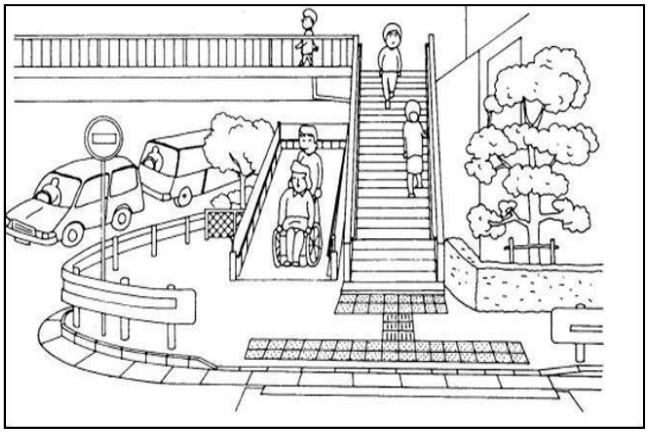
PORT SPECIFIC DESIGN ELEMENTS AT THE PORT, CRUISE, PASSENGER TERMINALS.

(source: Harmonised guidelines MoUD)

6.1 Transport and roads within the port areas and facilities

- All footpaths, kerbs, ramps, road intersections, medians, traffic signals, subways, foot over bridges, public transport facilities, water transport crafts, etc. constructed and operated in port sector should adhere to Harmonized guidelines for Persons with disability and reduced mobility published by Ministry of Urban Development and made accessible to all users of port facilities including Persons with disabilities.

Pedestrian foot over ridge with ramp and steps *(source: Harmonised guidelines MoUD)*



6.2 Alighting and Boarding areas

6.2.1 Car Parks:

Signage, symbols, entrances, exit points, locations of car parking areas in port premises and allied facilities should adhere to Accessibility guidelines of standards given below and more specifically mentioned in Harmonized guidelines for Persons with disability and reduced mobility published by Ministry of Urban Development. The guidelines for parking areas are as under:

(i) There should be accessibility to parking facilities

(ii) Sufficient parking spaces should be available with an area of 5m X 3.5 m

(iii) Designated parking spaces should be marked by the international symbol of accessibility.

(iv) Designated parking spaces should not be misused.

(v) If the drop-off area has a kerb, there should be kerb ramp leading to the pathway The drop-off area should be marked by signage.

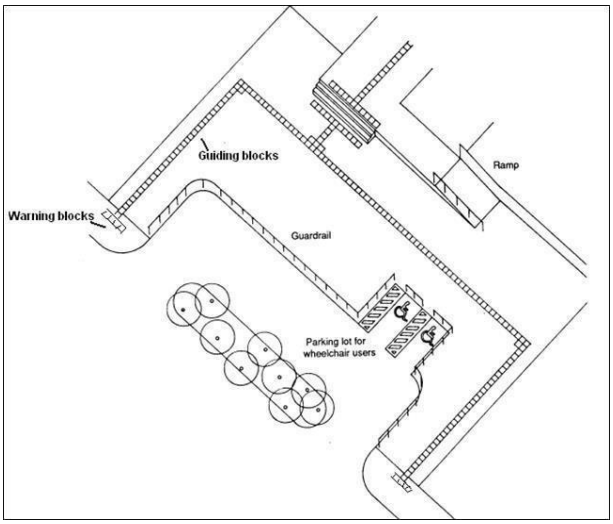
(vi) There should be an accessible path of travel from the drop-off area to the main entrance.

(*Source : IPA's draft report)*

(source: Dictionary on disability, MoSJ& E)

6.2.2 Taxi / Auto rickshaw stands / bus stops:

Signage, symbols, entrances, exit points, locations of taxi/ rickshaw stands and bus stops in port premises and allied facilities should adhere to Harmonized guidelines for Persons with disability and reduced mobility published by Ministry of Urban Development and made accessible to all users of port facilities including Persons with disabilities.



