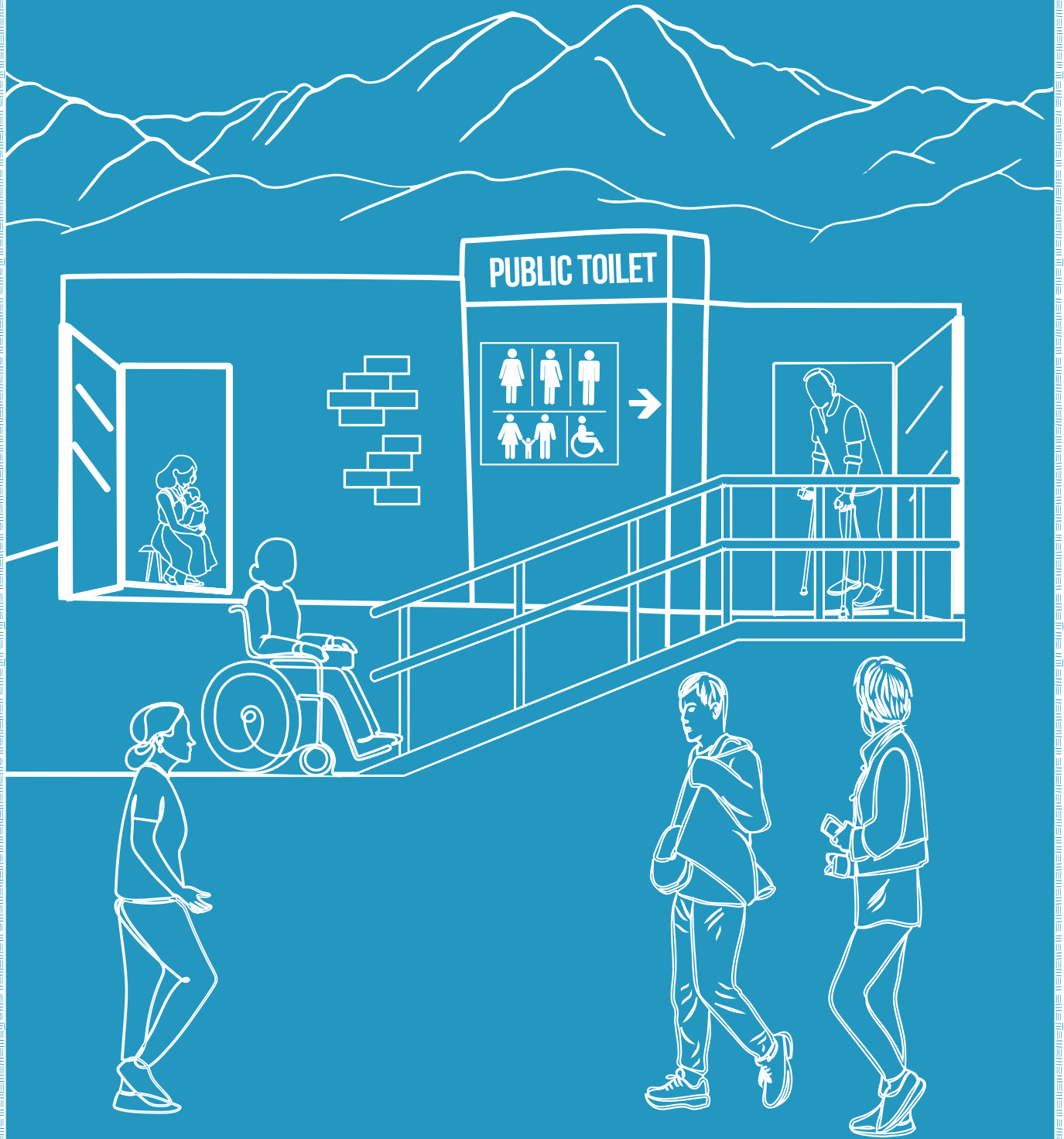




Localising the vision "Swachh evum Sugamya" Uttarakhand

Guidelines and Standards to Create Inclusive Aspirational Public Toilets

A Compilation





उत्तराखण्ड शासन



Sanitation Capacity
Building Platform



National Institute of Urban Affairs

Localising the vision "Swachh evum Sugamya" Uttarakhand

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A Compilation

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DISCLAIMER

This publication is intended to be used as a guide for planning an inclusive public sanitation facility. It primarily considers the needs of marginalised groups (persons with disabilities, women, children, elderly, and other gender minorities) while designing a public sanitation facility.

It compiles the relevant guidelines, standards and best practices available/applicable in India for the promotion of an inclusive sanitation facility.

Published in 2024.

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Abbreviations

SBM	:	Swachh Bharat Mission
AMRUT	:	Atal Mission for Rejuvenation and Urban Transformation
UNICEF	:	United Nations Children's Fund
WHO	:	World Health Organisation
GoI	:	Government of India
WASH	:	Water, Sanitation and Hygiene
SOPs	:	Standard Operating Procedures
MHM	:	Menstrual Hygiene Management
CSZ	:	Core Sanitation Zone
SDGs	:	Sustainable Development Goals
CWIS	:	Citywide Inclusive Sanitation
ULBs	:	Urban Local Bodies
O&M	:	Operations and Management
3D	:	Three-Dimensional
PT	:	Public Toilet
CT	:	Community Toilet
WC	:	Water Closet
CCTV	:	Closed Circuit Television
GI	:	Galvanised Iron
MTV	:	Mobile Toilet Vans
LRV	:	Light Reflectance Value
LEDs	:	Light Emitting Diode
CFL	:	Compact Fluorescent Lamp
DWWM	:	Decentralised Wastewater Management System
RCC	:	Reinforced Cement Concrete
FRP	:	Fibre Reinforced Plastic
CPHEEO	:	Central Public Health & Environmental Engineering Organisation
SWM	:	Solid Waste Management
DRDO	:	Defence Research and Development Organisation
I&D	:	Incision and Drainage
STP	:	Sewage Treatment Plant
TGSI	:	Tactile Guiding Surface Indicators
ODF	:	Open Defecation Free

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Secretary



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MESSAGE

It is with great pleasure and a sense of accomplishment that I introduce the 'Guidelines and Standards to Create Inclusive Aspirational Public Toilets' which embodies the essence of our commitment to Inclusive Sanitation (CWIS) in the urban areas of Uttarakhand.

The collaboration between the Urban Development Directorate (UDD) of Uttarakhand and the National Institute of Urban Affairs (NIUA) has played a critical role in our pursuit of making our state cleaner, more accessible, and truly inclusive. This document has been enriched by the findings of the comprehensive assessment of public sanitation facilities from the lens of inclusion.

I am pleased that this document marks a pioneering achievement in Uttarakhand, driving forward the cause of Inclusive Sanitation in India. In alignment with the Swachh Bharat Mission's objective to enhance the overall quality of life and well-being for all individuals in India, regardless of their physical abilities or social backgrounds, the compilation of these standards and guidelines offers a precious resource for our state. This document will ensure that we achieve the goal of making public toilets accessible and inclusive for all. It is a testament to our unwavering dedication to enhancing the quality and creating aspirational and inclusive public toilets in Uttarakhand.

I would like to extend my heartfelt appreciation to our partner, NIUA for their indispensable support in the development of this document. I am confident that this document will play a pivotal role in shaping the future of public sanitation infrastructure in Uttarakhand.

I urge all stakeholders, urban planners, and administrators to encourage the widespread adoption of this document. Let it be the guiding light that leads us to a cleaner, more inclusive future. Together, we can make Uttarakhand an example for the rest of the nation to follow.

Shri. Nitesh Jha, IAS

Secretary, Urban Development Department
Government of Uttarakhand

(Nitesh Kumar Jha)
Secretary
Urban Development
Govt. of Uttarakhand

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funskd
Nitin Singh Bhadauria, IAS
Director



'lgjh fodkl funskky;
Directorate Urban Development

MESSAGE

I am pleased to introduce the 'Guidelines and Standards to Create Inclusive Aspirational Public Toilets' a testament to our commitment to advancing Citywide Inclusive Sanitation (CWIS) in the urban areas of Uttarakhand.

The collaboration between the Urban Development Directorate (UDD) of Uttarakhand and the National Institute of Urban Affairs (NIUA) has been a remarkable journey that has led to the creation of this comprehensive document. This document mirrors our collective vision to foster vibrant, clean, and infrastructure-strong urban areas in Uttarakhand. It encapsulates our dedication to forging a more accessible and inclusive urban environment, particularly for marginalised communities often overlooked during the planning and design of public toilets. Hopefully it serves as a resource for guiding our efforts to provide better facilities and services for all citizens.

I extend my heartfelt gratitude to the dedicated team behind this endeavour and our esteemed partners at NIUA for their steadfast support.

I encourage all the departments in the state to make the most of this resource. Let us collaborate to build cities that align with our vision for integrated development, making them vibrant, clean, and infrastructurally strong, while improving our service delivery. Together, let us build cities that are inclusive, aspirational, and beacons of excellence in the realm of sanitation.

Nitin Singh Bhadauria, IAS
Director, Urban Development Directorate (UDD)
Government of Uttarakhand

MESSAGE

I congratulate the Urban Development Directorate (UDD), Government of Uttarakhand, for their dedicated pursuit towards inclusive sanitation. The National Institute of Urban Affairs (NIUA) is honoured to have supported the state of Uttarakhand in the development of the “Guidelines and Standards to Create Inclusive Aspirational Public Toilets.”

Through this document, UDD has addressed the diverse dimensions of sanitation, including Menstrual Hygiene Management (MHM), caregiving facilities, inclusion, and accessibility. This document is a compilation of a comprehensive set of standards and guidelines, each focusing on these aspects individually. It plays a pivotal role in realising the creation of aspirational toilets, as envisioned under the Swachh Bharat Mission (SBM), both within Uttarakhand and at a nationwide scale.

This document serves as a guidance for the design of public conveniences including the services to the marginalised through a holistic and inclusive lens. I strongly encourage all urban local bodies, architects, urban planners, engineers and other stakeholders involved in sanitation to adopt the principles and guidelines outlined in this document. Together, let us work towards safe, inclusive and accessible sanitation for all with a particular focus on urban poor and vulnerable demographics.



Dr. Debolina Kundu

Director (Additional Charge)

National Institute of Urban Affairs

Executive Summary

Urban areas are experiencing rapid expansion as city boundaries stretch to connect with neighbouring cities, satellite towns, and rural regions. This urban sprawl has ushered in fresh opportunities for socio-economic growth, leading to an influx in both the urban population and daily commuters within the cities. This increased diversity in the urban populace demands better urban infrastructure especially the basic sanitation services. Access to basic sanitation facilities is essential for safeguarding public health, promoting human dignity, supporting economic development, ensuring environmental sustainability, and enhancing the overall well-being of all.

The United Nations recognised 'Access to Sanitation as a human right – fundamental to everyone's health, dignity and prosperity'. It is a human right that ensures everyone; irrespective of age, gender and disability uses the facilities with dignity. As the urban population comprises diverse groups that have unique sanitation needs, and as this diversification progresses, public sanitation also has to be accommodative towards their needs. To address these challenges, the Government of India (GoI) and other agencies, both public and private have issued numerous guidelines, checklists, frameworks, Standard Operating Procedures (SOPs), and policy instruments.

The Government of India (GoI) introduced Swachh Bharat Mission (SBM) 2.0 to sustain the achievements of SBM 1.0 and resolve sanitation challenges to create healthy, sustainable, and liveable urban environments. A key aspect of SBM 2.0 is the creation of aspirational toilets, i.e., 25% of public toilet seats added in any city or urban unit, hereof, to be 'aspirational toilets'.

In Uttarakhand, the state is committed to achieving universal sanitation coverage and eradicating open defecation by constructing approximately 4,642 public and community toilets. In a continued commitment to this mission, the Government of Uttarakhand has embarked on the implementation of Inclusive Sanitation through the '**Swachh evum Sugamya Uttarakhand**' project. Given its title of 'Deva Bhumi' and the scenic beauty attracting a substantial number of tourists, Uttarakhand experiences a significant influx of visitors who rely on public utilities like toilets. Recognising this, the state has identified the necessity to plan public sanitation that cater to the diverse needs of both its population and the millions of tourists traveling to the region. This document "**Guidelines and Standards to Create Inclusive Aspirational Public Toilets**" is a significant step towards promoting inclusive public sanitation.

The document covers technical norms for the macro-level (planning) and micro-level (design) for the public toilets, particularly the building superstructure. Its primary purpose is to serve as a comprehensive technical resource for the creation of inclusive public toilet facilities by providing guidance for the development of user-friendly and accessible public toilets. It is intended to improve accessibility and inclusivity for a wide range of demographic groups including persons with disabilities, women, children, the elderly, and transgenders.

With an emphasis on the internal features along with the external components of the public toilets, the document ensures that the varied needs of its users are addressed. This document is a compilation of guidelines, standards and best practices published by the Government of India (GoI) for various purposes at different time periods. The information in the document is structured to ensure ease of use by the stakeholders as well as comprehensively guide them on making the internal as well as external environment inclusive for all.

The document provides details on every inclusive aspect of creating public sanitation facilities. It also presents a design prototype of an inclusive sanitation facility. The provisions are arranged to complement a user's experience on his journey to use a public toilet, following the sequential steps of their journey. It is expected that this document will address the vital need for equitable access to public sanitation for all, echoing the principal of 'Leave No One Behind'. It encompasses all the elements from the planning stage to the construction of exterior and interior elements, as well as the provisions for the staff, revenue generation, information and utilities.

The document covers the aspects of a public toilet from the master planning to building services level. It illustrates the guidelines and standards on making each step of designing and planning inclusive to the diverse

needs of its user group. The norms also encompass considerations for the safety, comfort and privacy of all the users, leading to holistic development of public toilets.

This document is a compilation of standards and guidelines for inclusive urban facilities, from across various documents developed and issued by the Government of India over the years. The **National Institute of Urban Affairs (NIUA)** has compiled all these standards and guidelines supplemented with additional recommendations to comprehensively address all facets of inclusive urban development in public sanitation facilities. These documents have been vetted by a set of domain experts to uphold quality and emphasise inclusion in public sanitation design. The initiative has been supported by BMGF and NFFSM Alliance.

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01

INTRODUCTION

1.1 Context

The United Nations recognised 'Access to Sanitation as a human right – fundamental to everyone's health, dignity and prosperity. Access to basic sanitation facilities is essential for safeguarding public health, promoting human dignity, supporting economic development, ensuring environmental sustainability, and enhancing the overall well-being of urban populations. A collaborative report by UNICEF-WHO (2012) reported that India was home to 626 million people practising open defecation out of the total one billion across the world. With the Swachh Bharat Mission (SBM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Jal Jeevan Mission focusing on the provision of toilets, and efficient sewerage and septage management, the existing gaps in the provision of WASH facilities for everyone is attained. Under SBM, approximately 100 million household toilets and six million community toilets and public toilets have been constructed in rural and urban areas respectively till date. The country declared itself Open defecation free (ODF) in 2019. As per UNICEF, there is a significant reduction in the number of people without access to toilets by an estimated 450 million people. SBM 2.0 focuses on sustaining the achievements of SBM 1.0 and ensuring sanitation challenges are resolved to create healthy, sustainable, and liveable urban environments. One of the key aspects of SBM 2.0 is the creation of aspirational toilets i.e., 25% of public toilet seats added in any city or urban unit, hereof, to be 'aspirational toilets.'⁴⁹

Urbanization brings about a ripple effect, expanding city boundaries to connect with neighbouring areas. There has also been an increase in fresh opportunities for socio-economic growth, leading to an influx in both the urban population and daily commuters within the cities. This growth has brought about an increased diversity within the urban populace that are dependent on public utilities. Though public sanitation facilities play a vital role in creating healthy, inclusive, and functional urban environments, these facilities lack consideration of provisions for users on the basis of disability, gender and socio-economic status. The access of such user groups is hindered by a confluence of prevailing stigmas and safety concerns w.r.t. using public toilets (PTs), lack of social integration during planning of public toilet facilities, inadequate toilet infrastructure design, and lack of awareness and sensitisation.

The design of the public toilets cater to a very few basic needs of the diverse user group and is limited to accessibility only. While various national guidelines include accessibility features like ramps, staircases, and grab rails in disabled-friendly toilets, provisions also extend to installing sanitary napkin vending machines and incinerators. To truly enable the use of these facilities, it's crucial to ensure a user-friendly and accessible end-to-end experience.

The lack of inclusive and accessible sanitation facilities catering to the specific needs of all citizens, including marginalized and diverse populations such as persons with disabilities, women, children, the elderly, and transgenders, leads to further exclusion and isolation. This impedes independence of these groups, often forcing individuals to rely on others for their basic needs. This may lead to latency in use of public toilets, posing health risks, such as urinary tract infections and constipation. The absence of suitable public toilets not only erodes dignity, but also impacts their physical and mental well-being, perpetuates inequalities, and hampers social participation of marginalised groups such as persons with disabilities.

Addressing these pressing concerns, the Government of India (GoI) and other agencies, both public and private have issued numerous guidelines, checklists, frameworks, Standard Operating Procedures (SOPs), and policy instruments. To name a few, the SBM guidelines primarily focus on achieving Open Defecation Free (ODF) status, promoting toilet construction, responsible solid waste management, behaviour change, and improved sanitation practices for a cleaner and healthier environment in India. The Central Public Health and Environmental

⁴⁹*Aspirational Toilet is a facility beyond basic and conventional functionality and embodying higher qualities like cleanliness, modernity, accessibility, and aesthetics. It includes environmentally sustainable high-quality materials, innovative design elements, advanced sanitation technology, and user-experience enhancing amenities.*

It is important to note that the concept is still evolving, and the specific features and standards may vary depending on location and budget. However, the underlying goal remains to create public toilets that are not just functional but also dignified and comfortable, leading to a positive shift in sanitation practices.

Engineering Organization (CPHEEO), has compiled- 'Advisory on Public and Community Toilets,' emphasising standards and recommendations for the construction, upkeep, and design of toilet facilities to enhance hygiene, sanitation, and reduce open defecation in public areas. The Ministry of Housing and Urban Affairs (MoHUA) had launched the revised 'Harmonised Guidelines and Space Standards for Universal Accessibility in India – 2021', which provides guidelines and standards for building different types of universally accessible sanitation facilities. Additionally, the 'Inclusive Sanitation: Way forward for Cities' framework aims to establish efficient and inclusive urban sanitation services, with an emphasis on marginalised groups and their empowerment, and social equity. The National Guidelines for Menstrual Hygiene Management (MHM) concentrate on facilitating menstrual hygiene management for women and adolescent girls in toilets at public school.

Despite the wealth of existing knowledge and resources, there remains a widespread lack of awareness regarding the creation of inclusive public toilet facilities. As a result, the problems persist, perpetuating a cycle of sanitation issues upheld by cultural norms and misconceptions. Inadequate maintenance and substandard infrastructure further plague existing facilities, rendering them unhygienic or non-operational. The challenges are exacerbated by urbanisation, as inadequate infrastructure struggles to accommodate growing urban populations, resulting in insufficient public toilet provision.

A comprehensive and collaborative approach is imperative to tackle these interconnected challenges and achieve the national as well as global goals, necessitating the adoption of a 'Citywide Inclusive Sanitation (CWIS)' Approach. As per the World Bank, Citywide Inclusive Sanitation (CWIS) looks to shift the urban sanitation paradigm, aiming to ensure everyone has access to safely managed sanitation by promoting a range of solutions - both onsite and sewerred, centralized or decentralized—tailored to the realities of the world's burgeoning cities.⁵⁰ There is an imperative need to shift from a piece-meal approach to ecosystem approach, where the development is more holistic.

1.2 Swachh evum Sugamya Uttarakhand

Public toilets facilities are a crucial component of urban infrastructure, as they not only improve the quality of life for city residents but also cater to the needs of visitors, commuters, and those in transit. Under the SBM, the state of Uttarakhand, strived to achieve universal sanitation coverage and eliminate open defecation. To ensure public sanitation for all its citizens, the state has constructed approximately 4,642 public and community toilets. This ongoing progress in public toilet facilities and their access provides various opportunities for mainstreaming inclusive sanitation in public toilets. In line with this and the ecosystem approach, the Government of Uttarakhand partnered with the National Institute of Urban Affairs (NIUA) to implement Inclusive Sanitation under the 'Swachh evum Sugamya Uttarakhand' project.

1.3 About the Document

The Swachh Bharat Mission 2.0, emphasises that the benefits of improved sanitation and hygiene must reach all sections of society, including marginalised and vulnerable communities. It intensifies the focus on citizen engagement for achieving the goals set. In this regard, the '[Handbook on Accessible Household Sanitation for Persons with Disabilities \(PwDs\)](#)⁵¹ prepared in 2015 guides the construction of accessible Individual Household Latrines (IHHLs). However, to establish inclusive public environments for all, initiating a knowledge-driven effort regarding public toilets is crucial for fostering inclusion among marginalized groups.

⁵⁰(Citywide Inclusive Sanitation (CWIS) Initiative, 2021)

⁵¹(Ministry of Drinking Water and Sanitation, Swachh Bharat Mission (Gramin), Government of India, 2015)

This document, **'Guidelines and Standards to create Inclusive Aspirational Public Toilets'** serves as a repository of technical norms required to influence public toilet design to make it inclusive for all. Its primary purpose is to provide guidance for the development of user-friendly and accessible public toilets that align with various standards and guidelines. Additionally, the document takes into account design considerations that play a crucial role in the operations and management (O&M) of the toilet. However, other aspects falling under this topic are beyond the scope of this document. It is intended to improve accessibility and inclusion for a wide range of demographic groups including persons with disabilities, women, children, the elderly, and transgenders.

The document covers technical norms for the macro-level (planning) and micro-level (design) for the public toilets, particularly the building superstructure. It consolidates various standards and guidelines for inclusive and accessibility provisions as well as provides suggestive layouts for the development of inclusive and aspirational public toilets. The document will be useful for the decision-makers and professionals across the public and private sectors, including; (1) Parastatal State bodies; (2) Urban Local Bodies (ULBs); (3) Architects; (4) Engineers; (5) Sanitation Inspector; (6) Contractors; (7) Service Providers; and (8) Private agencies.

This document makes an effort to provide a comprehensive understanding of crucial inclusive aspects in the development of public sanitation facilities. It accommodates diverse user needs, spanning disabilities, age, gender, and socio-economic backgrounds, addressing caregiving, accessibility, and menstrual hygiene requirements across various demographic groups. It aligns with the objectives of SBM 2.0, expanding the advantages of improved sanitation and hygiene for all the sections of society. It is developed as a one-stop resource hub for inclusive and accessibility provisions as well as building layouts for public toilets, simplifying the planning and design process for stakeholders. Through these provisions, the document promotes inclusion in public sanitation, aiming for equitable access for all. Aligned with the overarching objective of 'Leave No One Behind,' it reinforces the commitment to establishing a universally inclusive sanitation landscape. The key features of the documents are - (1) comprehensiveness; (2) technical guidance; (3) alignment with national mission; (4) one stop ready reckoner; (5) inclusive lens; and (6) influencing the value chain.