(source: Harmonised guidelines MoUD)

6.3 Piers, Jetties, Cruise Terminals

All forms of water transport and port (cruise) terminals should be accessible to people with disabilities and reduced mobility. Guidelines for designing accessible piers and jetties are similar to the ones for railway stations except for the platform.

(i) Ferries should be fitted with accessible ramps;

(ii) Within a cabin, space should be set aside for securing a wheelchair in a position for comfortable integration with other passengers;

(iii) Piers, terminals should be fully accessible and have simple boarding and disembarkation procedures;

(iv) All the facilities in the cruise terminal building such as waiting/ rest rooms, toilets, corridors, ticket counters, shops, libraries etc. should be compliant with accessibility guidelines in Paras 6.4 to 6.9 below.

(source: Harmonised guidelines MoUD)

(source: Dictionary on disability, MoSJ& E)

6.4 Signage:

Signs are imperative for people to get information on the surrounding that they are not familiar with, like Port areas, which can inform them of a route, a hazard, or a facility. Signs allow the Port facility user to identify the environment they are in. In addition to this, Signage is also important for the aesthetics and first impression of a structure and therefore, must be clear, concise, and consistent.

(i) The location of signs should be realized during the planning stages of the Port Structure and allied areas.

(ii) It must be easy to understand even to common layman including Persons with Disabilities.

(iii) The Signage provided at a location should be Universal in nature, understandable by people of all ethnicities and cultures and languages. This can be achieved through use of pictograms that effectively depict the message that is to be conveyed.

(source: Harmonised guidelines MoUD)

6.4.1 The layout of Signages should maintain a clear sense of direction and purpose and be well sequenced to enable users to process the information correctly. Information should be provided at key junctions and destinations. Use of Audio as well as Video information along with pictograms should be incorporated (e.g. signs, notice boards, public address and security systems, induction loops, telephones, and infrared devices, signs with embossed lettering or Braille).

(i) The signs should be clear, simple and easy to read

(ii) The colour of signs should be clearly distinguishable

(iii) The surface of the sign should be processed so as to prevent glare

Few parameters that should be kept in mind to design Signages are as under:

a. The location, accessibility, layout and height of signs;

b. the size of lettering, symbols and their reading distances;

c. the use of tactile letters and symbols;

d. visual contrast and lighting;

e. the finished surfaces of materials used for signs and symbols;

f. the simultaneous use of audible cues;

g. Integration with any other communication systems.

6.4.2 Signage provisions

Signs to facilities for Persons with Disabilities should incorporate the International Symbols for Accessibility.

Universally recognized symbols/pictograms should be used to replace text, wherever possible. Other symbols should supplement text, but should not be used in isolation.

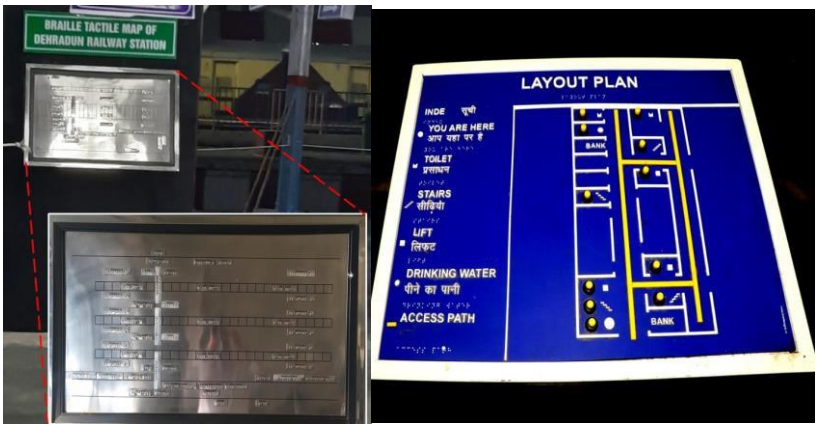
6.4.3 Types of Signages

(a) Directional

Usages of wall mounted and/or overhead signs should include directional arrows to direct users to specific areas of the port, and the facilities available therein.