The entire process involved an extensive literature review of national standards, reports, papers, and articles, that explored user requirements, such as accessibility, caregiving amenities, safety, security for women and girls, menstrual hygiene management, and gender-neutrality. This was followed by the curation of recommendations, suggestions and guidelines across various manuals, guidelines, codes and standards released by the Government of India. This step highlighted overlapping information and reiterated provisions pertaining to planning and design of the public toilets across the documents. The standards and guidelines analysed in detail, but not limited to were as follows;

1. Advisory on Public and Community Toilets by Central Public Health & Environmental Engineering Organisation, Ministry of Housing and Urban Affairs, Government of India, November 2018.⁵²
2. Revised Guidelines for Swachh Bharat Mission - Urban by Ministry of Housing and Urban Affairs, Government of India, October 2017.⁵³
3. Swachh Bharat Mission - Urban 2.0: Operational Guidelines by Ministry of Housing and Urban Affairs, October 2021.⁵⁴
4. Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation, Government of India, December 2015.⁵⁵
5. Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance, October 2020.⁵⁶

⁵²(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)

⁵³(Ministry of Housing and Urban Affairs, Government of India, 2017)

⁵⁴(Ministry of Housing and Urban Affairs, Government of India, 2021)

⁵⁵(Ministry of Drinking Water and Sanitation, Government of India, 2015)

⁵⁶(National Faecal Sludge and Septage Management Alliance, 2020)

6. Harmonised Guidelines and Standards for Universal Accessibility in India, 2021 by Ministry of Housing and Urban Affairs (MoHUA), Government of India.⁵⁷
7. Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines by Town and Country Planning Organisation, Ministry of Urban Development, Government of India, January 2015.⁵⁸

Accessibility audits of public toilets in Uttarakhand included spatial evaluations and user perspective capture, revealing specific provisions incorporated and lacking in these facilities. Case studies of existing inclusive toilet facilities provided insights into innovations, technology integration, financial models, operation and maintenance strategies, sustainability, risk assessments, and user and service provider benefits. Lastly, designs of existing public toilets, documented during audits, were reviewed and enhanced according to standards and guidelines, prioritising practical feasibility and inclusion.

In summary, our methodology integrated literature review, standards analysis, audits, case studies, and design reviews, driving improvements and contributing to a inclusive public toilet design document.

1.4 How to Use

This document is organized to guide users through the various facets of a public toilet, mapping the sequential progression of their journey. The structured table of contents leads users from the external areas of the public toilet to its internal spaces. It comprehensively addresses provisions concerning the site entrance of the public toilet complex, extending to the main entrances of the toilet building. Additionally, it delineates provisions for various user-accessible features within the toilet, including essential spaces such as the caretaker's room and storage room, emphasizing the caretaker's journey.

The document also comprises provisions related to revenue-generating activities and building services and utilities of the toilet. In all, it captures a holistic view of all-encompassing features associated with a public toilet. Additionally, this document mentions which sections are useful during different project stages. The project stages include - Feasibility Study, Concept Development, Design Tendering, Procurement, Implementation, and Operations & Maintenance. The Table 1 provides the detailed overview of the project stages stated above corresponding to each chapter.

Table 1 Corresponding planning stage for each chapter of the document

S.No	Chapter	Corresponding Project Stage
1	Planning	Feasibility Study, Concept Development, Design Stage, Tendering Stage, and Operations & Maintenance Stage.
2	External Elements	Design Stage, Tendering Stage, Procurement Stage, Implementation Stage and Operations & Maintenance Stage.
3	Internal Elements	Design Stage, Tendering Stage, Procurement Stage, Implementation Stage, and Operations & Maintenance Stage.
4	Ancillary Provisions	Concept Development Stage, Design Stage, Tendering Stage, Procurement Stage, Implementation Stage, and Operations & Maintenance Stage.
5	Revenue Generating Provisions	Feasibility Stage, Concept Development Stage, Design Stage, Tendering Stage, Procurement Stage, Implementation Stage, and Operations & Maintenance Stage.
6	Information Systems	Design Stage, Tendering Stage, Procurement Stage, Implementation Stage and Operations & Maintenance Stage.
7	Materials and Finishes	Design Stage, Tendering Stage, Procurement Stage, Implementation Stage and Operations & Maintenance Stage.

⁵⁷Ministry of Housing and Urban Affairs, Government of India, 2021)

⁵⁸(Town and Country Planning Organisation, Ministry of Urban Development, Government of India, 2015)

S.No	Chapter	Corresponding Project Stage
8	Building Services	Design Stage, Tendering Stage, Procurement Stage, Implementation Stage and Operations & Maintenance Stage.
9	Utilities	Design Stage, Tendering Stage, Procurement Stage, Implementation Stage and Operations & Maintenance Stage.
10	Design Prototype	Feasibility Study, Concept Development, Design Stage, Implementation Stage, and Operations & Maintenance Stage.

This document provides a comprehensive list of provisions from relevant guidelines, standards and best practices which enable the development of inclusive and aspirational; public toilets. This list consists of both; provisions that are pertinent to the development of such public toilet facilities (indicated in **blue-coloured text**), as well as provisions when included will enhance a user's experience of the toilet facility (indicated in black-coloured text). The mandatory features are obligatory to enhance the functionality and efficiency of the public toilet facility, while the recommendatory provisions are to be adopted on need-basis.

02

PLANNING

This chapter sets out the norms for the spatial planning of the public toilet and its integration with the city's profile. Public toilets should be planned in a way that it meets the requirements of city's population and are located strategically throughout the city. Starting from the location to the design of the toilet, it must allow for universal access and ease of use. It must adequately address the different sanitation needs of special user groups including, women, children, elderly, persons with disabilities, and other gender minorities. To ease planning efforts by cities, it is important that toilets are planned & constructed based on the user needs as well as local conditions.⁵⁹

This chapter lists down the minimum standards and numbers of different toilet facilities based on the number of users and their requirements. The standards and guidelines pertaining to the toilet location and surroundings, and their visibility are also elaborated. It further specifies fundamental provisions for the toilet facility important for user safety and its external walls. These provisions are important as they help plan the toilet facilities which facilitate inclusion as an integral unit from the beginning of the design process.

2.1 Number of Facilities

2.1.1 Men's Toilet

Guidelines	
2.1.1.1	Provide 1 urinal for every 50 individuals.
2.1.1.2	For a population up to 400, provide 1 WC for every 100 individuals.
2.1.1.3	For a population above 400, provide 1 WC for every 250 individuals or fewer.
2.1.1.4	Ensure that at least 25% of the WCs are Indian-style.
2.1.1.5	Provide 1 wash basin per WC and Urinal.
2.1.1.6	Ensure that minimum one urinal is accessible (same as child-friendly). (Refer to Section 2.1.4 and 4.6)
2.1.1.7	Provide bathing/washing units in men's and women's toilets at relevant places.
2.1.1.8	Provide one bathing unit for every 50 users.

2.1.2 Women's Toilet

Guidelines	
2.1.2.1	For a population up to 200, provide 2 WCs for every 100 individuals.
2.1.2.2	For a population above 200, provide 1 WC for every 100 individuals or fewer.
2.1.2.2	Ensure that at least 50% WCs are Indian-style.
2.1.2.3	Provide 1 wash basin per WC.
2.1.2.4	Provide bathing/washing units in men's and women's toilets at relevant places.
2.1.2.5	Provide one bathing unit for every 50 users.

⁵⁹(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)

2.1.3 Other Inclusive Provisions

Guidelines	
2.1.3.1	Provide one accessible toilet in both male and female toilet groups. OR One unisex/gender neutral accessible toilet per facility. (Based on need assessment of anticipated footfall and land availability)
2.1.3.2	Provide minimum one toilet cubicle with child-sized WC or a seat adaptor in both men's and women's toilet. (Refer to Section 4.6)
2.1.3.3	Provide one child-friendly wash basin in both men's and women's toilet. (Refer to Section 4.6)
2.1.3.4	In case of multiple bathing/washing units, ensure that at least one unit is accessible in both men's and women's toilets. (Refer to Section 4.7.4)
2.1.3.5	In case only one bathing/washing unit is provided, it should be made accessible. (Refer to Section 4.7.4)
2.1.3.6	Provide gender-neutral toilets that are usable by all (women, children, elderly, persons with disabilities, and other gender minorities) at appropriate places. (Refer to Section 4.8.1)

A Case Illustration for Designing Toilet Facilities for High Footfall

For a toilet with a footfall of 500 users on a daily basis in both men's and women's toilets, respectively;

1. Number of facilities in the Men's Toilet;

- Provide 1 urinal for every 50 individuals.
 $500 \text{ male user population} / 50 = 10 \text{ Urinals}$, out of which **at least 1 is an accessible (child-friendly) urinal.**
- For a population up to 400, 1 WC has to be provided for every 100 individuals, and for a population above 400, provide 1 WC for every 250 individuals. Also 25% of the toilets should be Indian.
Therefore, $500 \text{ male user population} / 250 = 2 \text{ WCs}$
 $\text{WCs} / 4 = 0.5$ (Consider 1)
Therefore, provide **total 2 WCs**, out of which **at least 1 WC is Indian-style.**
- Provide 1 washbasin per WC and Urinal
Therefore, $10 \text{ (Urinals)} + 2 \text{ (WCs)} = 12 \text{ Wash Basins}$
- Provide 1 bathing/changing area for every 50 male users. Also, provide at least 1 accessible bathing/washing unit.
Therefore $500 \text{ male user population} / 50 = 10 \text{ Bathing/Washing Units}$, out of which **at least 1 is an Accessible Bathing Unit.**

2. Number of facilities in the Women's Toilet;

- For a population up to 200, 2 WCs has to be provided for every 100 individuals, and for a population above 200, provide 1 WC for every 100 individuals. Also 50% of the toilets should be Indian.
 $500 \text{ female user population} / 100 = 5 \text{ WCs}$
 $5 \text{ WCs} / 2 = 2.5$ (Consider 3)
Therefore, provide **total 5 WCs**, out of which **at least 3 WCs are Indian-style.**
- Provide 1 Wash Basin per WC
 $1 \text{ (Wash Basin)} \times 5 \text{ (WCs)} = 5 \text{ Wash Basins}$
- Provide 1 bathing/washing unit for every 50 male users
Therefore, $500 \text{ female user population} / 50 = 10 \text{ Bathing/Washing units}$ out of which **at least 1 is an Accessible Bathing Unit.**

2.2 Location and Surroundings

Guidelines	
2.2.1	Easily visible and safe to access toilet premises.
2.2.2	Locate it within a reasonable walking distance, (preferably within 1 km) of activity generating areas such as footpaths, streets, bus stops, parking, petrol pumps, markets, religious places, parks, tourist spots, educational campuses and health centres.
2.2.3	Avoid unsafe and rundown locations such as liquor shops, areas with no/poor street light, walking access, narrow lanes, etc.
2.2.4	Ensure that surrounding vegetation, including trees and plants, does not obscure the public toilet's visibility or create concealed spaces.
2.2.5	Ensure that the area within 3 m (3000 mm) from each direction of the structure is free of unauthorised construction and vendors.

2.3 Toilet Layout

Guidelines	
2.3.1	Ensure that the toilet design and layout consider the needs of women, children, elderly, persons with disabilities, and other gender minorities.
2.3.2	Separate toilet blocks for women and men with entrances at sufficient distance.
2.3.3	For single storied buildings, allow roof access only through ladders.
2.3.4	For single storied toilets, ensure that the minimum wall height is 9 ft (2800 mm).
2.3.5	Restrict access to all areas not intended for public occupancy or areas with no fixtures.
2.3.6	Installation of Closed-Circuit Television (CCTV) at the entrance of the toilet.

2.4 External Walls

Guidelines	
2.4.1	Use external walls either for advertisements or public awareness messages on safe and hygienic sanitation practices.
2.4.2	Ensure that the advertisement boards do not interfere with the toilet operations and safety.
2.4.3	Ensure that facade design avoids/minimises graffiti and posters.
2.4.4	Explore the potential for incorporating local art, cultural and heritage elements.
2.4.5	Provide all information in local and popular vernacular languages.

03

EXTERNAL ELEMENTS



Image 1 'Ti' Toilet outside Shaniwar Wada, Pune

Image Credits: Monica Thakur



This chapter outlines the guidelines and standards related to various elements of the external environment i.e. lying outside the toilet building, within the toilet complex. Every built environment is usually approached from an external site entrance before one approaches the building entrance door. The site entrances, access routes and walkways must be planned and designed while considering the needs of PwDs and other diverse user groups. Walking routes or pathways are one of the critical elements to make sites socially inclusive allowing diverse user groups to access them.⁶⁰ It is crucial to design for universal accessibility at every site considering various elements including gate widths, security counter heights, sheltered drop off spaces, clearly demarcated waiting zones, adequate illumination and connectivity with sidewalks for pedestrian routes.

This chapter provides a compiled set of standards and guidelines specific to the design of the access route to the toilet facility so that it allows easy access for people. The norms across these design elements are organised with careful consideration of the user journey, encompassing the path from parking areas leading to the entrance of the toilet facility.

3.1 Accessible Parking

Guidelines	
3.1.1	Installation of visible minimum one accessible parking bay within 30 m of building entrances. a. For accessible two-wheeler parking, provide a minimum bay size of 3000 mm x 2400 mm b. For four-wheeler parking, provide a minimum bay size of 5000 mm x 3600 mm.
3.1.2	The minimum bay size is to be inclusive of a 1200 mm wide side transfer zone.
3.1.3	Provide 1800 mm wide rear transfer zone.
3.1.4	Ensure both on the side and the rear transfer zones have yellow or white cross-hatch road markings.

3.2 Access Route

Guidelines	
3.2.1	Provide safe, clearly defined, accessible, and well-lit access route to the toilet facility.
3.2.2	Provide appropriate tactile guiding systems to the toilet entrance.
3.2.3	Avoid any obstructions, including planters, furniture or decorative items in the access route.
3.2.4	It is recommended to provide 1800 mm clear wide access route, but ensure that it is no less than 1200 mm.
3.2.5	Ensure that the minimum overhead height for covered routes is 2200 mm.
3.2.6	Preferably have step-free entrance.
3.2.7	Provide accessible ramps and stairs in case of a raised plinth. (Refer to Section 3.3. and 3.4)
3.2.8	Provide landing space for wheelchairs at both the accessible ramp and staircase.
3.2.9	Avoid gratings and manholes.

⁶⁰(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)
(Ministry of Housing and Urban Affairs, Government of India, 2021)

3.3 Ramps

Guidelines	
3.3.1	Provide flat, smooth, non-slippery, firm and stable ramps made from durable material.
3.3.2	Avoid rumblings or corrugations on ramps.
3.3.3	Ensure ramp surface is colour contrasted with other floor surfaces.
3.3.4	Ensure the ramps have a minimum clear width of 1200 mm.
3.3.5	Provide a level platform of minimum 1200 mm x 1500 mm.
3.3.6	Gradient of the ramps <ol style="list-style-type: none"> For 6 m ramp length, provide a slope of 1:12. For 9 m ramp length, provide a slope of 1:14 For 11 m ramp length, provide a slope of 1:15. For 15 m ramp length, provide a slope of 1:20. For 18 m ramp length, provide a slope of not less than 1:25.
3.3.7	Provide landings at the top and bottom of each ramp run and where the ramp run changes direction.
3.3.8	For longer ramp runs, provide landings at regular intervals of 9000 mm of the horizontal run.
3.3.9	Ensure the minimum landing size is 1200 mm wide and 1500 mm long.
3.3.10	Ensure that all ramps and landing not adjacent to a wall have an edge protection with a minimum height of 75 mm.
3.3.11	Provide handrails on both sides of a ramp run with a height greater than 150 mm. (Refer Section 3.5 for more details)
3.3.12	Install handrails at a height of 750-900 mm from the floor level. (Refer Section 3.5 for more details)
3.3.13	Ensure continuous handrails on both sides along the entire length of the ramp, including landings. (Refer Section 3.5 for more details)

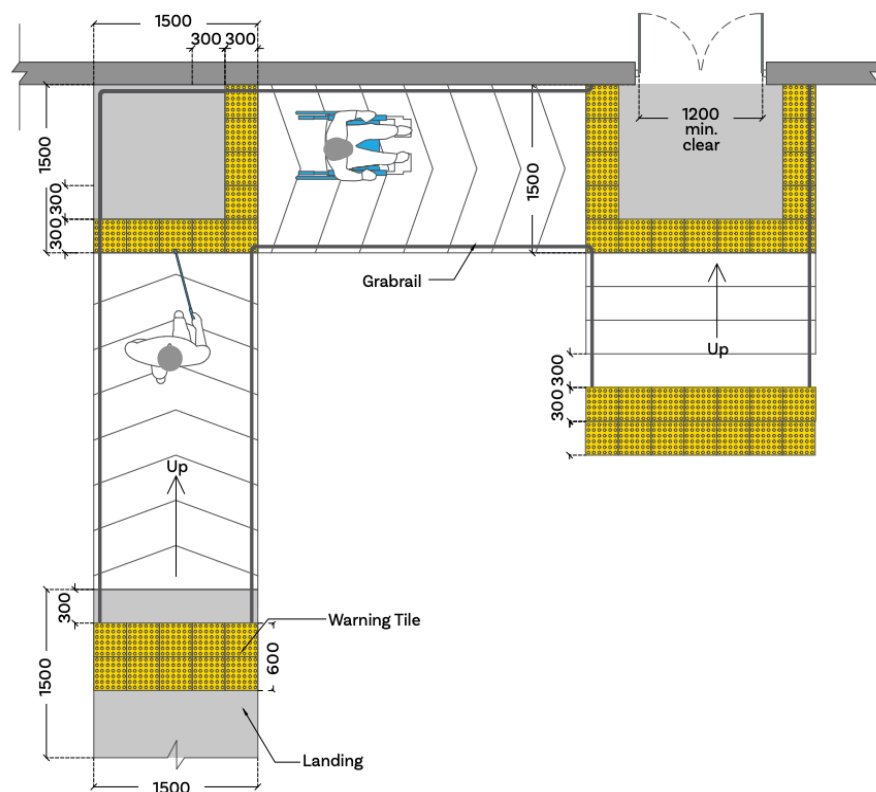


Figure 1 Typical details of 'L' Shaped ramp with steps: Type A (in mm)

Source: <https://niua.in/intranet/sites/default/files/2262.pdf>

3.4 Stairs

Guidelines	
3.4.1	Provide consistent tread and risers throughout the staircase.
3.4.2	Provide 300 mm deep treads and risers not higher than 150 mm.
3.4.3	Avoid projected nosing and open stairs.
3.4.4	Provide staircases with a minimum clear width of 1500 mm.
3.4.5	Provide staircase landing with a minimum width of 1200 mm.
3.4.6	Ensure that the landing is obstacle-free.
3.4.7	Ensure that the door opening does not interfere with the landing dimensions.
3.4.8	Installation of warning blocks at a distance of 300 mm at the beginning and end of each flight.
3.4.9	Provision of 50 mm wide colour contrast bands on the edge of each tread.
3.4.10	Landings and the staircase steps should be highly colour contrasted.
3.4.11	Risers and treads must be colour contrasted.
3.4.12	Provision of handrails at two heights - 600-750 mm for the lower handrail and 900-1000 mm for the upper handrail. (Refer Section 3.5 for more details)
3.4.13	Ensure continuous handrails on both sides for stairs and ramps with a level change greater than 500 mm. (Refer Section 3.5 for more details)
3.4.14	Provision of additional intermediate handrail if the staircase width exceeds 2100 mm. (Refer Section 3.5 for more details)
3.4.15	The maximum distance between intermediate handrails should be 2100 mm. (Refer Section 3.5 for more details)

3.5 Railings

Guidelines	
3.5.1	Provide continuous handrails, without interruptions or obstructions.
3.5.2	Use slip-resistant handrails with round ends.
3.5.3	Use circular section handrails of 38-50 mm diameter.
3.5.4	If possible, have handrails with knurled surfaces.
3.5.5	Avoid sharp or abrasive elements.
3.5.6	Include tactile and braille signs.
3.5.7	Ensure that handrails are colour contrasted with the background.
3.5.8	Use material that is easy to grip and not extremely cold or warm to touch.
3.5.9	Extend handrails horizontally at least 300 mm beyond the top and bottom of ramps/stairs.
3.5.10	Avoid handrails from protruding into other travel paths.
3.5.11	Ensure handrail edges return to the wall, floor, or post.
3.5.12	Maintain clear space between the handrails and walls, 40 mm for smooth walls and 60 mm for rough walls.
3.5.13	Ensure handrails support a weight of 250 kg.

04

INTERNAL ELEMENTS

This chapter is dedicated to outlining the requisite standards and guidelines specific to the different sections of the toilet facility, including men's, women's, accessible and gender-neutral toilets. Internal elements of our built environments require to compliment the external elements to ensure a universally accessible experience for all. Every building typology and it's intended usage must exert to widen the scope to accommodate diversity of users through an understanding of accessibility requirements for each internal element. Internal design considerations are the most crucial for ensuring acceptability and safety for all.⁶¹ The designs shall consider diverse sanitation needs of different user groups (women, children, elderly, persons with disabilities, and transgender persons) without compromising safety and privacy at all times.⁶² It needs to sensitively respond to creation of accessible infrastructure facilities like urinals and WCs for diverse disabilities, body types, gender, age groups and socio-cultural aspects.⁶³

The norms compiled in this chapter acknowledge the diverse needs of various users and states the considerations for accommodating their sanitation needs. These provisions encompass considerations for ensuring safety and comfort of the users. Building upon the user journey introduced in the previous chapter, which concluded at the railings of an accessible staircase/ramp, this chapter continues by addressing the separate entrances leading to the men's, women's, and accessible toilet unit sections. This ensures user satisfaction and inclusion throughout the facility. It includes specifications and standards for main entrances to the different toilet sections, the waiting areas, doors, corridors, urinals, toilet cubicles, wash basins and related fixtures, and bathing/washing spaces. It provides detailed provisions for disability-friendly, child-friendly, and menstruation hygiene management within the toilets.

4.1 Main Entrance

Guidelines	
4.1.1	Ensure entrance design conceals the toilet interior from passers-by by placing toilet cubicles, mirrors, and other elements away from the line of sight of the main entrance.
4.1.2	Provide separate entrances for men's and women's toilet sections.
4.1.3	Avoid hidden entrances.
4.1.4	Provide at least one accessible entrance, preferably the main entrance which is indicated clearly.
4.1.5	Use signs with the accessibility symbol at non-accessible entrances to direct persons with disabilities to the accessible entrance.
4.1.6	Provide an accessible entrance door of 1000 mm width, but no less than 900 mm.
4.1.7	Ensure that the leading edge of the entrance door is visually contrasting with the remaining door surfaces.
4.1.8	If mats are provided, recess and flush them with the floor.
4.1.9	Ensure that the floor around the entrance has textural difference.
4.1.10	Provide tactile guiding systems at the entrances. If possible, add beepers to the tactile guiding systems.
4.1.11	For Glazed Door; <ol style="list-style-type: none"> a. Provide manifestations on the glazed entrance doors at two levels i.e., at 800-1000mm and 1400 to 1600 mm from floor. b. Ensure the manifestations contrast in colour with the background and are at least 150 mm high.

⁶¹(Ministry of Housing and Urban Affairs, Government of India, 2021)

⁶²(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)

⁶³(Ministry of Housing and Urban Affairs, Government of India, 2021)



Image 2 Common accessible entrance facing the street, Noida
Source: (Noida Authority, 2022)



Image 3 Separate entrances for different toilet sections at an airport, India
Image Credits: Monica Thakur

4.2 Waiting Areas

Guidelines	
4.2.1	Provide a common waiting area for the toilet.
4.2.2	Ensure the waiting area is not visible to the passers-by.
4.2.3	Provide a 2 to 3m (2000 mm to 3000mm) wide waiting area in the women's block.
4.2.4	Provide benches/chairs inside the waiting area.
4.2.5	Installed the seat between the height of 450 mm-500 mm.
4.2.6	Ensure seat width is 400-450 mm.

4.3 Corridors

Guidelines	
4.3.1	Provide a corridor of minimum 1200 mm clear width.
4.3.2	Provide open circulation spaces for ventilation and light, except in areas with snowfall or heavy rainfall areas.
4.3.3	Ensure colour contrast between floor and walls.
4.3.4	Avoid obstacles or protrusions that reduce required clear width.
4.3.5	Ensure protruding objects do not obstruct the accessible route or manoeuvring space.
4.3.6	Position protruding objects within alcoves or designated locations.



Image 4 Toilet Corridor leading to Accessible Toilet, University of Hong Kong Libraries

Source: <https://libguides.lib.hku.hk/SENSupport/learning-environment>

4.4 Men's Toilet

4.4.1 Doors

Guidelines	
4.4.1.1	Provide easily closable free-swinging or sliding doors.
4.4.1.2	Ensure that all doors have locks like handles, latches, or sliding bolts.
4.4.1.3	Provide user operated locks only inside.
4.4.1.4	Provide emergency latches on the outside for only authorised use when needed.
4.4.1.5	Provide tightly fitted doors, without any gaps.
4.4.1.6	Ensure all doors have strong double hooks that hold a minimum 6.8 kg weight.
4.4.1.7	If unable to fix hooks on the doors, fix them on the strongest wall.
4.4.1.8	Install door handles between the height of 800 to 1100 mm from the floor level.
4.4.1.9	It is preferable to use Lever shaped or D-type door handles.
4.4.1.10	Fix a 140 mm long handle on the outer side of the door.
4.4.1.11	Ensure the leading edge of the entrance door is visually contrasting with the remaining door surfaces.

4.4.2 Urinals

Guidelines	
4.4.2.1	Provide wall-hung urinals.
4.4.2.2	Ensure that minimum width of the urinals is 300mm.
4.4.2.3	Ensure the urinal has a minimum distance of 450 mm from a side wall, partition, vanity or other obstruction.
4.4.2.4	Ensure the urinal has a minimum 450 mm centre-to-centre clear space from any wall, fixture, or door.
4.4.2.5	Provide modesty boards with minimum 300 mm width and 1800 mm height.
4.4.2.6	Ensure the modesty boards do not extend till the floor.
4.4.2.7	Ensure urinals have flush valves.
4.4.2.8	Provide urinal screen mats to reduce splashes.



Image 5 Accessible and Child-friendly Wall-Hung Urinals
Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)



Image 6 Urinal Screen Mats
Source: (Systems, 2020)

4.4.3 Toilet Cubicles

Guidelines	
4.4.3.1	For Indian toilets, ensure that the closet pans are of standard design.
4.4.3.2	Ensure that Indian WCs have adequate grab rail support.
4.4.3.3	For Indian WC, mount the ablation tap at 200 mm and attached jet spray up to the height 450 mm.
4.4.3.4	Provide wall-hung western toilets with manual or automatic flushing systems.
4.4.3.5	Extend cubicle partitions to within 5 cm (50 mm) from the floor.
4.4.3.6	Ensure minimum height of the cubicle partition is 2134 mm.
4.4.3.7	Install toilet roll dispensers adjacent to the water tap.
4.4.3.8	Provide an ablation tap coupled with hose and a spring-loaded nozzle.
4.4.3.9	Provide a water tap in each cubicle with a bucket and mug.
4.4.3.10	Make drainage arrangements for the taps.
4.4.3.11	Indicate washroom occupancy with red for occupied and green for vacant.



Image 7 Toilet Cubicle with a Western Water Closet
Source: (Tripadvisor, n.d.)



Image 8 Toilet Cubicle with Wall-Hung Western Water Closet, India Habitat Centre, Delhi
Image Credits: Monica Thakur

4.4.4 Wash Basins and Related Fixtures

Guidelines	
4.4.4.1	Install vanity top-cum-wash basins.
4.4.4.2	Install liquid soap dispensers, paper towel dispenser, hand dryer, towel rails and litter bins adjacent to the wash basins.
4.4.4.3	Provide wash basins with mirrors.
4.4.4.4	Ensure mirror's position does not allow passers-by to view inside the toilet.
4.4.4.5	Ensure water pressure and tap / washbasin position does not cause water to splash onto the user's body during activation.
4.4.4.6	Provide a liquid soap dispenser with a cleaning and refill mechanism at each wash basin.
4.4.4.7	Provide sensor-controlled taps with precise flow and shut-off settings.
4.4.4.8	Avoid sharp or abrasive surfaces under wash basins and sinks.
4.4.4.9	Provide minimum one hand dryer blower.



Image 9 Vanity top-cum wash basins

Source: (Sufyan, 2023)

4.4.5 Bathing/Washing Unit

Guidelines	
4.4.5.1	Provide a bathing unit with minimum unit size of 900 mm by 1050 mm.
4.4.5.2	Provide anti-skid flooring.

4.5 Women's Toilet

4.5.1 Doors

Guidelines	
4.5.1.1	Provide easily closable free-swinging or sliding doors.
4.5.1.2	Ensure all doors have locks like handles, latches, or sliding bolts.
4.5.1.3	Provide user operated locks inside only.
4.5.1.4	Provide emergency latches on the outside for only authorised use when needed.
4.5.1.5	Provide tightly fitted doors, without any gaps.
4.5.1.6	Ensure all doors have strong double hooks that hold a minimum 6.8 kg weight.
4.5.1.7	If unable to fix hooks on the doors, fix them on the strongest wall.
4.5.1.8	Install door handles between the height of 800 to 1100 mm from the floor level.
4.5.1.9	It is preferable to use Lever shaped or D-type door handles.
4.5.1.10	Fix a 140 mm long handle on the outer side of the door.
4.5.1.11	Ensure the leading edge of the entrance door is visually contrasting with the remaining door surfaces.

4.5.2 Toilet Cubicles

Guidelines	
4.5.2.1	For Indian toilets, ensure that the closet pans are of standard design.
4.5.2.2	Ensure that Indian WCs have adequate grab rail support.
4.5.2.3	For Indian WCs, mount the ablution tap at 200 mm and attached jet spray up to the height 450 mm.
4.5.2.4	Provide wall-hung western toilets with manual or automatic flushing systems.
4.5.2.5	Extend cubicle partitions to within 5 cm (50 mm) from the floor.
4.5.2.6	4 Ensure minimum height of the cubicle partition is 2134 mm.
4.5.2.7	Install toilet roll dispensers adjacent to the water tap.
4.5.2.8	Provide an ablution tap coupled with hose and a spring-loaded nozzle.
4.5.2.9	Provide a water tap in each cubicle with a bucket and mug.
4.5.2.10	Make drainage arrangements for the taps.
4.5.2.11	Indicate washroom occupancy with red for occupied and green for vacant.
4.5.2.12	Provide a foldable platform, shelf, hooks or niche to keep clothing and menstrual adsorbents dry
4.5.2.13	Provide adequate space in the cubicle for girls to change their napkins/cloth and to wash themselves.

4.5.3 Wash Basins and Related Fixtures

Guidelines	
4.5.3.1	Install vanity top-cum-wash basins.
4.5.3.2	Install liquid soap dispensers, paper towel dispenser, hand dryer, towel rails and litter bins adjacent to the wash basins.
4.5.3.3	Provide wash basins with mirrors.
4.5.3.4	Ensure mirror's position does not allow passers-by to view inside the toilet.
4.5.3.5	Ensure water pressure and tap / washbasin position does not cause water to splash onto the user's body during activation.
4.5.3.6	Provide a liquid soap dispenser with a cleaning and refill mechanism at each wash basin.
4.5.3.7	Provide sensor-controlled taps with precise flow and shut-off settings.
4.5.3.8	Avoid sharp or abrasive surfaces under wash basins and sinks
4.5.3.9	Provide minimum one hand dryer blower.



Image 10 Vanity-Top Accessible and Child-Friendly Wash Basins, India Habitat Centre, Delhi

Image Credits: Monica Thakur

4.5.4 Menstruation Hygiene Management (MHM)

Guidelines	
4.5.4.1	Provide sanitary napkin vending machines at toilets with high footfall.
4.5.4.2	Provide signages directing users to dispose feminine products in the sanitary bin. (Refer to Section 8.3 for more information on waste disposal)
4.5.4.3	Provide space for changing clothes, washing oneself and menstrual products.



Image 11 Sanitary Napkin Vending Machine

Source: (Anytime Automatic Sanitary Napkin Vending Machine, n.d.)

4.5.5 Bathing/Washing Unit

Guidelines	
4.5.5.1	Provide a bathing unit with minimum unit size of 900 mm by 1050 mm.
4.5.4.2	Hooks and ledges for hanging clothes, keeping belongings off the floor or keeping menstrual products on a clean surface.

4.6 Child-Friendly Facilities

4.6.1 Toilet Cubicle

Guidelines	
4.6.1.1	In the child-friendly toilet cubicle in both men’s and women’s toilet, provide a child-sized WC.
4.6.1.2	Alternatively, if not possible then provide a seat adaptor with a small seat cover.
4.6.1.3	Install the cubicle door half the usual height openable from the outside.
4.6.1.4	Install additional door fixtures at half the height of the normal doors.
4.6.1.5	Mount the hanger holding the seat cover at an easily accessible level for young children.
4.6.1.6	Provide a stable portable stool.
4.6.1.7	Provide liquid bath dispensers and a flexible hose with water spray head in the WC.
4.6.1.8	For children’s toilets, set the grab bar height between 510 mm and 635 mm.



Image 12 Water Closet Seat Adaptor for Children
Source: (Star and Daisy)



Image 13 Water Closet Seat Adaptor for Children (In-Use)
Source: (Kiden)



Image 14 Seat Adaptor with Ladder (In-Use)
Source: (Toilet Training Seat with Step Stool Ladder)

4.6.2 Urinals

Guidelines	
4.6.2.1	Mount the child-friendly urinal (same as the accessible urinal) in the men’s toilet at a height of 400 mm from the floor level.

4.6.3 Wash Basin

Guidelines	
4.6.3.1	Install the child-sized wash basin at 550 mm from the floor in both men’s and women’s toilet.
4.6.3.2	Install sensor-operated taps.

4.6.4 Child Protection Seat

Guidelines	
4.6.4.1	Provide a child protection seat in one of the WC compartments in both men's, women's and the accessible toilet.
4.6.4.2	Mount the seat on a solid wall with the bottom being at a height of at least 400 mm from the floor.
4.6.4.3	Provide extendable straps to the seat that go over shoulders and between legs of the baby.
4.6.4.4	Ensure the child protection seat withstands weight up to 20 kg.



Image 15 Child Protection Seat

Source: (Koala Bear KB102-00 Wall-Mounted Child Protection Seat)



Image 16 Child Protection Seat (In-Use)

Source: (Aquam)

4.6.5 Baby Diaper Changing Station

Guidelines	
4.6.5.1	Provide a stable diaper changing station in both men's, women's toilet and accessible toilet unit.
4.6.5.2	Install it in a way that when opened, the highest edge of the pull-down deck is between 700 mm to 850 mm from the floor.
4.6.5.3	Ensure it has a concave changing surface with barriers along the sides.
4.6.5.4	Ensure it is equipped with safety straps.
4.6.5.5	Ensure it has clear instructions to facilitate safe use.
4.6.5.6	Provide bed linens and wet wipe dispensers. (Refer to Section 8.3 for more information on waste disposal)



**Image 17 Diaper Changing Station for Toddlers (Closed),
Indira Gandhi International Airport, Delhi**
Image Credits: Monica Thakur



**Image 18 Diaper Changing Station for Toddlers (In-Use),
Indira Gandhi International Airport, Delhi**
Image Credits: Monica Thakur

4.7 Accessible Toilet⁶⁴

Every washroom or public toilet complex shall ensure accessibility provisions for all disabilities and gender types. An accessible toilet is a facility designed to cater to the needs of individuals with disabilities. These facilities can be used by persons with temporary disabilities, elderly, and expecting mothers. These toilets are designed to ensure that people with varying degrees of mobility, including wheelchair users and those with other impairments, can use the facilities independently and comfortably.

Depending on footfall, one accessible toilet in both male and female toilet groups or one unisex/gender neutral accessible toilet room with independent entrance shall be provided.

⁶⁴The Provisions are given for the design of unisex accessible toilets. Relevant sections can be used to make male and female cubicles.

4.7.1 Doors

Guidelines	
4.7.1.1	Ensure the toilet doors have a minimum clear opening width of 900 mm.
4.7.1.2	Provide a 600 mm horizontal pull bar on the inside of the door.
4.7.1.3	Install the horizontal bar at the height of 1000 mm from the floor and 130 mm from the hinged side.
4.7.1.4	Provide a visual lock displaying occupancy.
4.7.1.5	Ensure doors are locked easily from the inside with one hand.
4.7.1.6	Ensure doors open with one hand using a maximum force of 22N, without the need for fine finger control, tight grasping, pinching, or wrist twisting.
4.7.1.7	Preferably provide D-shaped or lever handles, avoid doorknobs.
4.7.1.8	Ensure door hardware contrast visually with the surface of the door.
4.7.1.9	For power-operated doors, use motion sensors or manual controls like push pads.
4.7.1.10	Install a distinct audio signal (beeper/clapper) above the entrance door.
4.7.1.11	Additionally, a foot-operated door lock could be provided, if possible.
4.7.1.12	Provide a braille script for the visual lock, if possible.



Image 18 Washroom Occupancy Indicator

Source: (Mano Mano, n.d.)

4.7.2 Accessible Urinals

Guidelines	
4.7.2.1	Provide minimum one accessible urinal.
4.7.2.2	Provide stall-type or wall-hung urinals.
4.7.2.3	Install grab bars on both the sides and at the front of the urinal.
4.7.2.4	Ensure the accessible urinal's cubicle size is 900 mm wide.
4.7.2.5	Ensure urinal rim's maximum height from the floor is 430 mm.
4.7.2.6	Provide a minimum clear floor space of 760 mm x 1200 mm in front of the urinals.
4.7.2.7	Mount the flush controls at a maximum height of 1200 mm from the floor.

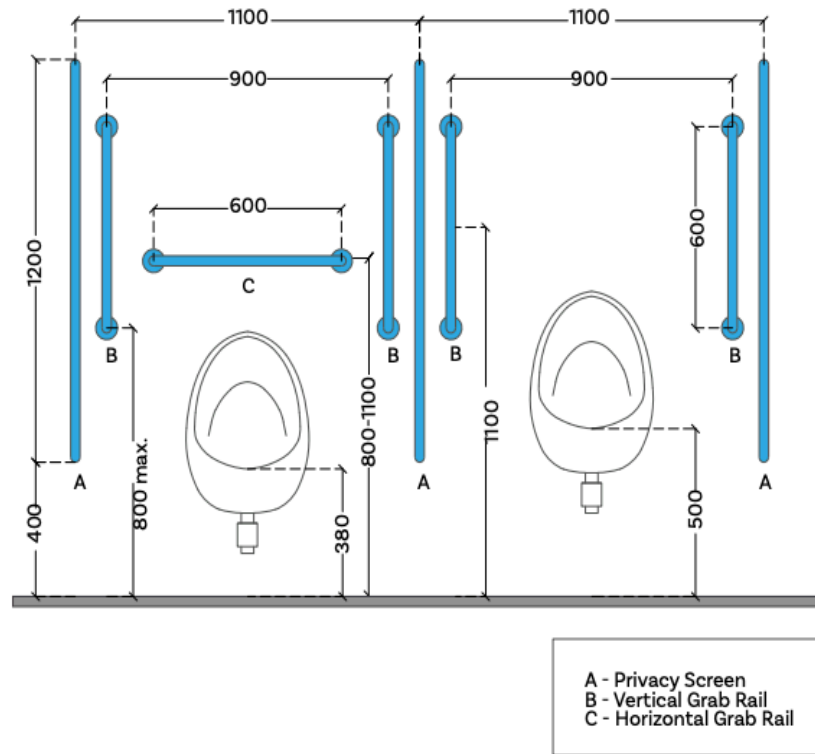


Fig a: Accessible urinal: Sectional elevation

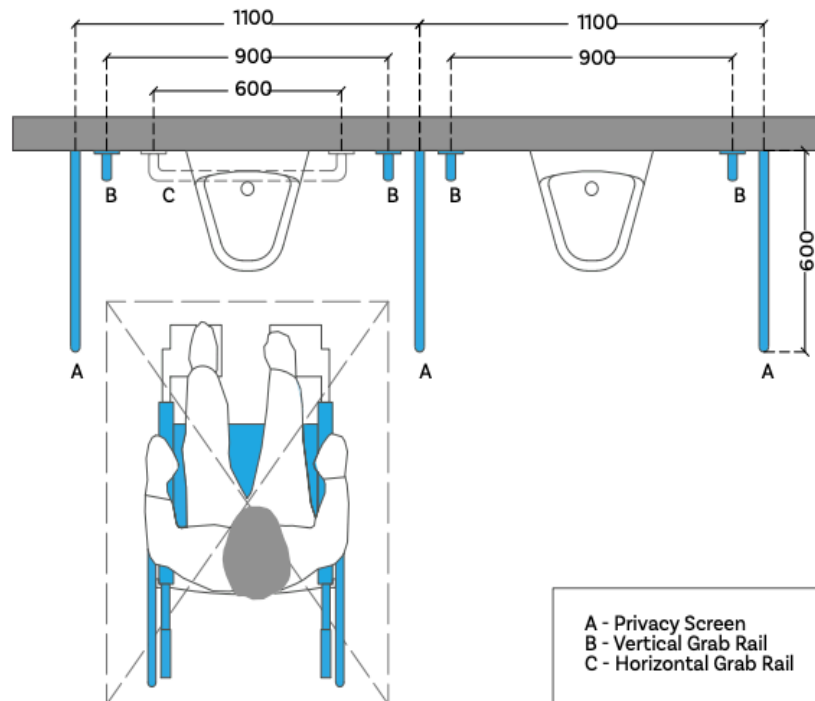


Fig b: Accessible urinal: Plan layout

Figure 2 Accessible Urinals (in mm)

Source: (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)

4.7.3 Toilet Units/Cubicles

Guidelines	
4.7.3.1	Provide accessible toilet unit measuring 2200 mm x 2000 mm.
4.7.3.2	Provide wall-hung or corbel type WC with a back support.
4.7.3.3	Ensure the height of the WC seat from the floor is 450 to 480 mm.
4.7.3.4	Ensure distance from the adjacent wall to the centre of the WC is 460-480 mm.
4.7.3.5	Provide a clear manoeuvring space of 1800 mm diameter in front of the WC and wash basin. In case it is not possible, provide an uncompromising space of 1500 mm diameter.
4.7.3.6	Provide a lateral interaction space on at least one side of the accessible WC.
4.7.3.7	At places with more than one accessible toilet, provide a left and right-hand transfer option in other accessible toilets.
4.7.3.8	Provide minimum 900 mm wide clear space next to the water closet.
4.7.3.9	Ensure minimum 1350 mm deep and 900 mm wide clear floor space in front and on the transfer side of WC.
4.7.3.10	Install grab bars between the height of 200 to 250 mm from the WC seat.
4.7.3.11	Mount one L-shape grab bar firmly on the side wall closest to the WC, with a length of 600 mm horizontally and 750 mm vertically.
4.7.3.12	Install a hinged or flip-up horizontal grab bar near the water closet. Ensure it is located 320 mm from the centreline of the WC, positioned between 200 mm and 250 mm above the top of the WC seat, and extending 100 mm to 150 mm beyond the front of the WC.
4.7.3.13	Ensure flush is either lever type or automatic.
4.7.3.14	Ensure the flush control is located on the transfer side of WC at a maximum height of 1000 mm from the floor.
4.7.3.15	Mount the toilet paper dispenser below the grab bars, within 300 mm from the front edge of the WC seat, and between the height of 600-700 mm from the floor.
4.7.3.16	Install cloth hooks on a side wall, with a maximum height of 1200 mm from the floor.
4.7.3.17	Ensure cloth hooks do not extend more than 40 mm from the wall.
4.7.3.18	If possible, provide a shelf of 400 mm x 200 mm.
4.7.3.19	Install the shelf between the height of 900 mm and 1000 mm from the floor.
4.7.3.20	Indicate washroom occupancy with red for occupied and green for vacant.