(b) Information

Inform users about the features and facilities of the location and the surrounding areas, which include directions, maps, identification signs, notices etc.



(source: Dictionary on disability, MoSJ& E)

(c) Identification

To help users identify the entrances, addresses, rooms, buildings, facilities etc.

(d) Instructive

To provide instruction to the user to follow a procedure to operate a device.

(e) Health & Safety

To inform users on lifesaving directives and/ or mandatory rules that are to be followed

6.4.4 Location:

Sites for signages should be identified appropriately to enable effective dissemination of information and should cover all Port/ public buildings, spaces, and facilities including

a. Approach to building /facility/ service
b. Building / Gate Entrance /exit
c. Main lobby or reception
d. Public facilities such as cruise terminals, library, toilets etc.
e. Departments and offices
f. Fire exits
g. Parking and garages

6.4.5 Universal Signage

Signage used should be universally acceptable.

Few key aspects while designing signages are as under:

a. Colour contrast Signs
b. Character, Content and Layout
c. Pictograms and accessibility symbols
d. Positioning
e. Viewing Distance

f. Lighting (measured in lux)

g. Material and surface finish

Detailed information on incorporation of Universal features while designing such signs can be explored in Chapter 6.4 of Harmonized standards by Ministry of Urban Design

6.5 Level Changes

Amenities like Kerbs, Gradients, Flared Sides, Ramps, Handrails allow persons with disabilities to move from one level to another without much difficultly. Where there is a large change in elevation that requires multiple ramps and landing combination, other solutions such as elevators should be considered.

Universal Standards and Specifications are as under:

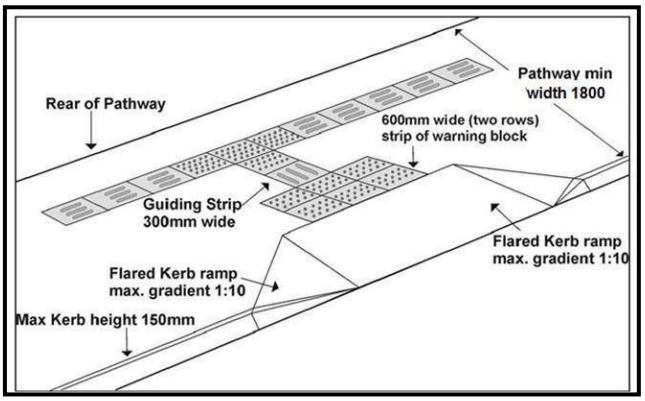
6.5.1 Main Entrances

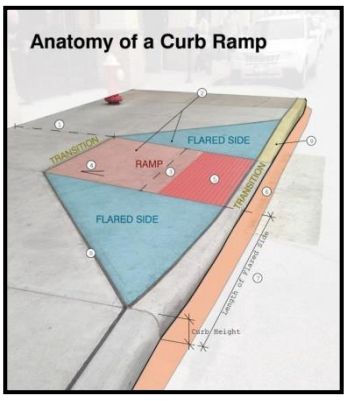
- All steps at the entrance should be provided with a handrail, on both sides, along with ramps if necessary.
- There should be a clear door width of at least 1000 mm
- The entrance door operations should be easy enough to handle independently
- The door handle should be at a height between 800 mm and 1000 mm
- The entrance should have accessibility to an elevator
- The landing surface should not be slippery.

6.5.2 Kerbs and Kerb Ramps

- Kerb and Kerb ramps provided where the vertical rise is less than 150 mm
- width should not be less than 900mm min and gradient should not be steeper than 1:12
- should have a slip-resistant surface;
- should not project into the road surface;
- should be located or protected to prevent obstruction by parked vehicles
- should be free from any obstruction such as signposts, traffic lights, etc.
- should not be used if they project in

- should be designed not to allow water accumulating on the walking surface.