Image 19 Accessible Washrooms 1

Source: (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)

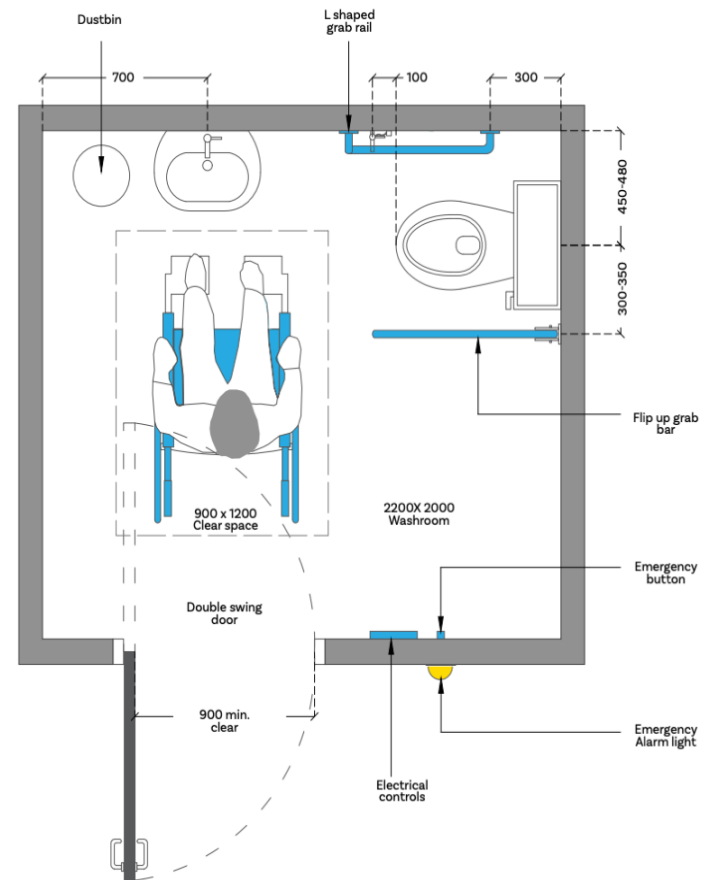


Figure 3 Detail of accessible washroom with double swing door: Plan (in mm)
 Source: (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)

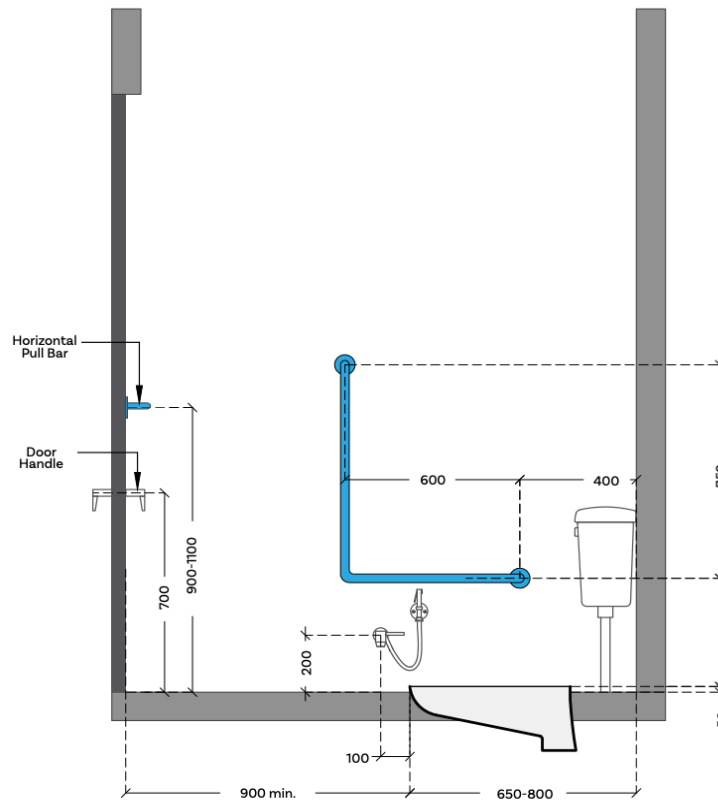


Figure 4 Detail of accessible washroom: Sectional elevation (in mm)
 Source: (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)



Image 20 Accessible Washrooms 2

Source: (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)



Image 21 Accessible Washrooms

Image Credits: Aarti Thakur

4.7.4 Accessible Bathing/Washing Space

Guidelines	
4.7.4.1	Provide an accessible bathing/washing area of 2000 mm breadth and 2200 mm length if bathing areas are provided.
4.7.4.2	Provide a minimum clear floor space of 1350 mm breadth and 900 mm length in front of the shower entrance.
4.7.4.3	Provide slip-resistant flooring.
4.7.4.4	Provide minimum 900 mm wide doors.
4.7.4.5	Provide one L-shaped bar or two grab bars in L-shaped configuration between 700 mm and 800 mm from the shower floor.
4.7.4.6	Provide one grab bar at least 750 mm long installed vertically with another at least 900 mm long mounted horizontally.
4.7.4.7	Provide accessible tap, soap and mug.
4.7.4.8	Provide a wall-mounted shower seat, preferably foldable.
4.7.4.9	The distance between the wall and centre-line of the shower seat should be between 450 mm to 480 mm.
4.7.4.10	Install lever-type functioning taps or lever/sensor type faucets.



Image 22 Shower Seat inside Bathing

Source: Space (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)



Image 23 Shower Seats

Source: (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)

4.7.5 Grab Bars

Guidelines	
4.7.5.1	Provide grab bars in accessible toilets as well as in toilet cubicles with Indian-style WCs.
4.7.5.2	Ensure horizontal grab bar is continuous for its entire length.
4.7.5.3	Use Galvanised Iron (GI) or steel pipes with a diameter of 40 mm to 45 mm for grab bars.

4.7.6 Wash Basins and Other Fixtures

Guidelines	
4.7.6.1	Provide washbasin near the entrance.
4.7.6.2	Ensure a wheelchair manoeuvring space with a minimum 1500 mm diameter.
4.7.6.3	Provide a wheelchair parking space of at least 900 mm x 1200 mm.
4.7.6.4	Allocate a clear floor space of 900 mm wide by 1200 mm deep, with up to 480 mm under the washbasin.
4.7.6.5	Maintain a minimum distance of 460 mm between the fixture's centreline and the sidewall.
4.7.6.6	Install the top edge of the washbasin between the height of 750 mm to 850 mm from the floor.
4.7.6.7	Position the front edge of the wash basin between 350 mm and 600 mm from the wall.
4.7.6.8	Provide a 680 to 700 mm high and 200 mm wide clear knee space.
4.7.6.9	Include at least 230 mm high toe clearance space.
4.7.6.10	Ensure the tap control is within a reachable distance of a maximum 300 mm.
4.7.6.11	Install swing bars on both sides at a height of 800 mm.
4.7.6.12	Include a full-length mirror with the bottom edge between 900 mm and 1000 mm from the floor.
4.7.6.13	Ensure the mirror is tiltable at a 30° angle with an adjustable mechanism.
4.7.6.14	Position hand dryers, towel dispensers, and soap dispensers with operable parts and controls near the basin, between the height of 800 mm to 1000 mm from the floor.
4.7.6.15	Accessories such as hand towels, soaps, waste bins, etc, should not hamper the use of the grab bars.
4.7.6.16	All fixtures and utilities should provide a clear space of 900mm x 1200 mm for wheelchair users.
4.7.6.17	Provide sensor-operated soap dispensers.

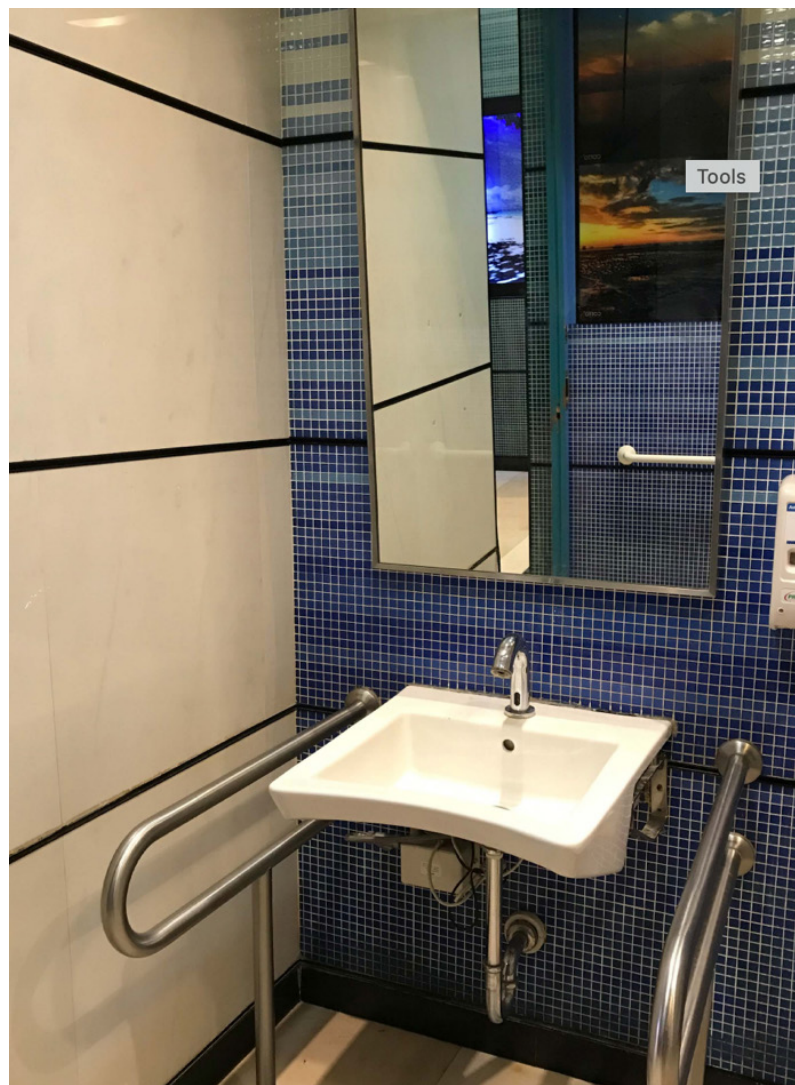


Image 24 Recommended faucets for toilets

Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)



a. Lever handles

b. Lever handles

c. Sensor based taps

Image 25 Accessible Washbasin

Source: (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)

4.7.7 Adult Diaper Changing Station

Guidelines	
4.7.7.1	Provide a stable diaper changing station.
4.7.7.2	Install it in a way that when opened, the highest edge of the pull-down deck is between 700 mm to 850 mm from the floor.
4.7.7.3	Ensure it has a concave changing surface with barriers along the sides.
4.7.7.4	Ensure it is equipped with safety straps.
4.7.7.5	Ensure it withstands a static weight of about 130 kg
4.7.7.6	Ensure it has clear instructions to facilitate safe use.
4.7.7.7	Provide bed linens and wet wipe dispensers. (Refer to Section 8.3 for more information on waste disposal)



Image 26 Adult Diaper Changing Station (Closed)

Source: (Why We Need Adult Changing Tables in Public Spaces, 2020)



Image 27 Adult Diaper Changing Station (In-Use)

Source: (Reddit, 2020)

4.7.8 Emergency Warning Alarm

Guidelines	
4.7.8.1	Ensure the emergency alarm system is easily reachable from the changing area or shower seats, WC and by a person lying on the floor.
4.7.8.2	Connect it to an emergency help point, or at a place where a staff member can assist.
4.7.8.3	Install an emergency alarm and call switch in the toilet cubicle, within easy reach on the wall near the water closet, at two levels - 300 mm and 900 mm from the floor.
4.7.8.4	Design the alarm system as a red pull cord with two red bangles, each with a diameter of 50 mm.
4.7.8.5	Set one bangle at a height between 800 mm and 1100 mm and the other bangle 100 mm above the floor.
4.7.8.6	Ensure the system indicates when the alarm is activated, that the emergency assistance call has been acknowledged, and that action has been taken.



Image 28 Emergency Warning Alarm Switch near Accessible Toilet
Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)

4.8 Other Inclusive Provisions

4.8.1 Gender-Neutral Toilet Unit

Guidelines	
4.8.1.1	Ensure distinct signage for unisex or gender-inclusive toilets.
4.8.1.2	Indicate washroom occupancy with red for occupied and green for vacant.
4.8.1.3	Provide a sanitary napkin vending machine.
4.8.1.4	Provide hooks and ledges for hanging clothes, belongings, and menstrual products.
4.8.1.5	Provide a mirror above the wash basin.
4.8.1.6	Ensure mirror's position does not allow passers-by to view inside the toilet.
4.8.1.7	Ensure availability of soap for personal cleansing.
4.8.1.8	Install CCTVs at the entrance of the toilet block.
4.8.1.9	Provide a separate gender-neutral bathing space in public toilets on appropriate places.



Image 29 Signage for Gender-Neutral Toilets
Source: (Edinburgh University Science Media, 2019)



Image 30 Signage indicating information on toilet usage by all
Source: (WCVB, 2015)

4.8.2 Family Toilet Unit

Guidelines	
4.8.2.1	Provide a wash basin with liquid detergent and paper towels.
4.8.2.2	Provide a child-sized water closet. (Refer to Section 4.6)
4.8.2.3	Provide mirrors.
4.8.2.4	Provide a diaper changing station. (Refer to Section 4.6)
4.8.2.5	Provide a child protection seat. (Refer to Section 4.6)
4.8.2.6	Provide a vending machine for diapers. (Refer to Section 4.6)
4.8.2.7	Provide a vending machine for sanitary napkins. (Refer to Section 4.5.4)

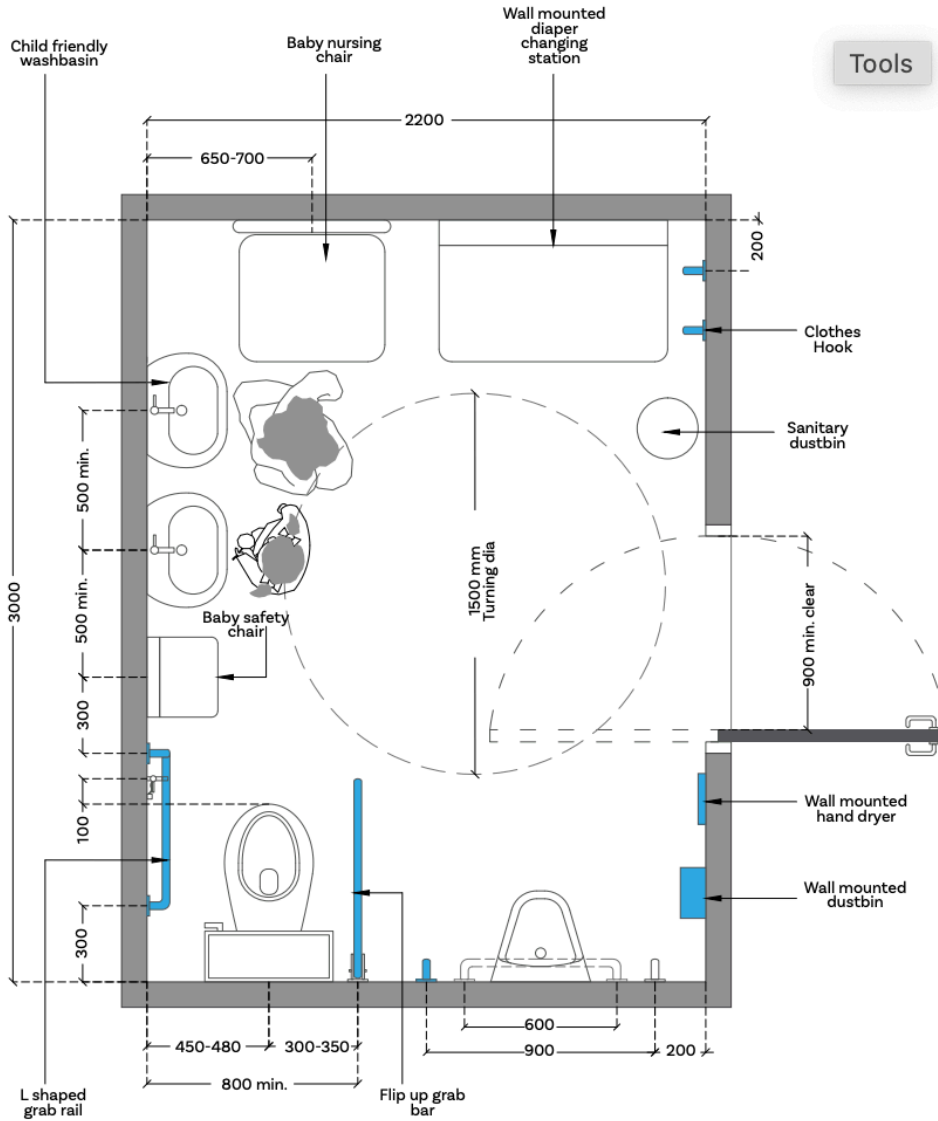


Figure 5 Family Toilet Detail (in mm)

Source: (Ministry of Housing and Urban Affairs (MoHUA), Government of India, 2021)

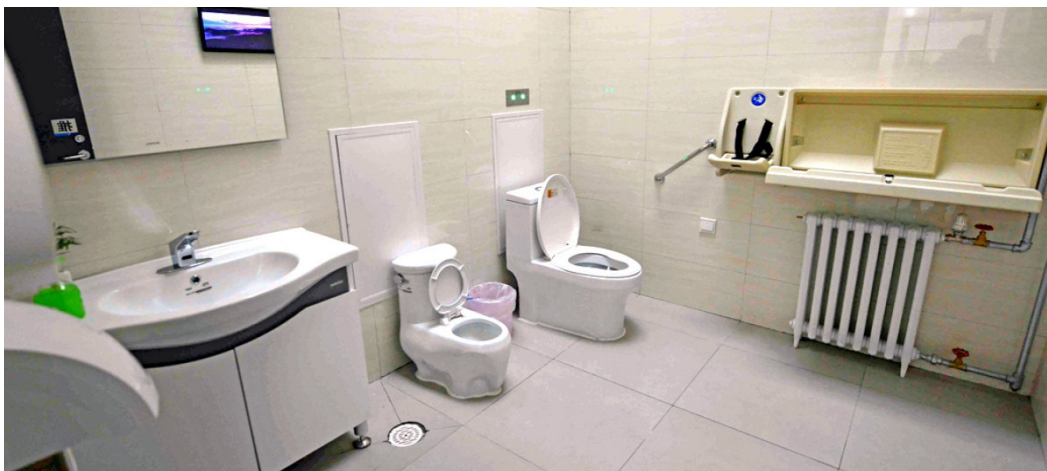


Image 31 Family Toilet Unit, China

Source: (Associated Press, 2015)

4.8.3 Lactation Room

Guidelines	
4.8.3.1	Based on space available, designate space for child feeding/child care.
4.8.3.2	Provide comfortable seating, preferably armchairs or similar.
4.8.3.3	Provide diaper changing stations. (Refer to Section 4.6)
4.8.3.4	Provide wash basins with liquid detergent and paper towels.
4.8.3.5	Provide dispensers for hot and cold water.
4.8.3.6	Install vending machines for beverages and diapers.
4.8.3.7	Provide electrical outlets for breast pumps.
4.8.3.8	Provide mirrors.



Image 33 Lactation Room for baby feeding at Chhatrapati Shivaji Maharaj International Airport, Mumbai

Image Credits: Monica Thakur



Image 32 Inside Lactation Room for Baby Feeding at Chhatrapati Shivaji Maharaj International Airport, Mumbai
Image Credits: Monica Thakur

05

ANCILLARY PROVISIONS



Image 34 Pause Toilets with multiple facilities for diverse set of users, Mumbai-Goa Highway, Maharashtra

Source: (Pause - Restrooms, n.d.)



This chapter outlines the provisions for the activities which facilitate the O&M of the toilets and recommended revenue-generating within the design and layout of public toilet facilities. The Advisory on Public and Community Toilets by CPHEEO, MoHUA states that provision of a Staff / Caretaker's Room for the operating staff / caretaker of the toilet complex, and a storage room is essential.⁶⁵

With respect to the financial aspect, the advisory also states, "The O&M costs should be generally met completely by user charges wherever possible, a principle advocated by MoHUA generally for all infrastructure projects. The idea is to make toilet operations financially sustainable." To ensure that service provision and revenue generation is uniform across the city, the advisory states that revenue generating options require strategic decision-making by the ULB and must be deployed to newly constructed and old toilets. It lists a few options for meeting the revenue shortfall in the toilets. These options include generating revenue through advertisement, small-scale vending of toiletry items, commercial areas and other infrastructure.⁶⁶

In light of the revenue-generating activities proposed and the prevailing practices in the field, this chapter compiles spatial guidelines recommended for the effective integration of these activities. It also includes the provisions for caretaker/cleaner and storage rooms for improved toilet functioning.

5.1 Staff / Caretaker Room

Guidelines

- | | |
|-------|--|
| 5.1.1 | Provide staff/caretaker room in the toilet complexes, specially at places that have high footfall and are open round the clock. |
| 5.1.2 | If possible, provide it on the first floor. |

5.2 Storage Room

Guidelines

- | | |
|-------|--|
| 5.2.1 | Provide one small room for storing cleaning materials / equipment. |
| 5.2.2 | The room size can be decided depending on volume of items to be stored. |

5.3 Caretaker/Cleaner Desk

Guidelines

- | | |
|-------|--|
| 5.3.1 | Ensure that the caretaker/cleaner counter is accessible to all. |
| 5.3.2 | Ensure that the counter has a frontal approach, especially for wheelchair users. |
| 5.3.3 | Install the counter between the height of 750 mm to 800 mm. |
| 5.3.4 | Provide a 680 mm high clear knee space below the counter. |

⁶⁵(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)

⁶⁶(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)

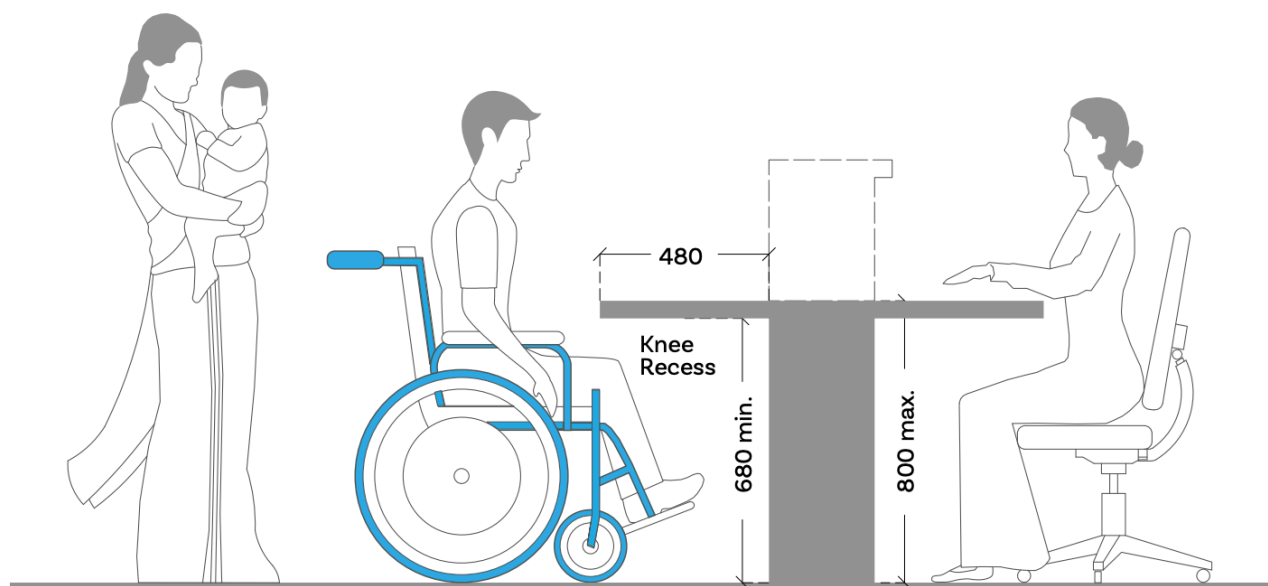


Figure 6 Staff/Caretaker Desk (in mm)

Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)

5.4 Advertisement Space

Guidelines

- 5.4.1 Use the external wall of the toilet for advertising, considering the design and safety.
- 5.4.2 Panels / illuminated boards are preferred.

5.5 Drinking Water

Guidelines

- 5.5.1 Provide an easily locatable and reachable drinking water facility through well identified signage.
- 5.5.2 Install the drinking water facility at a height of 750 mm that may extend 480 mm from the wall.
- 5.5.3 Provide a clear floor space of at least 900 mm x 1200 mm.
- 5.5.4 Provide minimum 750 mm wide and 230 mm high toe space.
- 5.5.5 Provide tap above 100 mm from the basin.
- 5.5.6 Provide lever type taps or sensor-operated taps.

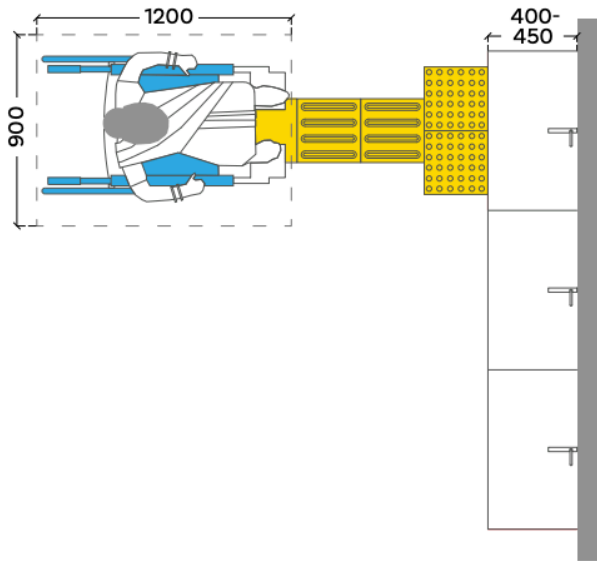


Figure 7 Typical layout for accessible drinking water fountain (in mm)
 Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)

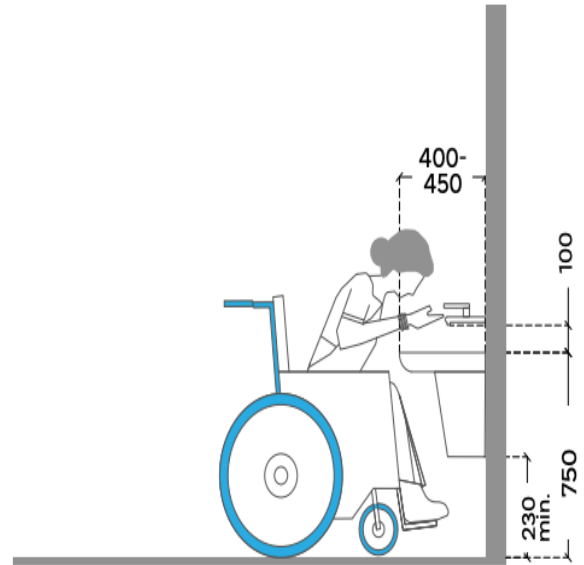


Figure 8 Accessible Drinking Water Foundation: Sectional Elevation (in mm)
 Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)



Image 35 Drinking Water Station at Indira Gandhi International Airport, Delhi
 Image Credits: Monica Thakur

5.6 Shops or Other Services

Guidelines	
5.6.1	Services such as ATMs and shops can be provided in the toilet premises
5.6.2	Provide accessible wayfinding systems for shop locations.
5.6.3	Provide accessible ramps and staircase at places with level difference.
5.6.4	Provide non-slippery landing space for wheelchairs (Refer to Section 3.3 and 3.4)
5.6.5	Provide access route with TGS1 tiles leading up to the shop.
5.6.6	Ensure goods do not obstruct access routes.
5.6.7	Ensure signage have contrasting colours and large fonts
5.6.8	Provide an entrance door with minimum 900 mm clear width.
5.6.9	Provide a manoeuvring space of 1800 mm for wheelchair users inside the facility



Image 36 Accessible entrance to a bank ATM

Source: <https://niua.in/intranet/sites/default/files/2262.pdf>

06

INFORMATION SYSTEMS

This chapter serves as a compilation of norms regarding the overall character of the information systems of the building. Information accessibility is one of the key pillars of any environment to make it identifiable, usable and safe for diverse user types. Every built environment requires to develop their contextual information system designs to ensure access for all including persons with visual, hearing or cognitive impairments. Legible and clear information enables human functioning and enhances accessibility for most individuals.⁶⁷ This chapter is crucial from the viewpoint of identifying services that require signage, their design characteristics, and the critical information that must be displayed.

1. Directional Signs could help in navigating in or around the toilet building. Arrow heads can aid wayfinding for diverse user groups by directing them to the toilet location.
2. Identification Signs could be used to display the different toilet sections i.e. men's, women's, accessible, gender-neutral toilets, caretaker's room, and the storage room among other facilities.
3. Instructive or Advisory Signs could provide instructions on toilet etiquettes, behaviour and awareness.

6.1 Information and Wayfinding

Guidelines	
6.1.1	Ensure wayfinding and facility signages for persons with disabilities, transgender individuals, families with children, and the elderly.
6.1.2	Label different sections with signs like Men's Toilet, Women's Toilet, Accessible Toilet, Child-Care Rooms, Diaper Changing Stations, etc.
6.1.3	Use uniform colour codes and standard nomenclature, as per the Harmonised Guidelines and Standards for Universal Accessibility in India, 2021.
6.1.4	Use legible fonts with high-contrast backgrounds.
6.1.5	Integrate emergency signs within the toilet systems.
6.1.6	Include messages about proper toilet use and health benefits inside, and outside the facility.
6.1.7	Include pictograms, arrows, and text in multiple languages, including the local language, in tactile and Braille formats.

⁶⁷ (Ministry of Housing and Urban Affairs, Government of India, 2021)

6.2 Signages

Guidelines	
6.2.1	Place toilet direction signs at main junctions, busy areas, and road margins.
6.2.2	Clearly mark toilet locations with appropriate signs.
6.2.3	Use legible universal signage of a man, woman and person in a wheelchair at entrance and passage ways.
6.2.4	Display the International Symbol of Access (ISA) at all unisex accessible toilets.
6.2.5	Preferably place the signages near light sources.



Image 38 Toilet Signages

Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)



Image 39 Colour-contrasting instructive Signs on toilet etiquettes

Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)

6.3 Information Display Boards

Guidelines	
6.3.1	Display name and contact details of the Caretakers, Supervisor, the Supervisor's agency, and the area Sanitary Inspector.
6.3.2	Display toilet operation timings and user charges.
6.3.3	Provide and display SMS-based/toll-free numbers allotted for feedback in local and disability-friendly languages.
6.3.4	Display the following information prominently for each toilet block: <ol style="list-style-type: none"> Toilet identification number. Name of the ULB (Urban Local Body) under which the toilet falls. Ward number. Maintenance authority. Toilet timings.

6.4 Tactile Map

Guidelines	
6.4.1	Provide tactile layout of the toilet building at the entrance with braille and audio.
6.4.2	Indicate its location with a Tactile Guiding Surface Indicator (TGSi).
6.4.3	Place it in a well-lit and obstacle-free area.
6.4.4	Locate it at the entrance door, on the right side, near the latch side, within 1000 mm.
6.4.5	If fixed on a vertical surface, place it between the height of 1250 mm and 1750 mm above the floor.
6.4.6	If fixed on a horizontal or inclined surface, place it between 900 mm and 1200 mm from the floor, with a 15° to 30° inclination.



Image 40 Braille cum tactile sign board

Source: (Ministry of Housing and Urban Affairs, Government of India, 2021)

07

MATERIALS AND FINISHES

This chapter provides the norms for the materials and finishes in the building to enhance the user comfort and convenience. RCC PT facilities have a long structural life. Since, design and material choices play an important role in ensuring that the structure meets its intended lifespan⁶⁸, it is important that the overall process of service provision (planning, implementation, operations) incorporates sustainability elements. This includes that the choice of durable materials is consistent to locational and climatic conditions.

This chapter comprises the recommendations for the overall colour scheme of the toilet, and the materials and finishes to be used within the toilets to increase their durability. Apart from the recommended materials and finishes, additional options can be explored and considered to align with the overall design theme of the restroom.⁶⁹

Guidelines	
7.1	Ensure all sanitary fixtures, surfaces and accessories are made of durable materials to withstand possible abuse, extra weight and heavy usage.
7.2	Tile the inner walls of the toilet unit up to a minimum height of 3ft (900mm).
7.3	Ensure bathroom walls are tiled up to the roof height.
7.4	Avoid using paint as a finishing option.
7.5	If paint is necessary, limit it to areas that are out of reach, such as the ceilings.
7.6	Use anti-skid flooring materials.
7.7	Non-slippery materials such as ceramic tiles, natural stones, homogeneous tiles, and terrazzo are recommended for flooring.
7.8	Water-proof natural stone is recommended for flooring in common areas.
7.9	Cement flooring is recommended for toilet units.
7.10	Provide non-staining, skid-resistant mats with grid design.
7.11	For walls, consider using materials such as ceramic tiles, natural stone, anti-slip homogeneous tiles, stainless steel, enamelled steel panels, glass block, aluminium panels, or phenolic cladding.
7.12	Ceramic tiles are recommended for wall cladding.
7.13	For ceiling, materials such as mineral fibre board, fibrous plaster board, aluminium panels or strips is recommended.
7.14	For Indian toilet closet pans, use materials such as ceramic or an equivalent material allowed by standards.
7.15	Use materials such as wood, plastic, and GI sheets for doors.
7.16	Use suitable corrosion prevention paints for doors with GI sheets.
7.17	To prevent decay in wooden doors, consider adding aluminium sheets up to 2ft (600mm) from the door bottom.
7.18	If possible, materials and lighting to contribute to the toilet colour scheme making the toilet bright and conducive.
7.19	The colour of the tile or stone finishes, or the applied finishes such as the enamelling on steel or aluminium to contribute to the colour scheme.

⁶⁸(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)

⁶⁹For instance, Smart Sustainable Toilets at Koper Khairne Ward uses upcycled PET bottles, discarded keyboards, and metal waste. Also, a public toilet at Marine Drive, Mumbai is designed to complement the surrounding Art Deco buildings aesthetics. Retrieved from: https://www.linkedin.com/posts/swachh-bharat-urban_toilettales-activity-7142838206986702848-s1gf?utm_source=share&utm_medium=member_desktop

Retrieved from: Mumbai's Marine Drive gets a 'five star' public toilet - The Hindu

08

BUILDING SERVICES

This chapter is dedicated to detailing the provisions and systems necessary for the building services pertaining to toilet facilities.

The toilet fixtures, lighting and ventilation contribute to the usability and safety of a public toilet. The design and construction of the operating controls and devices should aim to ensure the independent, safe and convenient operation of controls and devices by a wide range of users with or without functional limitations.⁷⁰ Proper ventilation and odour control is one of the biggest priorities while operating PT / CT facilities. Ineffective ventilation can make a PT / CT facility unusable, even if it is well designed.⁷¹

This chapter will be useful in making a decision on which building services systems should be adopted as per the topography and weather conditions. It covers details about the internal systems and amenities within a building that contribute to the user comfort and safety, as well as improving operational efficiency. This includes bathroom fixtures, switches and controls, waste collection and disposal, illumination and lighting, water and drainage systems, and ventilation.

8.1 Bathroom Fixtures

Guidelines	
8.1.1	Provide faucets and other controls that are either hand-operated or electronically controlled (sensor based).
8.1.2	Ensure hand-operated controls are operable by one hand without tight grasping, pinching, or wrist-twisting and require a force less than 22 N to activate.
8.1.3	Use lever-type handles (non-self-closing) allowing operation with a closed fist.
8.1.4	Ensure controls are colour-contrasted.
8.1.5	Ensure the surrounding face plate panel and the faceplate should similarly contrast with the background wall on which the controls are mounted.

8.2 Switches and Controls

Guidelines	
8.2.1	Place controls, electrical sockets, and switches between 800-1200 mm from the floor.
8.2.2	Ensure that the operable part of these items is at least 350 mm away from internal corners or obstructions.
8.2.3	The switch plate should contrast with the wall by at least 30 points in Light Reflectance Value (LRV).
8.2.4	It shall be possible to activate it with an elbow.

8.3 Waste Collection and Disposal

Guidelines	
8.3.1	Place bins within toilet cubicles or next to washbasins, prioritising foot-operated bins over hand-operated ones.
8.3.2	Prefer sanitary bins with non-touch opening mechanisms like motion sensors.
8.3.3	Provide covered sanitary bins in women's and unisex toilet areas for napkin disposal.
8.3.4	Install incinerators for toilets with more than 10 seats and those near women's colleges and hostels.
8.3.5	Include waste containers for diaper disposal.
8.3.6	For sanitary napkin disposal, implement a proper disposal mechanism with local biomedical waste agencies.

⁷⁰(Ministry of Housing and Urban Affairs, Government of India, 2021)

⁷¹(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)

8.4 Illumination and Lighting

8.4.1 General Considerations

Guidelines	
8.4.1.1	Ensure constant interior and exterior lighting, especially at night.
8.4.1.2	Well-lit entrances, exits, walkways, paths, and open areas leading to the toilet should have natural light or bright artificial lighting, especially for night time use.
8.4.1.3	Consider using energy-efficient lighting options like LEDs and CFLs when feasible.

8.4.2 Natural Lighting

Guidelines	
8.4.2.1	The design should include features that provide natural daylight to illuminate at least half of the toilet space during the day.

8.4.3 External Lighting

Guidelines	
8.4.3.1	Adequate lighting in the wider area surrounding the toilet block.
8.4.3.2	Provision of carefully placed fixtures and lamps.
8.4.3.3	Regular electricity supply (backed by power support) throughout the path.
8.4.3.4	Toilet gate to be adequately lit.
8.4.3.5	Illumination at the top and bottom and along of the flight should be at least 200 lux.
8.4.3.6	Installation of flood-lights / mass lights near public toilets for night, especially the access points.
8.4.3.7	Advertisements to have illumination provisions for night.

8.4.4 Internal Lighting and Fittings

Guidelines	
8.4.4.1	Internal lighting should be bright enough to illuminate entrances, exits, wash areas, cubicles and publicly accessible areas.
8.4.4.2	All toilet units and cubicles should be well-lit.
8.4.4.3	Each toilet seat should have its own functional light point.
8.4.4.4	Warm colour lighting to be used for general lighting.
8.4.4.5	Down lights to be used above the washbasin / mirror in all toilets.
8.4.4.6	Minimum general lighting level is 300 lux.
8.4.4.7	Adequate colour contrast of 30 points difference in LRV between flooring, walling and fixtures.
8.4.4.8	Minimum 100 lux illumination level in access routes leading to washrooms.
8.4.4.9	Wherever possible, motion sensor lighting is recommended to avoid manual controls and automated response.

8.4.5 Emergency Lighting

Guidelines	
8.4.5.1	Emergency lighting in both men and women blocks.
8.4.5.2	Illumination design should reflect exit signs to indicate a path for exit from the toilet safely.
8.4.5.3	Functional alternative backup energy systems like generators and inverters for toilets open at night.
8.4.5.4	Wiring system design to accommodate these requirements.

8.5 Water and Drainage Systems

Guidelines	
8.5.1	Conceal all internal water supply and drainage pipes connected to fixtures.
8.5.2	Secure pipes with durable hangers, supports, and fasteners designed for repeated human use impact.
8.5.3	In hilly areas with cold winters, provide a water heating system.
8.5.4	Ensure plumbing designs have backup or alternative facilities to support toilet operations in case of frozen pipes.
8.5.5	For urinals, install scupper drains or stainless-steel grating over the drainage beneath the urinal bowls.
8.5.6	For WCs, place a floor trap within the toilet, especially if it has an ablution tap, bucket, and mug.
8.5.7	Ensure proper grading of flooring in toilet cubicles towards the floor trap for effective drainage.

8.6 Ventilation

8.6.1 General Considerations

Guidelines	
8.6.1.1	Provision of adequate ventilation facilities such as vents, slanted glass slats and/or exhaust fan.
8.6.1.2	Ventilation systems should not compromise privacy

8.6.2 Natural Ventilation

Guidelines	
8.6.2.1	Windows, doors, louvres or other openings to the outdoors for natural ventilation.
8.6.2.2	Provision of access to operating mechanisms of such openings.

8.6.3 Mechanical Ventilation

Guidelines	
8.6.3.1	Ensure replacement air for exhaust systems to create a slight negative pressure.
8.6.3.2	This replacement air can come from outside or from adjacent spaces that are either air-conditioned or naturally ventilated.
8.6.3.3	Replacement air can be drawn through features like louvres in doors, walls, door undercuts, or other suitable means.
8.6.3.4	The exhaust system should release air directly outdoors without causing disturbances to neighbouring premises.
8.6.3.5	Maintain a minimum air exchange rate of 15 air changes per hour or 35.4 litres per second of exhaust per toilet cubicle.
8.6.3.6	Discharge the exhaust air to the building's exterior at a location at least 2000 mm above the external surface level and at least 5000 mm away from any building openings like windows, doors, or air intakes where the discharged air might re-enter the building.

09

UTILITIES

This chapter states the norms for essential utilities crucial to building operations, typically integrated with the broader infrastructure of a city or region. The efficient functioning of a building is linked to the provision and management of essential utilities such as water and electricity. The diverse local topography and prevailing weather conditions significantly influence the choice of infrastructure for these utilities. The selection of an appropriate system tailored to these conditions is paramount for optimal performance.

These utilities encompass water supply and storage, stormwater drainage, and wastewater management. Availability of sufficient water in a PT / CT is essential for its efficient operations and maintenance. It is also essential to ensure that users practice good personal hygiene. While it is desirable to harvest rain water at the toilets, the size of structure is often a deterrent and limits the benefits derived out of the effort. Hence, it is important to direct this water towards the storm water drainage. Along with this, human waste from PT / CT facilities needs to be properly managed to maintain sanitary conditions, to ensure that there are no adverse consequences on health and the environment.⁷²

The information provided herein serves as a valuable resource for informed decision-making regarding the adoption of specific systems, with due consideration for the unique topography and prevailing weather conditions of the area.

9.1 Water Supply and Storage

Guidelines	
9.1.1	Ensure water storage for half-day use
9.1.2	For reliable municipal supply, use underground sump and overhead tanks.
9.1.3	If there is no municipal supply, install a bore well and pump.
9.1.4	Include standby pumping with a covered pump house if needed.

9.2 Stormwater Drainage

Guidelines	
9.2.1	Direct all down pipes from the roof and floor cleaning/wash water used for maintenance, except those going to the sewer network, toward the stormwater drainage.
9.2.2	Provide rainwater harvesting system based on the roof area size.

⁷²(Ministry of Housing and Urban Affairs, Central Public Health & Environmental Engineering Organisation, Government of India, 2018)

9.3 Wastewater Management

9.3.1 General Considerations

Guidelines	
9.3.1.1	If there is an existing sewerage system within 30 metres of the proposed individual household, community, or public toilets, only build the toilet structure itself and connect it to the existing sewerage system under SBM (Swachh Bharat Mission).
9.3.1.2	No discharge of untreated faecal sludge/septage and sewage from the toilet to be dumped in drains, open areas or water bodies.
9.3.1.3	Organise safe disposal of septage in tandem with city-wide infrastructure to sewer systems or on-site treatment solutions.
9.3.1.4	Choose technology based on site conditions, hydro-geological factors, and nearby infrastructure.
9.3.1.5	Different options include; <ol style="list-style-type: none"> a. Connection to sewer where wastewater will be collected and conveyed by laying underground pipes as per the manual on Sewerage and sewage treatment systems by CPHEEO 2013. <p style="text-align: center;">OR</p> <ol style="list-style-type: none"> b. On-Site Sanitation is suitable for areas where sewer networks are impractical due to topography or any other factors

9.3.2 On-Site Sanitation System

Guidelines	
9.3.2.1	For public toilets that cannot be connected to a sewer line, consider using on-site treatment systems such as Septic Tank System with Soak Pit, Anaerobic Bio-Digester Toilets developed by Defence Research and Development Organisation (DRDO), Aerobic Bio Tank.
9.3.2.2	On-site treatment technologies for human waste include septic tanks with soak pits, bio-digesters, and decentralised wastewater treatment systems.
9.3.2.3	Connect only toilet and urinal waste to the septic tank system.
9.3.2.4	The effluents from the septic tanks should be directed to a soak pit or dispersion trench.
9.3.2.5	Wastewater from washing and bathing should be directly connected to the soak pit.

9.3.3 Design Period for Sewerage Systems Components

Guidelines	
9.3.3.1	30-year recommended design period for collection system i.e., Sewer Network.
9.3.3.2	30-year design period for Pumping stations (civil works).
9.3.3.3	15-year design period for pumping machinery.
9.3.3.4	30-year design period for sewerage treatment plant.
9.3.3.5	30-year design period for effluent disposal and utilisation.
9.3.3.6	15-year of design period for Decentralised Wastewater Management System (DWWM), if possible. Another way is to design a DWWM by estimating the present-day capacity and plan the system for an additional 20% capacity.

10

DESIGN PROTOTYPE FOR PUBLIC TOILET COMPLEX

In alignment with the standards and guidelines compiled in this document, a prototype for the design layout of a public toilet has been developed. This prototype of an inclusive public toilet complex incorporates various accessibility features for accommodating diverse user groups and ensuring their convenience.

The purpose of creating this prototype is to offer a visual representation of the toilet design and the spatial organization of features outlined in the document. The content of this chapter is expected to be useful in organizing spaces, allocating areas for specific functions, and coordinating the placement of structural components, utilities, and amenities. Additionally, it aims to ensure efficient space utilization and serve as a reference point for understanding the existing toilet buildings, making it easier to plan and implement changes without compromising the building's integrity. It is intended to enable communication between architects, designers, builders, and other stakeholders, ensuring a shared understanding of the proposed structure.