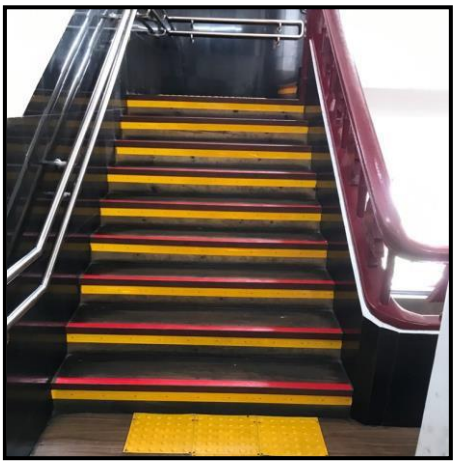
(Source: Harmonized guidelines….)

6.5.3 Ramps

- The location of the ramps should be clearly identifiable
- The ramp gradient should not be steeper than 1:12
- There should be a landing of at least 1500 mm X 1500 mm, at every 9000 mm intervals
- There should be a landing wherever there is a change in direction
- There should be a landing at the top and bottom of every ramp.
- Minimum width of the ramp should be 1500 mm
- A ramp run with a vertical rise greater than 150 mm should have handrails
- Continuous handrails should be provided on both sides, at a height of 760 mm- 900 mm
- The surface of the ramp should be non-slippery
- There should be rail/protection on both sides of the ramp

6.5.4 Stairs

- The minimum width of the stairs should be 1200 mm
- There should be continuous handrails, on both sides, at a height between 760 mm 900 mm
- If the width of the stair is more than 3m, handrails should be installed in the centre of the stair width
- The landing space should not be less than 1200 mm
- The step edges should be of a different colour or texture to be easily identifiable by low-vision & vision impaired persons
- There should be warning blocks installed at the beginning and end of all flights
- The height of the risers should be no more than 150 mm and tread should be no less than 300 mm
- Treads should have a non-slip surface
- The risers should not have open gaps
- Projecting nosing and open stairs should not be provided to minimize the risk of stumbling. Also, spiral stairs should be avoided.



(source: Dictionary on disability, MoSJ& E)

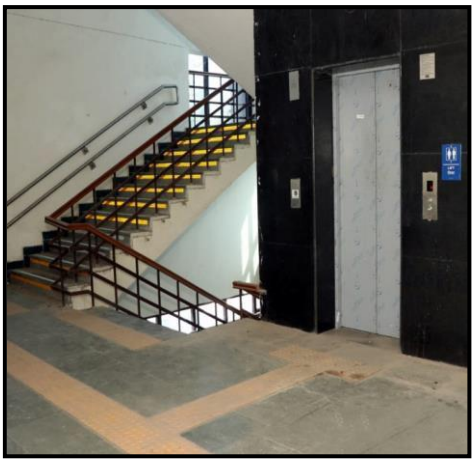
6.5.5 Handrails:

- Handrails should be mounted at a height between 760 mm- 900 mm
- Handrails should be easy to grip
- Handrails should be securely attached
- Handrails should be extended horizontally 300 mm at the top and bottom of every staircase or ramp
- The ending of the handrails should be grouted in the ground or turn downward
- The space between the handrails and the wall should not be less than 50 mm
- The handrails should be painted in contrast colours to be easily identifiable.
- There should be tactile strip/Braille plates identifications on the handrails for emergency stairs.

6.5.6 Lifts:

- Lifts provided in a building and used by the general public or staff should be accessible to and usable by Persons with Disabilities at all levels.
- Lifts should be marked with the symbol of accessibility and directional signs be provided to the lifts.
- Signs indicating the location of an accessible lift should be provided in a location that is clearly visible from the building entrance. The sign should incorporate a representation of the International Symbol for Access.
- A sign indicating the number of the floor should be provided on each lift landing on the wall opposite the lift. It is also recommended to install a floor directory of the main facilities and services available on the lift landing, along with an accessible emergency egress route that clearly indicates the location of nearest refuge areas for Persons with Disabilities.
- Minimum size of the lift should be 1500 mm wide by 1500mm deep; wherever possible, 13 passenger lift to be provided, which allows easy maneuverability for wheelchair user.
- The lift door should have a clear opening of not less than 900mm.
- Time of closing of an automatic door should be more than 5 seconds and the closing speed should not exceed 0.25 meters per second