10.1 About the Prototype

The following building layout accommodates 600 men and women users each per day. These toilets incorporate universal accessibility provisions as outlined in the above-mentioned documents, specifying the number and type of facilities.

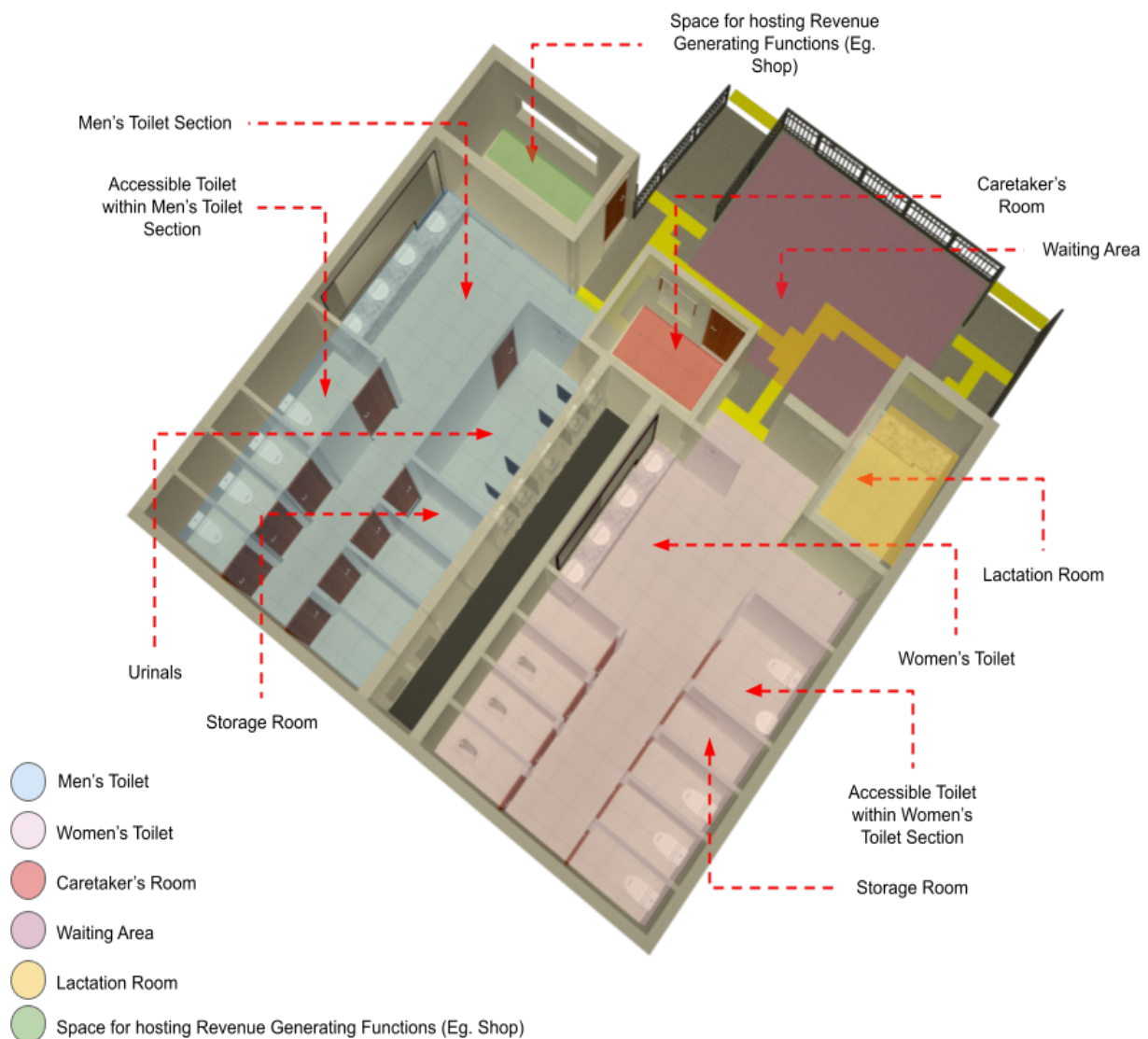


Figure 9 Top view of the public toilet complex with areas within the toilet

As shown in Figure 9, the toilet complex features toilets for men, women, and accessible facilities in each of these toilet sections. Additionally, there is a lactation room that can be accessed from the women's toilets. The complex also includes a caretaker's room and a dedicated area for alternative revenue-generating activities.

The entire complex is accessible via ramps and stairs, with a waiting area located outside. Both the men's and women's toilets have separate entrances situated at a distance from each other, separated by a caretaker's room, ensuring user privacy. Access to the caretaker's room is from within the toilet complex. Conversely, the spaces allocated for revenue-generating activities are part of the toilet complex but can be accessed by users from outside the toilet complex.

Designed to accommodate 600 female users, the women's section includes a total of 6 toilet cubicles, with 3 equipped with Western-style WCs and 3 with Indian-style WCs. Similarly for the same number of male users, the men's toilet section comprises a total of 5 cubicles, with 3 featuring Western-style WCs and 2 with Indian-style WCs, along with a total of 5 urinals, including 1 accessible urinal.

Both the men's and women's sections are equipped with washing/bathing spaces, 1 storage room, and a total of 4 wash basins, with 1 of them set at a lower height for accessibility. In both sections, the accessible toilet cubicle features an accessible Western-Style WC. Figure 10 highlights all these facilities within the toilet design prototype.

The approach to the toilet complex comprises a 900 mm accessible ramp and a 1500 mm wide accessible staircase leading to a waiting area. The waiting area is tailored to accommodate 1200 users (600 for men and 600 for women). It leads to the men's and women's toilet sections, as well as the caretaker room.

Both entrances to the men's and women's toilet sections feature 1000 mm wide doors, and the corridors inside are 1200 mm wide. Inside the toilet units for both men and women, an accessible toilet cubicle of 2200 mm x 2000 mm is provided. It is equipped with essential features like grab bars, an accessible western water closet, and a wash basin, alongside other accessible fixtures and amenities.

Additionally, these toilets cater to users of varying heights and needs. Lower-height wash basins are available at two levels, one at 850 mm and another at 550 mm from the floor, making them suitable for wheelchair users, children, and individuals of short stature. Furthermore, there are 5 urinals, one of which is an Accessible/Child-Sized Urinal installed at a height of 430 mm from the floor.

In terms of accessibility, the design incorporates manoeuvring spaces for wheelchair users, ensuring easy access to all necessary toilet facilities, including the accessible toilet unit, accessible urinals, and wash basins. This prototype aims to provide an inclusive and user-friendly environment for all individuals, regardless of their mobility or height requirements.

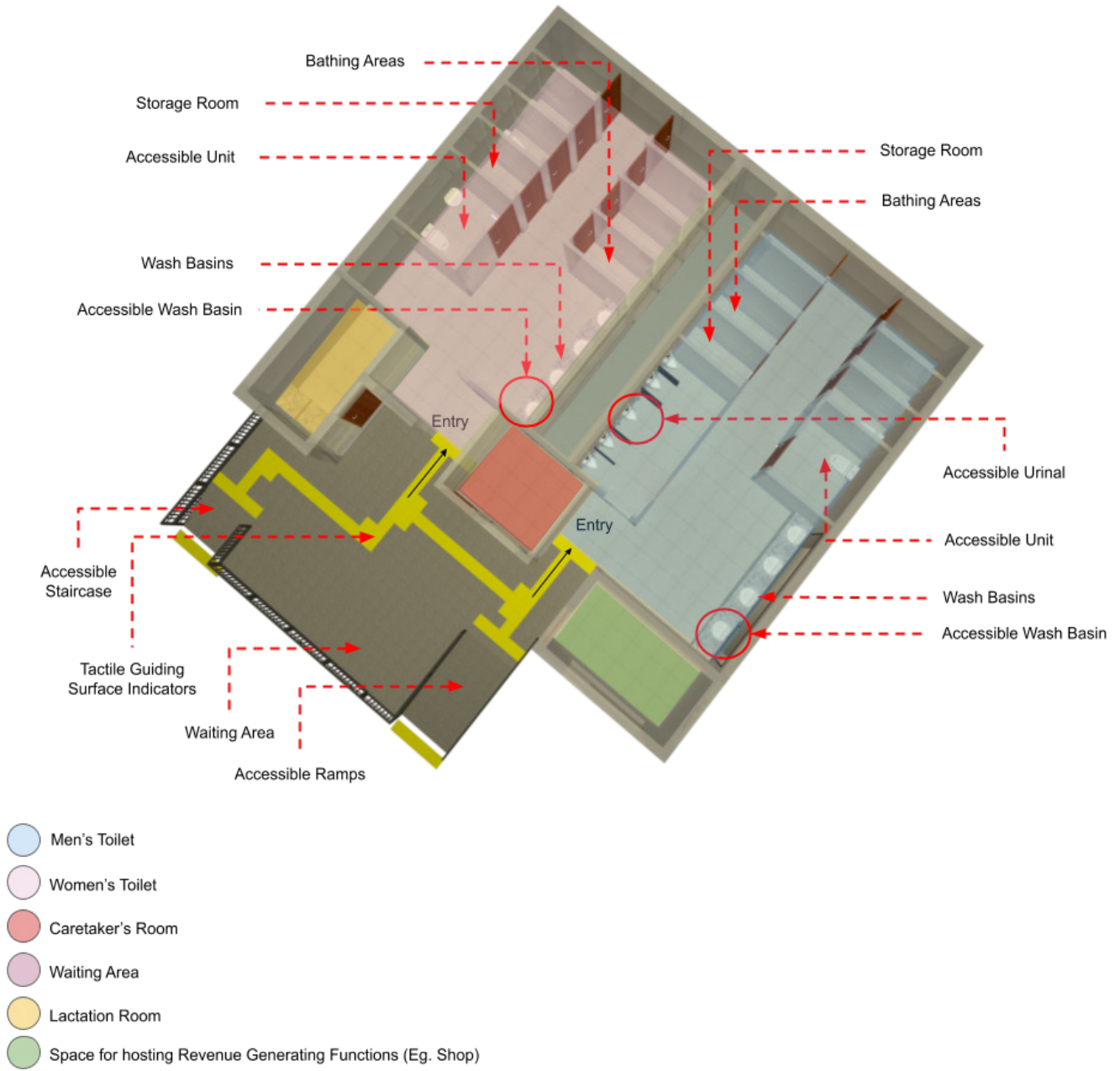


Figure 10 Top view of the public toilets with toilet facilities inside the toilet

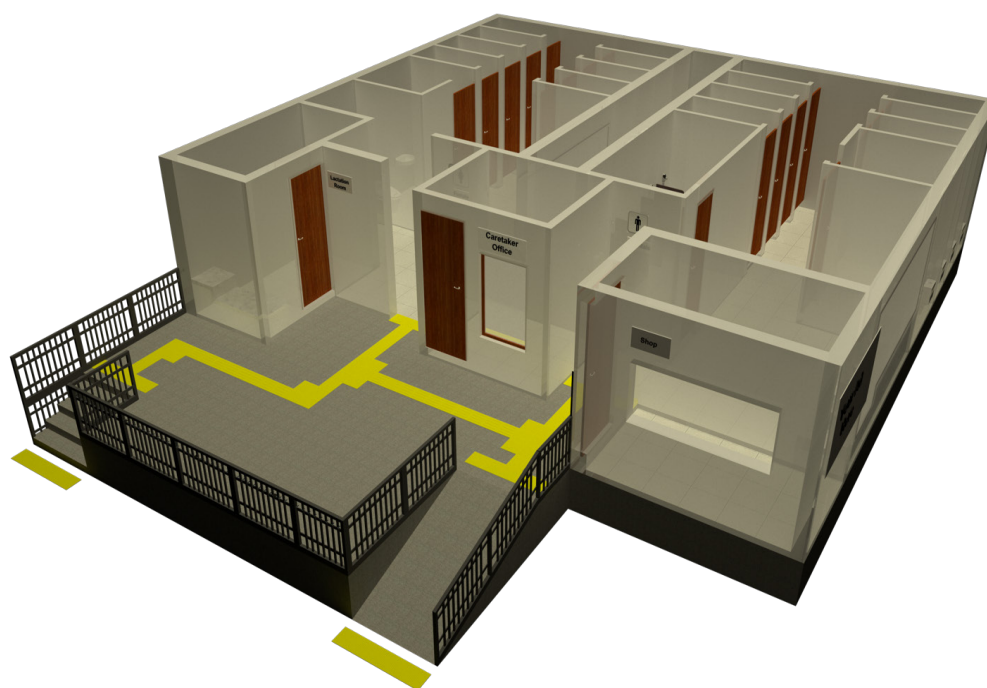


Figure11 Front view of the public toilet complex

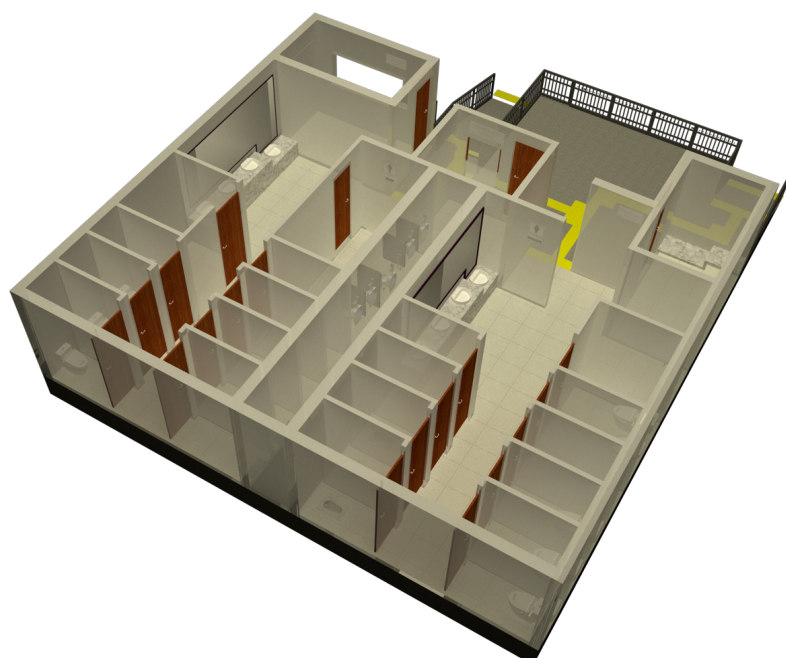


Figure12 Back view of the public toilet complex

10.2 Area Statement

The Table 2 and Table 3 given below provides the minimum dimension size as well as the area of the facilities provided in the design prototype. This encompasses the size and area of single facility.

Table 2 Types and size of the facilities

Sr. No.	Toilet Facilities	Minimum Size of the Facility (Length x Breadth) (in m)	Carpet Area of the Facility (in sq. m.)
1	Urinal (Including clear floor space)	1.8 x 0.65	1.17
	Accessible Urinal/Child-Sized Urinal (Including clear floor space)	1.8 x 0.9	1.62
2	Indian-Style Toilet Cubicle	1.8 x 0.9	1.62
3	Western-Style Toilet Cubicle	1.8 x 0.9	1.62
4	Wash Basin	1 x 0.54	0.54
5	Child-size Wash Basin (Including clear floor space)	0.54 x 0.9	0.48
6	Accessible Toilet	2.2 x 2	4.4
7	Bathing Area	1.8 x 0.9	1.62
8	Storage Area	1.8 x 0.9	1.62
9	Seating Space	1.9 x 1.6	3
10	Lactation Room	3.3 x 1.75	5.8
11	Caretaker's Room	2.5 x 2	5
12	Corridor Width	1.5 (width)	-
13	Waiting Area	-	31.6
14	Toilet Duct	7.7 x 1	7.7

Table 3 Area statement of the toilet

Sr. No.	Toilet Facilities	Carpet Area of the Facility (in sq. m.) (A)	No. of Units (B)	Total Carpet Area (C)
I. Men's Toilet				
1	Urinal (Including clear floor space)	1.17	4	4.7
2	Accessible Urinal/Child-Sized Urinal (Including clear floor space)	1.62	1	1.62
3	Indian-Style Toilet Cubicle	1.62	2	3.24
4	Western-Style Toilet Cubicle	1.62	3	4.86
5	Wash Basin	0.54	3	1.62
6	Child-size Wash Basin (Including clear floor space)	0.48	1	0.48
7	Accessible Toilet	4.4	1	4.4
8	Bathing Area	1.62	1	1.62
9	Storage Area	1.62	1	1.62
10	Corridor Space	-	-	16.5
11	Total Area of the Men's Toilet			40.7
II. Women's Toilet				
12	Indian-Style Toilet Cubicle	1.62	3	4.86
13	Western-Style Toilet Cubicle	1.62	3	4.86
14	Wash Basin	0.54	3	1.62
15	Child-size Wash Basin (Including clear floor space)	0.48	1	0.48
16	Accessible Toilet	4.4	1	4.4
17	Bathing Area	1.62	1	1.62
18	Storage Area	1.62	1	1.62
19	Seating Space	3	1	3
20	Corridor Space	-	-	15.2
21	Total Area of the Women's Toilet			37.7
III. Total Area of Lactation Room		5.8	1	5.8
IV. Total Area of Caretaker's Room		5	1	5
V. Total Area of Waiting Area		31.6	1	31.6
VI. Toilet Ducts		7.7	1	7.7
Total Area of the Toilet (I+II+III+IV+V+VI)				128.5

11

CASE STUDIES

11.1 Highway Toilets/Transit Hub Toilets⁴⁹

Location: Ghatkopar, Mumbai

Implementation Organisation: is MAD(E) in MUMBAI

Facilitation by: the Central Government, State Government and Urban Local Body

Type of Toilet: Public Toilet at Transit Areas

Salient features

1. Separate men's, women's, accessible, and transgender-friendly toilets.
2. Female section equipped with a changing room, infant-care area, and sanitary hygiene amenities.
3. All the toilet sections are well-illuminated by natural light as well as solar-powered systems.
4. In-situ transformation of faecal matter and urine into fertilizer.
5. The toilet complex has a public seating, a drinking water kiosk, and an ATM.
6. Potential for additional amenities, such as retail shops, to enhance the overall facility.

Scope for Replication

1. User charges can cover the O&M costs.
2. Easily replicated along main roads based on the space availability.
3. Easy-to-recognize design can become a landmark of a transit hub.

11.2 Sulabh International Toilets⁵⁰

Location: Pan-India

Implementation Organisation: Sulabh International and its Partners

Facilitated by: Central and Local Governments

O&M by: Sulabh International

Type of Toilet: Public Toilet

Salient features

1. Separate Male & Female sections with separate entrances.
2. Child-friendly toilet in the women's section.
3. Accessible toilets are provided in most toilet complexes.
4. Amenities include bathing facilities, changing rooms, handwashing stations, and sanitary hygiene provisions in both sections.
5. Additional services including the cloakroom, telephone service, first-aid, night shelter for caretakers, and

⁴⁹(Maharashtra Urban WASH & Environmental Sanitation Coalition)

⁵⁰(Maharashtra Urban WASH & Environmental Sanitation Coalition)

drinking water are also provided at the complexes.

6. Toilet is architecturally designed to align with the local aesthetics.
7. The toilet has an easily recognizable signage.
8. Continuous 24-hour water supply from tube well and overhead tank.
9. Uninterrupted 24-hour electricity supply.
10. At places where the sewer network is unavailable, the toilet complexes are connected to Sulabh Flush Compost twin-pit systems.

Scope for Replication

1. Sulabh International manages and operates the complex for 30 years, eliminating the need for ULBs to fund maintenance. ULBs provide land and capital costs.
2. It is a replicable model for ULBs, which can be modified based on land availability.
3. Pay-and-use system with charges of Rs 2 for urinals and Rs 5 for toilets covers O&M costs, ensuring self-sustainability.

11.3 'Ti' Toilet⁵¹

Location: Pune

Implementation Organisation: Ti Toilet

Facilitated by: Private Organisations

O&M by: Local Women Entrepreneurs

Type of Toilet: Public Mobile Toilet

Salient features

1. Mobile Toilet for women constructed within a bus.
2. Toilet bus equipped with water storage, smart toilets, handwashing basin, infant-care unit, sanitary hygiene kiosk, and incinerator.
3. User charge of Rs 5 per use.
4. The wastewater is emptied daily into city sewer channels.
5. Aesthetically maintained interiors.
6. Hygiene levels are monitored with temperature and odour sensors.
7. A snacks and convenience shop is provided at the front of the bus.

Scope for Replication

1. O&M costs covered by user charges; no ULB O&M cost required.
2. Retrofittable in various discontinued buses, ensuring cost-effectiveness for replication.

⁵¹(Maharashtra Urban WASH & Environmental Sanitation Coalition)

11.4 Suvidha Toilet⁵²

Location: Mumbai

Agencies involved: Implementation Organisation is Hindustan Unilever Limited, Facilitated by ULB, Private Organisations, NGOs, Corporates

Type of Toilet: Public cum Community Toilet

Salient features

1. Public cum community toilet strategically located in slum areas.
2. Separate male and female sections with toilets, urinals, wash basins, shower rooms, and changing rooms.
3. Dedicated janitor room also provided.
4. Additional services include laundry services (Rs. 50-60 per load) and R.O. drinking water at Rs. 1 per litre for community users.
5. Community users pay Rs.150 monthly charges per family, while general public user charges are Rs. 3 per use.
6. Hourly cleaning by dedicated staff ensures hygiene.
7. Used water from washing machines and handwashing stations are treated and recycled for flushing.

Scope for Replication

1. This model is replicable for community spaces near dense habitation.
2. O&M costs covered by user charges; ULBs provide land and capital costs.

⁵²(Maharashtra Urban WASH & Environmental Sanitation Coalition)

12

ANNEXURES

12.1 Annexure 1: Audit Framework for Public Toilets for Inclusive Sanitation

Audit Framework for Public Toilets for Inclusive Sanitation

A. General

1. Location:
2. Google coordinates:
3. Ward Number & Name:
4. Nearest landmark:
5. Type of toilet: Public toilet/ Community Toilet
6. Brief Description of toilet (4 to 5 sentences)

7. Geography and Appearance (All pictures shall be geotagged)
 - a. Picture 1: Front view (with sign)
 - b. Picture 2: Back-side view
 - c. Picture 3: Inside toilet (for each toilet unit and urinal)
 - d. Picture 4: Approach to women entry
 - e. Picture 5: Road to toilet, the road and street light
 - f. Picture 6: Advertisement board, if any
 - g. Picture 7: Information board on user charges
 - h. Picture 8: Water storage tank and wastewater outlet
8. Brief Description of Toilet Surroundings [The place it is situated in (Market/Street/Residential Area/ Commercial/Institutional Area, etc., immediate buildings and landscape around, condition of the approach road for the toilet):

- 9. Toilet visible from (indicate relevant): Main Road/Lane from the main road
- 10. Toilet owned by (indicate relevant):
- 11. Operated and maintained by:
- 12. Is there any user fee?

If yes, then what is the user fee?

Urinal	WC Men	WC women	PwDs/ Gender neutral facilities	Shower

- 14. Is there any ancillary activity provided?

B. Approach to Toilet

- 1. Provision of legible colour contrasted signage indicating the toilet:
- 2. Clear access route with minimum 1200 mm width: Yes/No
- 3. Well-illuminated access routes: Yes/No
- 4. Entrance characteristics:
 - ♦ Common entrance for women & men: Yes/No
 - ♦ Main door available: Yes/No
 - ♦ Condition of toilet complex door: Good/ workable/ No door / Door broken / No Latch / Door is stuck and not moving / Others (specify_____)
 - ♦ Clear Width of entrance to the toilet complex: Less than 900 mm / More than 900 mm
- 5. Universal accessibility at the entrance
 - ♦ Provision of accessible ramps with minimum 1200 mm width: Yes/No
 - ♦ Non-slippery handrails on both the sides of the ramp at a height of 760 mm and 900 mm: Yes / No
 - ♦ Tactile Guiding Surface Indicators from the footpath to the toilet: Yes/No
 - ♦ Provision of a Wheelchair Parking Space: Yes/No

C. Structural Questions

1. Structure Type: Brick & Mortar/ RCC / Prefabricated Steel/ Prefabricated Concrete/ E-Toilet
2. Floor type (indicate relevant): Mosaic / Tiles / Cement / Others (specify)
3. Provision of Anti-skid tile: Skid/Non-Skid
4. Floor condition (indicate relevant): Good condition / broken / cracked / uneven surface / tiles or flooring has come out / Others (specify)_____
5. Roof type (indicate relevant): Cement concrete / tile / asbestos / thatched / no roof / Others (specify)
6. Roof condition (indicate relevant): Good condition / leaking / broken / damaged / needs full repair

D. Design Questions

7. Size of the Toilet (indicate relevant):
 - ♦ Length (in m):
 - ♦ Breadth (in m):
 - ♦ Wall height (in m):
 - ♦ Built up area (in sqm):

8. No of cubicles/ urinals

Men		Women		Persons with disabilities			Gender neutral	
Indian	Western	Indian	Western	Men	Women	Gender neutral	Indian	Western

9. No. of bathroom or changing room

Men	Women	Persons with disabilities	Gender neutral

10. No. of washbasins

Men	Women	Persons with disabilities	Gender neutral

11. No. of Urinals:-
12. Provision of a Caretaker Room (indicate relevant): Yes/No
13. Rough Sketch of the layout of complex (if possible)



E. Individual toilet details

Men's toilet

1. Provision of legible colour contrasted signage indicating men's toilet: Yes / No
2. Clear Width of entrance door: Less than 900 mm / More than 900 mm
3. Specify if any issues (select all that apply, multiple responses possible): No door / Door broken / No Latch / Door is stuck and not moving / Others (specify)
4. Average width of corridor inside the toilet:- _____ m
5. Adequate Illumination: Yes/No
6. Provision of Soap Dispenser: Yes / No
7. Provision of Hand Dryer: Yes / No
8. Provision of Baby Changing Station: Yes/No
9. Provision of dustbins: Yes / No

Men's toilet	Nos.
10. W.C. broken:	
11. WC doors without latch:	
12. WC doors not closing:	
13. W.C. without doors:	
14. Provision of health faucet:	
15. Total taps in WC.:	
16. Taps working:	
17. Taps broken/not working:	
18. Bucket/mug provided:	
19. Flush tanks working:	
20. Flush tank broken/not working:	
21. Provision of dustbins	
22. Type of health faucet (Lever Type / Sensor-based)	

23. Types of western toilet seat: Wall Hung type / Back to Wall / Floor Mounted
24. Provision of at-least one western toilet seat between the height of 450 mm to 480 mm: Yes / No
25. Provision of flushing arrangements, toilet roll dispensers, and health faucet mounted between 300 mm x 800 mm: Yes / No
26. Type of wash basins: Countertop / Under-Mount / Pedestal / Wall Hung / Corner Basins
27. Provision of any wash basins between the height of 700 mm to 800 mm: Yes/No
28. Provision of any wash basins for children at the height of 550 mm from the finished floor level: Yes / No
29. Washbasins and their conditions (indicate Nos. for following):

Taps working:	
Taps not working:	
Basin broken:	

30. Types of urinals: Sensor-based Flush / Manual Flush / Waterless Urinal
31. Provision of minimum urinal space of 900mm x 1200mm: Yes/No
32. Provision of 1200 mm long modesty boards at the 400 mm height from ground: Yes/No
33. Provision of accessible/child friendly urinal fixture at 380 mm height: Yes/No
34. No. of accessible/child friendly urinals:
35. Details of the grab bars at accessible urinals:

Fixed Grab Bar – Vertical at a height of 800 mm with a length of 600 mm	Yes / No
Fixed Grab Bar – Horizontal at a height of 800 mm with a length of 600 mm	Yes / No

36. Urinal condition (indicate Nos. for following):

Fully working:	
Units broken:	
Unit pipes broken:	

37. Any other observations

Women’s toilet

1. Provision of legible colour contrasted signage indicating women’s toilet: Yes / No
2. Clear Width of entrance door: Less than 900 mm / More than 900 mm
3. Specify if any issues (select all that apply, multiple responses possible): No door / Door broken / No Latch / Door is stuck and not moving / Others (specify)
4. Average width of corridor inside the toilet- _____ m
5. Adequate Illumination: Yes/No
6. Provision of Soap Dispenser: Yes / No
7. Provision of Hand Dryer: Yes / No
8. Provision of Baby Changing Station: Yes/No
9. Provision of separate dustbins: Yes / No
10. Provision of full-length mirror fixed at the height of 900 mm: Yes/No
11. Provision of Baby Protection Seat mounted at the height of 400 mm: Yes/No
12. Provision of Sanitary napkins vending machine at maximum height of 1200 mm: Yes / No
13. Provision of Sanitary incinerator machine: Yes / No
14. Provision of squatting urinals for women: Yes/No
15. Provision of resting place/ bench: Yes/No
16. Provision of locker space to keep handbags: Yes/No
17. Provision of changing rooms: Yes/No

Women’s toilet	Nos.
18. WC broken:	
19. Provision of health faucet	
20. WC doors without latch:	
21. WC. doors not closing:	
22. WC without doors:	
23. Total taps in WC :	
24. Taps working:	
25. Taps broken/not working:	
26. Bucket/mug provided:	
27. Flush tanks working:	
28. Flush tank broken/not working:	
29. Provision of dustbins	
30. Type of health faucet (Lever Type / Sensor-based)	

- 31 Types of western toilet seat: Wall Hung type / Back to Wall / Floor Mounted
- 32 Provision of at-least one western toilet seat between the height of 450 mm to 480 mm: Yes / No
- 33 Provision of grab rails alongside any western toilet seat: Yes / No
- 34 Provision of flushing arrangements, toilet roll dispensers, and health faucet mounted between 300 mm x 800 mm: Yes / No
- 35 Type of wash basins: Countertop / Under-Mount / Pedestal / Wall Hung / Corner Basins
- 36 Provision of any wash basins between the height of 700 mm to 800 mm: Yes/No
- 37 Provision of any wash basins for children at the height of 550 mm from the finished floor level: Yes / No
- 38 Washbasins and their conditions (indicate Nos. for following):

Taps working:	
Taps not working:	
Basin broken:	

39. Any other observation

Accessible toilet

1. Provision of accessible toilet in both male and female: Yes / No
2. Provision of unisex accessible toilets: Yes / No
3. Easy identification of accessible facility: Yes / No
4. Provision of legible colour contrasted signage indicating accessible toilet: Yes / No
5. Provision of minimum 900 mm clear door width to accessible cubicle: Yes / No
6. Provision of doors that open inward/ outwards/both ways: Yes / No
7. Provision of Accessible Unit with minimum 2200 mm x 2000 mm: Yes / No
8. Provision of WC and bidets mounted at a height between 450mm- 480mm: Yes / No
9. Provision of space between the WC and the closet adjacent wall fitted with a grab bar between 450mm- 500mm: Yes / No
10. Provision of an accessible washbasin mounted at an appropriate height between 750- 850mm: Yes / No
11. Provision of folding seats inside the bathrooms: Yes / No
12. Provision of grab bars near WC between 750- 850mm: Yes / No
13. Provision of non-slippery grab bars of 38 mm diameter : Yes / No
14. Provision of easy to grip faucets that are operational with one hand: Yes / No
15. Provision of functioning emergency alarm system: Yes / No
16. Well drained and non-slippery floor surface: Yes / No
17. Provision of doors that can be locked from inside and released from outside under emergency situations: Yes / No
18. Provision of flushing arrangements, toilet roll dispensers, and health faucet mounted between 300 mm x 800 mm: Yes / No
19. Provision of easy to operate flushing equipment
20. Provision of dustbins: Yes / No
21. Any other observations

Gender neutral

1. Provision of legible colour contrasted signage indicating gender neutral toilet: Yes / No
2. Specify if any issues (select all that apply, multiple responses possible): No door / Door broken / No Latch / Door is stuck and not moving / Others (specify)
3. Average width of corridor inside the toilet- _____m
4. Adequate Illumination: Yes/No
5. Provision of Soap Dispenser: Yes / No
6. Provision of Hand Dryer: Yes / No
7. Provision of Baby Changing Station: Yes/No
8. Provision of Baby Protection Seat mounted at the height of 400 mm: Yes/No
9. Provision of adult diaper changing station: Yes/No
10. Provision of nursing seats: Yes/No
11. Provision of separate dustbins: Yes / No
12. Provision of full -length mirror fixed at the height of 900 mm: Yes/No
13. Provision of Sanitary napkins vending machine at maximum height of 1200 mm: Yes / No
14. Provision of resting place/ bench: Yes/No
15. Provision of locker space to keep handbags: Yes/No
16. Provision of changing rooms: Yes/No
17. Any other observations

F. Toilet Usage Details

1. Toilet timings (Specify AM / PM)

	Nov-Feb	Mar-June	July-Oct
Opens			
Closes			

2. Signboard with user fees available on public display (indicate relevant): Yes / No
3. User fee mentioned same as the collected fee (indicate relevant): Same / Higher / Lower
4. Mode of fee collection (indicate relevant): Cash payment / digital payment/ Weekly card / Monthly card / any other (specify)
5. Daily amount collected (average) (in Rupees):
6. Advertising done (indicate relevant): Yes / No
 - ◆ Possibility of using space for advertising: Yes / No
 - ◆ Space available for advertising (in sq.ft.):

7. Advertising area:

Bill board: Available Yes / No	If yes, Area in sq. m.:
Outside wall: Available Yes / No	If yes, Area in sq. m.:
Side wall: Available Yes / No	If yes, Area in sq. m.:
Any other (specify): Available Yes / No	If yes, Area in sq. m.:

8. Daily footfall (average) (indicate relevant):

	Morning	Forenoon	Afternoon	Evening
Men (Toilet)				
Men (urinal)				
Women (Toilet)				
Men (shower)				
Women (Shower)				
Persons with disabilities				
Gender neutral needs				

9. What is the daily peak hour (specify AM / PM):
10. Seasonal variations in footfall (indicate relevant):

Foot-fall (seasonal variations)	Jan – Mar	Apr – Jun	Jul – Sep	Oct - Dec
Daily number of visitors (average)				

- 11 Type of users (indicate relevant): Tourists / pilgrims / Slum-dwellers / General public / traders / vendors / Others (specify)
- 12 Daily usage record maintained (indicate relevant): Yes / No

G. Physical Infrastructure

Water Availability Status

1. Physically verify water availability (indicate relevant): Is water available inside the complex? Yes / No
2. Source of water (indicate relevant): Water connection from Municipality / Own bore well / Water tankers
3. Storage availability (select applicable; give specification)
4. Overhead tank (OHT): Yes / No Capacity:
5. Underground sump: Yes / No Capacity:
6. If no OHT, is there a direct water connection: Yes / No
7. Water supply frequency (indicate relevant): Continuous supply / Few hours per day / alternate days
8. Seasonal variation in water supply frequency (indicate relevant): Affected in summer / affected in winter / affected during monsoon / other events (please specify)

Issues Related to Monsoon

1. During monsoon (indicate relevant):
 - ♦ Water easily drained away: Yes/No
 - ♦ Time taken for water to drain: Less than 1 hour / 1 to 3 hours / 3 to 5 hours / 5 hours to 12 hours / More than 12 hours
 - ♦ Issues of water logging: Yes/No

Sewerage & Waste Disposal

1. Connectivity to wastewater disposal (indicate relevant): UGD System / On-Site Treatment – septic tanks or leach pits / road side drains / roads / no specific mechanism
2. If not connected to sewer network, distance from sewer network (in m)
3. If septic tank, frequency of cleaning septic tank (number of times / year)
4. Who is responsible for cleaning of septic tanks (indicate relevant): Agency/ ULB/ Others _____

Electricity Details

1. Toilet complex has electricity (indicate relevant): Yes/ No
2. Electricity availability (indicate relevant): Continuous / Disturbed (with power cuts)
3. Electricity board number available (indicate relevant): Yes / No
4. Electricity is used for (multiple answers are to be allowed): Lighting / Water sump / Cleaning / Misused
5. Electricity charges are paid by (indicate relevant): ULB / Contractor / No payment is made

H. Monitoring & Evaluation

1. Evaluation done by: Supervisor/ ULB / self / no evaluation
2. Frequency of evaluation: Daily / Weekly / fortnightly / Monthly/ half-yearly/ yearly/ other
3. Monitoring sheet (To be physically checked) (indicate relevant): Available / Not available
4. Items monitored (select all that apply): Cleanliness / Availability of caretakers / Availability of cleaners / Availability of supplies (water, electricity etc.) / Working condition of lights, taps / Water clogging

I. Details of the Caretaker

1. Is there a facility/space for caretaker / cleaner (indicate relevant): sitting and managing / staying / storing personal belongings
2. Count and gender of caretakers (indicate relevant):

	Men	Women
Cleaner		
Caretaker		

3. Caretaker employed by (indicate relevant): Contractor / Community / ULB / Self- employed
4. Shift timings of caretakers (note separately for each person):

Cleaner 1:	Cleaner 2:	Cleaner 3:	Cleaner 4:
Caretaker 1:	Caretaker 2:	Caretaker 3:	Caretaker 4:

5. Salary details

	Men	Women
Cleaner		
Caretaker		

6. Responsibility for cleaning toilet (indicate relevant): Cleaner / Caretaker / either
7. No. of times the toilet is cleaned per day (in no):
8. Cleaning time each day (indicate relevant):
 - a. Morning
 - b. Forenoon
 - c. Afternoon
 - d. Evening
 - e. Night
9. Is there a cleaning timesheet / record sheet issued (indicate relevant): Yes / No
10. Cleaning process (indicate relevant): Manual / Mechanised / Mixed / Not cleaned
11. Complaint redressal mechanism (indicate relevant):
 - a. Telephone number
 - b. Complaint register
 - c. Others (please specify)
 - d. None available
12. Provision of women caretaker for the toilet (indicate relevant): Full Time women caretaker/ part-time women caretaker/ no women caretaker

12.2 Annexure 2: Barriers to Inclusive Toilet Facilities: Challenges faced by Diverse Demographics in Public Toilets

Characteristics/ Factors	PwDs & Elderly	Children and Caregivers	Women	Transgenders
Location and Surroundings	<p>Toilets are located in dark and secluded areas.</p> <p>Toilet surrounding areas lack accessibility making it difficult to access the toilet from the road itself.</p> <p>Lack of an identifiable facility that has an accessible toilet.</p>	<p>Toilets are located in dark and secluded areas.</p>	<p>Toilets are located in dark and secluded areas.</p> <p>Lack of an identifiable facility that also offers privacy to women.</p>	<p>Toilets are located in dark and secluded areas.</p> <p>Lack of an identifiable toilet facility.</p>
Design and Planning	<p>Lack of a toilet entrance that is identifiable and offers privacy to the users.</p> <p>Lack of well-lit toilets.</p> <p>Lack of accessible entrance and routes, along with accessible staircases and ramps, are available to facilitate easy access to public toilet facilities.</p> <p>Lack of accessible doors that are easy to operate with door accessories placed at appropriate height.</p> <p>Lack of circulation areas inside the toilet cubicle, around the wash basins, and corridors.</p> <p>Lack of an accessible toilet unit that facilitates using the public toilet facility safely for PwDs and elderly.</p>	<p>Unavailability of clean and safe diaper changing stations for toddlers and adults.</p> <p>Lack of a gender-neutral or family toilet unit that allows universal use for everyone, accommodating individuals of all genders, including those with disabilities and their caregivers.</p> <p>Lack of a lactation room (a dedicated toilet facility, outside the toilet section) for baby feeding.</p> <p>Unavailability of child-friendly toilet seats and wash basins to allow children to use the toilet safely.</p> <p>Lack of provision for a child-protection seat, which would allow caregivers to safely situate their babies while using the toilets.</p>	<p>Lack of a toilet entrance that is identifiable and offers privacy to the users.</p> <p>Lack of well-lit toilets.</p> <p>Lack of a lactation room (a dedicated toilet facility, outside the toilet section) for baby feeding.</p> <p>Lack of menstruation hygiene management facilities for menstruators, including spaces for changing sanitary napkins and washing oneself, availability of fresh sanitary napkins, and separate systems for their disposal.</p> <p>Lack of accessible toilet infrastructure for expectant mothers, similar to the facilities provided for the elderly and persons with disabilities, to facilitate the use of public toilets.</p> <p>Lack of accessible bathing and changing rooms.</p>	<p>Lack of a toilet entrance that is identifiable and offers privacy to the users.</p> <p>Lack of well-lit toilets.</p> <p>Lack of gender-neutral toilets or signage indicating toilet usage by transmen and transwomen in men's and women's toilets.</p>

Characteristics/ Factors	PwDs & Elderly	Children and Caregivers	Women	Transgenders
<p>Design and Planning</p>	<p>Lack of accessible bathing and changing rooms.</p> <p>Lack of accessible bathing and changing rooms.</p> <p>Lack of bathroom fixtures such as hooks and shelves to hang/keep personal belongings and fresh sanitary napkins while using the toilets.</p> <p>No waiting/resting spaces inside the toilets.</p>	<p>Lack of accessible bathing and changing rooms.</p> <p>No waiting/resting spaces inside the toilets.</p> <p>Lack of dustbins inside toilets for disposal of diapers.</p>	<p>Lack of bathroom fixtures such as hooks and shelves to hang/keep personal belongings and fresh sanitary napkins while using the toilets.</p> <p>Lack of emergency calling systems to summon help in the case of an untold incident, accident, or when human assistance is required, especially for expectant mothers.</p> <p>No waiting/resting spaces inside the toilets.</p> <p>Lack of dustbins inside toilets for disposal of sanitary napkins.</p>	<p>Lack of menstruation hygiene management facilities for menstruators.</p> <p>Lack of dustbins inside toilets for disposal of sanitary napkins.</p>
<p>Information System and Signages</p>	<p>Lack of legible directional signages leading a user to the toilet.</p> <p>Lack of legible signage/board indicating that the building is a toilet facility.</p> <p>Lack of multilingual and vernacular signages to provide information that is understandable to the local public.</p>	<p>Lack of legible directional signages leading a user to the toilet.</p> <p>Lack of legible signage/board indicating that the building is a toilet facility.</p> <p>Lack of clear and globally recognized symbols indicating toilet units.</p> <p>Lack of legible signages that uses appropriate graphics and symbols to indicate a gender-neutral toilet unit and a family toilet unit.</p>	<p>Lack of legible directional signages leading a user to the toilet.</p> <p>Lack of legible signage/board indicating that the building is a toilet facility.</p> <p>No clear and globally recognized symbols indicating toilet units.</p> <p>Lack of legible signages that uses appropriate graphics and symbols to indicate a female toilet unit and a lactation room.</p>	<p>Lack of legible directional signages leading a user to the toilet.</p> <p>Lack of legible signage/board indicating that the building is a toilet facility.</p>

Characteristics/ Factors	PwDs & Elderly	Children and Caregivers	Women	Transgenders
Information System and Signages	<p>Lack of legible toilet signage for an accessible toilet indicating use by PwDs and elderly.</p> <p>Lack of appropriately designed signages that use the universal symbol of accessibility</p> <p>An audio and visual system to indicate toilet occupancy that is universally understandable for all persons with disabilities.</p> <p>Lack of accessible advisory signage indicating toilet usage and etiquettes, and how to use the emergency call button.</p> <p>Lack of a tactile building layout indicating the toilet building design and location of the different toilet sections.</p>	<p>A visual system to indicate toilet occupancy.</p> <p>Lack of signages indicating the availability of various facilities such as diaper changing station, sanitary napkins dispensers, and diaper dispensers.</p> <p>Instructive signages to indicate how to use various facilities.</p>	<p>A visual system to indicate toilet occupancy.</p> <p>Lack of signages indicating the availability of various facilities such as diaper changing station, sanitary napkins dispensers, and diaper dispensers.</p> <p>Instructive signages to indicate how to use various facilities.</p> <p>An accessible advisory signage indicating toilet usage and etiquettes.</p>	<p>Lack of signages indicating the toilet universal usage by everyone, irrespective of gender / signage indicating toilet usage by transmen and transwomen in men’s and women’s toilets.</p>
Safety and Security	<p>Lack of emergency calling systems to summon help in the case of an accident or when human assistance is required.</p> <p>Lack of security provisions such as CCTV camera outside the toilet facility.</p>	<p>Lack of security provisions such as CCTV camera outside the toilet facility.</p>	<p>Lack of emergency calling systems to summon help in the case of an incident, accident or when human assistance is required.</p> <p>Lack of security provisions such as CCTV camera outside the toilet facility.</p>	<p>Lack of security provisions such as CCTV camera outside the toilet facility.</p>

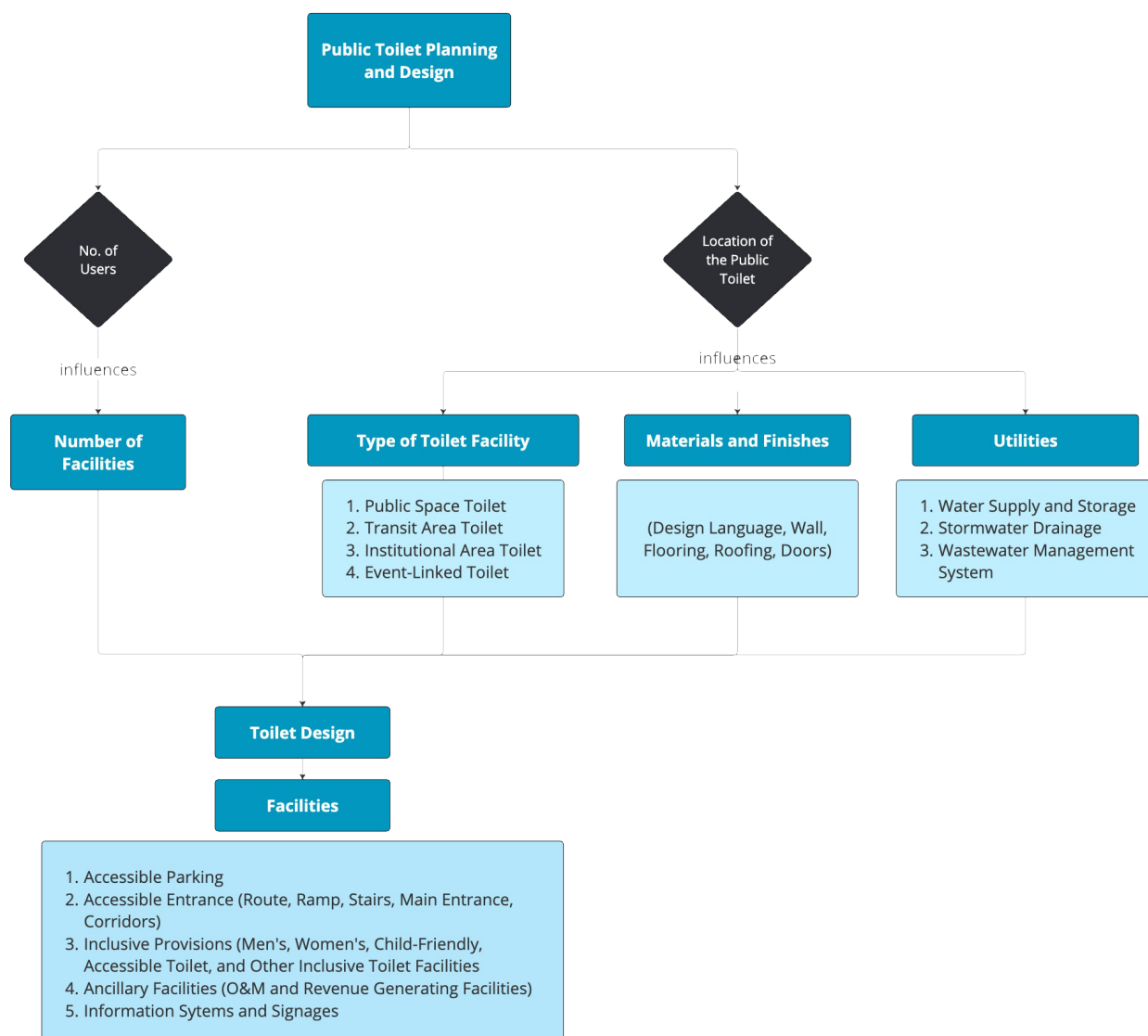
12.3 Annexure 3: Toilet Seat Costing

Technical Assistance to SBM 2.0 Conceptual Framework for Public Toilets and Community Toilets in India

Theme 1 : What is the cost of Inclusion?