- The call button located outside the lift should have a clear floor space of at least 900 mm x 1200 mm with no obstruction placed to prevent a wheelchair user from reaching the call button; and be installed at a height between 800 mm and 1000 mm
- The control panel should have a clear floor space of at least 900 mm x 1200 mm with no obstruction placed to prevent a wheelchair user from reaching it, be placed at a height of between 800 mm and 1000 mm from the floor level; and have buttons with Braille/ raised letters and in sharp contrast from the background to aid people with visual impairments.
- For further details with regard to the design of the lift, para 7 of Harmonized Guidelines (ministry) may be referred.



(Source : Dictionary on accessibility, MoSJ&E)

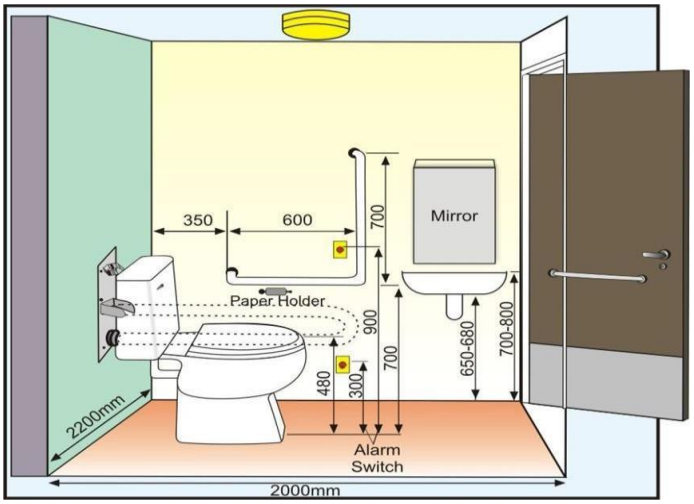
6.6 Toilets: (Unisex)

- Signage at accessible toilet entrance should be clearly visible and should comply with the International Symbol of Accessibility.
- There should be sufficient space of 2m X 2.2 m inside the toilets to manoeuvre a wheelchair.
- Water closet (WC) and bidets should be mounted at a height between 450 mm — 480 mm
- The space between the WC and the closest adjacent wall should be fitted with a grab bar at a height of 450 mm — 500 mm.
- There should be an accessible washbasin mounted a height between 750 mm — 850 mm

- The lower edge of the mirror should not exceed 1 m from the ground.
- The accessible showers should be provided with a folding seat
- There should be grab bars installed near Water Closet and showers at a height 750 mm — 850 ram
- Grab bar diameter should be 38 mm
- Wall mounted grab bars should have a minimum knuckle space 50 mm
- The grab bar should be non-slippery
- The grab bars should withstand the load of at least 200 kg
- The toilet door should be either an outward opening door or two-way opening door or a sliding type and should provide a clear opening width of at least 900 mm, with a horizontal pull-bar, at least 600 mm long, on the inside of the door, located so that it is 130 mm from the hinged side of the door and at a height of 1000 mm.
- The faucets should be easy to grip and operate with one hand
- Shower cubicles should have minimum interior dimensions of 2000 mm x 2200 mm
- Where the shower head is mounted on a vertical bar, the bar should be installed so as not to obstruct the use of grab bars
- Enclosures for the shower cubicle should not obstruct transfer from wheelchair onto shower seat
- shower seat - A wall mounted shower seat, preferably fold up kind should be self-draining, non-slip and with rounded edge
- The shower fixtures should have at least 1500 mm long hoses
- Hot water pipes should be insulated or covered
- Toilets should be equipped with an emergency alarm system
- Doors should be lockable from inside and should be releasable from outside under emergency situations
- Flushing arrangements, dispensers and toilet paper should be mounted at a height between 300 mm and 800 mm
- Flushing equipment should be easily operable,
- The floor material should be skid proof, well drained and waterproof.
- Pivoted doors should open outwards.
- An emergency alarm cum call switch should be provided within easy

reach on the wall near water closet at two levels: at 300mm and 900mm from the floor level to allow user to call for help in case of an emergency.

- Accessories should be placed in close proximity to the basin, to avoid a person with wet hands wheeling a chair.
- Urinals shall be stall-type or wall-hung, with an elongated rim at a maximum of 430 mm above the finish floor.
- The front bar is to provide chest support; the sidebars are for the user to hold on to while standing
- At least one of the urinals in the Gents toilets on each floor should have grab bars
- A clear floor space 760 mm by 1220 mm should be provided in front of urinals to allow forward approach
- Flush controls be located not more than 1200 mm from the floor
- A tactile layout of the toilet should be provided on the wall, near the latch side at 900mm height



6.7 Canteen / Eating outlets:

6.7.1 The canteens / eating outlets in the port building and facilities should be accessible to persons with disabilities

- There should be a pathway of at least 900 mm wide to allow a wheel chair user to move around the eating outlet.
- The cash and service counter height should be at a height below 800

mm The table should be accessible with a height of 750 mm to 850 mm and knee space of 750 mm wide and 480 mm deep

- The tables with fixed stools should have accessible spaces for wheel chairs.

(*Source : IPA's draft report)*

6.8 Drinking Water:

- The drinking water must be accessible.
- The tap/filter should be easily used by a person with poor hand function.
- The area should be dry.
- Clean glasses should be available.

(*Source : IPA's draft report)*

6.9 Resting facilities:

- In the case of long walkways, there should be resting facilities provided at every 30 meters interval.
- There should be an adjoining space for a wheelchair next to benches and public seats.
- The public seats should have a height between 450 — 800 mm.
- The table should be accessible with a height of 750 mm to 850 mm and knee space of 750 mm wide and 480 mm deep.

(*Source : IPA's draft report)*

6.10 Facilities provided at International / Domestic Cruise terminal shall be made accessible for persons with disabilities as under:

6.10.1 Baggage scanning and Check in counters:

- At least one check-in and baggage scanning counter accessible by wheel chair should be provided.
- It should be marked for priority treatment to people with persons with

disabilities

- Unobstructed space of 900mm X 1200 mm should be provided before check in counter.
- Warning tiles should be provided in front of the check-in counters which are connected to the accessible route tactile flooring.
- International Symbol of Accessibility of 450mm x 450mm,as shown below, should be displayed on the accessible counters.

6.10.2 Immigration:

- At least one immigration counter, giving priority treatment to persons with disabilities, should be made accessible for wheelchair and marked for priority treatment.

6.10.3 Security check:

- Separate lanes provided for males and females should have priority treatment to persons with disability and shall be marked. Both these lanes should be provided with frisking cubicle of standard size (minimum 1500mm x 1500mm for wheelchair turning).
- These lanes should be provided with the DFMD panel of minimum 1000mm width.

6.10.4 Pathway from check in point to gangway of ship/ vessel:

- The pathway from check in point to gangway of the ship to be used by public should be unobstructed with width of 2200mm to be maintained.
- Tactile guidance path (refer chapter 4) should be provided for ease of accessibility to persons with disabilities.
- Corridors should be well lit, provided with directional and information signages as mentioned above and provided with accessible grabs, hand rails wherever possible.
- The surfaces should be even and kerb ramps should be provided, as shown above, wherever required for passing over different level.
- For persons with visual impairment, red strips to be provided along tactile path in the corridor.

6.10.5 Gangway for access to vessel from port side:

- The gangway for access to vessel from port side shall be easily accessible by persons with disabilities.
- Accessible ramps should be provided for boarding and disembarkation from the vessel.

6.11 Onboard the Ship / Vessel

6.11.1 The Cruise/ Passenger ships have many infrastructure facilities such as Cabins, Cafetaria, passages, rest areas, leisure areas, auditorium, level changes such as stairs, lifts, etc., toilet, water closet etc which are utilised by all the passengers including persons with disabilities. These facilities should be made accessible for Persons with disabilities adhering to norms as under:

- Ramps for ease of movement from shore to ship and from ship to shore for the persons with disabilities and reduced mobility.
- Signages should be provided as per specifications mentioned at Para 6.4 above
- Level changes such as lift, stairs, kerbs, ramps should be as per Para 6.5 above.
- Handrails should be provided at these level changes as at Para 6.5.5 above.
- Few Cabins, in proportion to the market demand, should be provided for persons with disabilities for easy accessibility. Within a cabin, space should be set aside for securing a wheelchair in a position.
- Few unisex toilets, in proper ratio of passenger capacity of the ship, should be provided with easy accessibility to the persons with disabilities as provided in Para 6.6 above.
- Cafetaria, restaurant should be accessible for persons with disabilities as at Para 6.7 (provided for canteen/ eating outlets facilities).
- Drinking water, resting facilities should be as at Para 6.8 and 6.9 respectively.
- Auditorium/ theatres should be made accessible to persons with disabilities by providing kerbs, ramps, handrails, etc. at proper positions. Special seating arrangement should made for such persons.

6.11.2 The Ship operators of small ferry ships should provide following :

- The Ferries should be fitted with accessible ramps
- Space should be set aside for securing a wheelchair in a position / or lock it in fixed position.
- Wheelchair should be made available on call.

The aforesaid specifications are provided considering the space availability. However, considering the space constraints on board the ship/ vessel, proper alternatives can be used for above such as use of foldable wheelchair, movable ramps, etc.

The cruise ships deployed on domestic circuits are mostly the old passenger ships bought in the second hand international markets and refurbished to Indian standards before its registration with the competent authority under Indian Statutes for domestic operations. The authorities responsible for registration of such ships may ensure as a precondition that such ships comply with above accessibility standards at the time of their refurbishment.

(Picture courtesy: https://www.thehindu.com/news/cities/Kochi/indias-first-full-fledged-global-cruise-terminal-in-kochi/article29966979.ece)

At many places smaller passenger boats of capacity varying from 40 to 150 are used for short distance water transportation of passengers. These smaller passenger boats plying short distances within the harbor are licensed either by the port authorities or by the state maritime board. The licensing authorities can make suitable provisions in their procedures for licensing these boats to ensure that some percentage of the seating capacity of these boats are equipped to meet the requirements of passengers with disability and reduced mobility. Likewise, the

infrastructure facility in the harbour from where these smaller passenger boats operate also need to be provided with facilities meeting accessibility standards such as ramps along the steps, handrails, etc. Also, the staff employed by the small passenger boat operators need to be sensitized to facilitate accessibility to this mode of water transportation to the passengers with disability.

Summary of recommended guidelines on Port specific design elements:

The facilities provided in the port premises and building structures should be considering ease of Accessibility for persons with disabilities and reduced mobility.

The transport roads within the port areas and facilities, alighting and boarding areas, Car Parks, Taxi / Auto rickshaw stands / bus stops, Piers, Jetties, Cruise Terminals, Cruise/ Passenger Ships/ vessels should have following facilities in compliance with the Accessibility standards:

(i) Signages at proper location, easy to understand, universal in nature, understandable by people of all ethnicities and cultures and languages, through use of pictograms.

(ii) Level changes and Handrails provided at International/ Domestic Cruise terminal, On board the Ship / Vessel should be as per the accessibility standards.

References

1. The Rights of Persons with Disabilities Act, 2016
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7. Guidelines for accessible maritime passenger transport, NDA.
8. https://journalsofindia.com/sagarika-cruise-terminal-at-cochin-port

IPA's Committee *on Guidelines for Accessibility* Standards *in Port* Sector