1. For Women-friendly Toilet: Conventionally built SHE toilets cost Rs 2 lakhs/ seat. Precast toilets cost less by Rs 75,000 per seat.
2. For Accessible Toilet: Retrofitting one male and one female toilet unit into an accessible toilet costed Rs 2.2 lakhs in Nellore.

12.4 Toilet Toolkit



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2. Planning

2.1 Number of Facilities

2.1.1. Men's Toilet

Guidelines	Sources
2.1.1.1 Provide 1 urinal for every 50 individuals.	Page 9, Advisory on Public and Community Toilets by CPHEEO
2.1.1.2 For a population up to 400, provide 1 WC for every 100 individuals.	Page 9, Advisory on Public and Community Toilets by CPHEEO
2.1.1.3 For a population above 400, provide 1 WC for every 250 individuals or fewer.	Page 9, Advisory on Public and Community Toilets by CPHEEO
2.1.1.4 Ensure that at least 25% of the WCs are Indian-style.	Page no. 120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
2.1.1.5 Provide 1 wash basin per WC and Urinal.	Page 9, Advisory on Public and Community Toilets by CPHEEO
2.1.1.6 Ensure that minimum one urinal is accessible (same as child-friendly). (Refer to Section 2.1.4 and 4.6)	Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
2.1.1.7 Provide bathing/washing units at relevant places.	Page no. 26, Advisory on Public and Community Toilets by CPHEEO Page no. 22, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
2.1.1.8 Provide one bathing unit for every 50 users.	Page no. 9, Advisory on Public and Community Toilets by CPHEEO

2.1.2. Women's Toilet

Guidelines	Sources
2.1.2.1 For a population up to 200, provide 2 WCs for every 100 individuals.	• Page no. 9, Advisory on Public and Community Toilets by CPHEEO
2.1.2.2 For a population above 200, provide 1 WC for every 100 individuals or fewer.	• Page no. 9, Advisory on Public and Community Toilets by CPHEEO
2.1.2.3 Ensure that at least 50% WCs are Indian-style.	• Page no. 9, Advisory on Public and Community Toilets by CPHEEO
2.1.2.4 Provide 1 wash basin per WC.	• Page no. 9, Advisory on Public and Community Toilets by CPHEEO
2.1.2.5 Provide bathing/washing units at relevant places.	• Page no. 26, Advisory on Public and Community Toilets by CPHEEO • Page no. 22,27-28 Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance • Page no. 15-16, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation
2.1.2.6 Provide one bathing unit for every 50 users.	• Page no. 9, Advisory on Public and Community Toilets by CPHEEO

2.1.3. Other Inclusive Provisions

Guidelines	Sources
<p>2.1.3.1 Provide one accessible toilet in both male and female toilet groups. OR One unisex/gender neutral accessible toilet per facility. (Based on need assessment of anticipated footfall and land availability)</p>	<ul style="list-style-type: none"> Page xv-xvi, Table No. 2.2, Page 8, Page 25, Advisory on Public and Community Toilets by CPHEEO Page 194, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
<p>2.1.3.2 Provide minimum one toilet cubicle with child-sized WC or a seat adaptor in both men's and women's toilet. (Refer to Section 4.6)</p>	<ul style="list-style-type: none"> Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA Page no. 39-40, 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA
<p>2.1.3.3 Provide one child-friendly wash basin in both men's and women's toilet. (Refer to Section 4.6)</p>	<ul style="list-style-type: none"> Page no. 39-40, 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
<p>2.1.3.4 In case of multiple bathing/washing units, ensure that at least one unit is accessible in both men's and women's toilets. (Refer to Section 4.7.4)</p>	—
<p>2.1.3.5 In case only one bathing/washing unit is provided, it should be made accessible. (Refer to Section 4.7.4)</p>	—
<p>2.1.3.6 Provide gender-neutral toilets that are usable by all (women, children, elderly, persons with disabilities, and other gender minorities) at appropriate places. (Refer to Section 4.8.1)</p>	<ul style="list-style-type: none"> Page no. 25, Advisory on Public and Community Toilets by CPHEEO Page no. 41-42, Revised Guidelines for Swachh Bharat Mission - Urban by MoHUA Page 40, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 27-28, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 32, 193-194, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

2.2 Location and Surroundings

Guidelines	Sources
<p>2.2.1 Easily visible and safe to access toilet premises.</p>	<ul style="list-style-type: none"> • Page no. 21-22, Advisory on Public and Community Toilets by CPHEEO • Page 131, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA • Page no. 21, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance • Page no. 334, Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines Volume 1 by TCPO
<p>2.2.2 Locate it within a reasonable walking distance, (preferably within 1 km) of activity generating areas such as footpaths, streets, bus stops, parking, petrol pumps, markets, religious places, parks, tourist spots, educational campuses and health centres.</p>	<ul style="list-style-type: none"> • Page no. 20, 22, Advisory on Public and Community Toilets by CPHEEO • Page no. 41-42, 57-58, Revised Guidelines for Swachh Bharat Mission - Urban by MoHUA • Page 39, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA • Page no. 21, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance • Page no. 334, Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines Volume 1 by TCPO
<p>2.2.3 Avoid unsafe and rundown locations such as liquor shops, areas with no/poor street light, walking access, narrow lanes, etc.</p>	<ul style="list-style-type: none"> • Page no. 21-22, Advisory on Public and Community Toilets by CPHEEO • Page no. 21, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
<p>2.2.4 Ensure that surrounding vegetation, including trees and plants, does not obscure the public toilet's visibility or create concealed spaces.</p>	<ul style="list-style-type: none"> • Page no. 21-22, 34, Advisory on Public and Community Toilets by CPHEEO
<p>2.2.5 Ensure that the area within 3 m (3000 mm) from each direction of the structure is free of unauthorised construction and vendors.</p>	<ul style="list-style-type: none"> • Page no. 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA

2.3 Toilet Layout

Guidelines		Sources
2.3.1	Ensure that the toilet design and layout consider the needs of women, children, elderly, persons with disabilities, and other gender minorities.	<ul style="list-style-type: none"> Page no. 7, 23-26, Advisory on Public and Community Toilets by CPHEEO Page no. 11, 19-20, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 7-15, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
2.3.2	Separate toilet blocks for women and men with entrances at sufficient distance.	<ul style="list-style-type: none"> Page no. 23, Advisory on Public and Community Toilets by CPHEEO Page no. 40, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation
2.3.3	For single storied buildings, allow roof access only through ladders.	<ul style="list-style-type: none"> Page no. 23, Advisory on Public and Community Toilets by CPHEEO
2.3.4	For single storied toilets, ensure that the minimum wall height is 9 ft (2800 mm).	<ul style="list-style-type: none"> Page no. 29, Advisory on Public and Community Toilets by CPHEEO
2.3.5	Restrict access to all areas not intended for public occupancy or areas with no fixtures.	<ul style="list-style-type: none"> Page no. 23, Advisory on Public and Community Toilets by CPHEEO
2.3.6	Installation of Closed-Circuit Television (CCTV) at the entrance of the toilet.	<ul style="list-style-type: none"> Page no. xvi, Advisory on Public and Community Toilets by CPHEEO Page no. 21, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance

2.4 External Walls

Guidelines		Sources
2.4.1	Use external walls either for advertisements or public awareness messages on safe and hygienic sanitation practices.	<ul style="list-style-type: none"> Page no. 22, 43, 52, Advisory on Public and Community Toilets by CPHEEO
2.4.2	Ensure that the advertisement boards do not interfere with the toilet operations and safety.	<ul style="list-style-type: none"> Page no. 31, Advisory on Public and Community Toilets by CPHEEO
2.4.3	Ensure that facade design avoids/minimises graffiti and posters.	<ul style="list-style-type: none"> Page no. 23, 39, Advisory on Public and Community Toilets by CPHEEO Page no. 39, 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA
2.4.4	Explore the potential for incorporating local art, cultural and heritage elements.	<ul style="list-style-type: none"> Page no. 22, Advisory on Public and Community Toilets by CPHEEO
2.4.5	Provide all information in local and popular vernacular languages.	-

3. External Elements

3.1 Accessible Parking

Guidelines	Sources
<p>3.1.1 Installation of visible minimum one accessible parking bay within 30 m of building entrances.</p> <p>a. For accessible two-wheeler parking, provide a minimum bay size of 3000 mm x 2400 mm.</p> <p>b. For four-wheeler parking, provide a minimum bay size of 5000 mm x 3600 mm.</p>	<ul style="list-style-type: none"> Page no. 63-75, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.1.2 The minimum bay size is to be inclusive of a 1200 mm wide side transfer zone.	<ul style="list-style-type: none"> Page no. 63-75, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.1.3 Provide 1800 mm wide rear transfer zone.	<ul style="list-style-type: none"> Page no. 63-75, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.1.4 Ensure both on the side and the rear transfer zones have yellow or white cross-hatch road markings.	<ul style="list-style-type: none"> Page no. 63-75, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

3.2 Access Route

Guidelines	Sources
3.2.1 Provide safe, clearly defined, accessible, and well-lit access route to the toilet facility.	<ul style="list-style-type: none"> Page no. 21-22, Advisory on Public and Community Toilets by CPHEEO Page 21-22, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 119-120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.2.2 Provide appropriate tactile guiding systems to the toilet entrance.	<ul style="list-style-type: none"> Page 91-102, 152-153, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.2.3 Avoid any obstructions, including planters, furniture or decorative items in the access route.	<ul style="list-style-type: none"> Page 152-153, Page no. 75-83, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.2.4 It is recommended to provide 1800 mm clear wide access route, but ensure that it is no less than 1200 mm.	<ul style="list-style-type: none"> Page no. 75-83, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.2.5 Ensure that the minimum overhead height for covered routes is 2200 mm.	<ul style="list-style-type: none"> Page no. 75-83, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.2.6 Preferably have step-free entrance.	<ul style="list-style-type: none"> Page no. 152-153, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.2.7 Provide accessible ramps and stairs in case of a raised plinth. (Refer to Section 3.3. and 3.4)	<ul style="list-style-type: none"> Page no. 152-153, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.2.8 Provide landing space for wheelchairs at both the accessible ramp and staircase.	<ul style="list-style-type: none"> Page no. 152-153, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.2.9 Avoid gratings and manholes.	<ul style="list-style-type: none"> Page 75-83, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

3.3 Ramps

Guidelines		Sources
3.3.1	Provide flat, smooth, non-slippery, firm and stable ramps made from durable material.	<ul style="list-style-type: none"> Page no. 21-22, 25, Advisory on Public and Community Toilets by CPHEEO Page no. 17-18, Revised Guidelines for Swachh Bharat Mission - Urban by MoHUA Page no. 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 25, 29, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 152-153, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.2	Avoid rumblings or corrugations on ramps.	<ul style="list-style-type: none"> Page no. 105, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.3	Ensure ramp surface is colour contrasted with other floor surfaces.	<ul style="list-style-type: none"> Page no. 105, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.4	Ensure the ramps have a minimum clear width of 1200 mm.	<ul style="list-style-type: none"> Page no. 105, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.5	Provide a level platform of minimum 1200 mm x 1500 mm.	<ul style="list-style-type: none"> Page no. 105, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.6	Gradient of the ramps <ol style="list-style-type: none"> For 6 m ramp length, provide a slope of 1:12. For 9 m ramp length, provide a slope of 1:14. For 11 m ramp length, provide a slope of 1:15. For 15 m ramp length, provide a slope of 1:20. For 18 m ramp length, provide a slope of not less than 1:25. 	<ul style="list-style-type: none"> Page no. 104, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.7	Provide landings at the top and bottom of each ramp run and where the ramp run changes direction.	<ul style="list-style-type: none"> Page no. 105, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.8	For longer ramp runs, provide landings at regular intervals of 9000 mm of the horizontal run.	<ul style="list-style-type: none"> Page no. 105, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.9	Ensure the minimum landing size is 1200 mm wide and 1500 mm long.	<ul style="list-style-type: none"> Page no. 105, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.10	Ensure that all ramps and landing not adjacent to a wall have an edge protection with a minimum height of 75 mm.	<ul style="list-style-type: none"> Page no. 105, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.11	Provide handrails on both sides of a ramp run with a height greater than 150 mm. (Refer Section 3.5 for more details)	<ul style="list-style-type: none"> Page no. 25, Advisory on Public and Community Toilets by CPHEEO Page no. 25-27, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.12	Install handrails at a height of 750-900 mm from the floor level. (Refer Section 3.5 for more details)	<ul style="list-style-type: none"> Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.3.13	Ensure continuous handrails on both sides along the entire length of the ramp, including landings. (Refer Section 3.5 for more details)	<ul style="list-style-type: none"> Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

3.4 Stairs

Guidelines	Sources
3.4.1 Provide consistent tread and risers throughout the staircase.	<ul style="list-style-type: none"> Page no. 23, 25, Advisory on Public and Community Toilets by CPHEEO Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.2 Provide 300 mm deep treads and risers not higher than 150 mm.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.3 Avoid projected nosing and open stairs.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.4 Provide staircases with a minimum clear width of 1500 mm.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.5 Provide staircase landing with a minimum width of 1200 mm.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.6 Ensure that the landing is obstacle-free.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.7 Ensure that the door opening does not interfere with the landing dimensions.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.8 Installation of warning blocks at a distance of 300 mm at the beginning and end of each flight.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.9 Provision of 50 mm wide colour contrast bands on the edge of each tread.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.10 Landings and the staircase steps should be highly colour contrasted.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.11 Risers and treads must be colour contrasted.	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.12 Provision of handrails at two heights - 600-750 mm for the lower handrail and 900-1000 mm for the upper handrail. (Refer Section 3.5 for more details)	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.13 Ensure continuous handrails on both sides for stairs and ramps with a level change greater than 500 mm. (Refer Section 3.5 for more details)	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.14 Provision of additional intermediate handrail if the staircase width exceeds 2100 mm. (Refer Section 3.5 for more details)	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.4.15 The maximum distance between intermediate handrails should be 2100 mm. (Refer Section 3.5 for more details)	<ul style="list-style-type: none"> Page no. 64-68, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

3.5 Railings

Guidelines	Sources
3.5.1 Provide continuous handrails, without interruptions or obstructions.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.2 Use slip-resistant handrails with round ends.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.3 Use circular section handrails of 38-50 mm diameter.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.4 If possible, have handrails with knurled surfaces.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.5 Avoid sharp or abrasive elements.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.6 Include tactile and braille signs.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.7 Ensure that handrails are colour contrasted with the background.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.8 Use material that is easy to grip and not extremely cold or warm to touch.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.9 Extend handrails horizontally at least 300 mm beyond the top and bottom of ramps/ stairs.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.10 Avoid handrails from protruding into other travel paths.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.11 Ensure handrail edges return to the wall, floor, or post.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.12 Maintain clear space between the handrails and walls, 40 mm for smooth walls and 60 mm for rough walls.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
3.5.13 Ensure handrails support a weight of 250 kg.	• Page no. 105-115, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4. Internal Elements

4.1 Main Entrance

Guidelines	Sources
4.1.1 Ensure entrance design conceals the toilet interior from passers-by by placing toilet cubicles, mirrors, and other elements away from the line of sight of the main entrance.	<ul style="list-style-type: none"> Page no. 23, Advisory on Public and Community Toilets by CPHEEO Page no. 22, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.1.2 Provide separate entrances for men's and women's toilet sections.	<ul style="list-style-type: none"> Page no. 23 Advisory on Public and Community Toilets by CPHEEO
4.1.3 Avoid hidden entrances.	<ul style="list-style-type: none"> Page no. 21, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.1.4 Provide at least one accessible entrance, preferably the main entrance which is indicated clearly.	<ul style="list-style-type: none"> Page no. 152-154, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.1.5 Use signs with the accessibility symbol at non-accessible entrances to direct persons with disabilities to the accessible entrance.	<ul style="list-style-type: none"> Page no. 152-154, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.1.6 Provide an accessible entrance door of 1000 mm width, but no less than 900 mm.	<ul style="list-style-type: none"> Page no. 152-154, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.1.7 Ensure that the leading edge of the entrance door is visually contrasting with the remaining door surfaces.	<ul style="list-style-type: none"> Page no. 164, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.1.8 If mats are provided, recess and flush them with the floor.	<ul style="list-style-type: none"> Page no. 152-154, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.1.9 Ensure that the floor around the entrance has textural difference.	<ul style="list-style-type: none"> Page no. 152-154, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.1.10 Provide tactile guiding systems at the entrances. If possible, add beepers to the tactile guiding systems.	<ul style="list-style-type: none"> Page no. 152-154, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.1.11 For Glazed Door; <ol style="list-style-type: none"> Provide manifestations on the glazed entrance doors at two levels i.e., at 800-1000mm and 1400 to 1600 mm from floor. Ensure the manifestations contrast in colour with the background and are at least 150mm high. 	<ul style="list-style-type: none"> Page no. 152-154, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.2 Waiting Areas

Guidelines	Sources
4.2.1 Provide a common waiting area for the toilet.	• Page no. 26, Advisory on Public and Community Toilets by CPHEEO
4.2.2 Ensure the waiting area is not visible to the passers-by.	• Page no. 26, Advisory on Public and Community Toilets by CPHEEO
4.2.3 Provide a 2 to 3m (2000 mm to 3000mm) wide waiting area in the women's block.	• Page no. 26, Advisory on Public and Community Toilets by CPHEEO
4.2.4 Provide benches/chairs inside the waiting area.	-
4.2.5 Installed the seat between the height of 450 mm-500 mm.	• Page no. 154-157, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.2.6 Ensure seat width is 400-450 mm.	• Page no. 154-157, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.3 Corridors

Guidelines	Sources
4.3.1 Provide a corridor of minimum 1200 mm clear width.	Page no. 160-164, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.3.2 Provide open circulation spaces for ventilation and light, except in areas with snowfall or heavy rainfall areas.	Page no. 26, Advisory on Public and Community Toilets by CPHEEO
4.3.3 Ensure colour contrast between floor and walls.	Page no. 160-164, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.3.4 Avoid obstacles or protrusions that reduce required clear width.	Page no. 160-164, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.3.5 Ensure protruding objects do not obstruct the accessible route or manoeuvring space.	Page no. 160-164, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.3.6 Position protruding objects within alcoves or designated locations.	Page no. 160-164, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.4 Men's Toilet

4.4.1. Doors

Guidelines	Sources
4.4.1.1 Provide easily closable free-swinging or sliding doors.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.4.1.2 Ensure that all doors have locks like handles, latches, or sliding bolts.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.4.1.3 Provide user operated locks only inside.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.4.1.4 Provide emergency latches on the outside for only authorised use when needed.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.4.1.5 Provide tightly fitted doors, without any gaps.	• Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.4.1.6 Ensure all doors have strong double hooks that hold a minimum 6.8 kg weight.	• Page no. 24, 29-30, Advisory on Public and Community Toilets by CPHEEO
4.4.1.7 If unable to fix hooks on the doors, fix them on the strongest wall.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.4.1.8 Install door handles between the height of 800 to 1100 mm from the floor level.	• Page no. 190, 240-242, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.4.1.9 It is preferable to use Lever shaped or D-type door handles.	• Page no. 190, 242, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.4.1.10 Fix a 140 mm long handle on the outer side of the door.	• Page no. 243, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.4.1.11 Ensure the leading edge of the entrance door is visually contrasting with the remaining door surfaces.	• Page no. 164, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.4.2. Urinals

Guidelines	Sources
4.4.2.1 Provide wall-hung urinals.	• Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO
4.4.2.2 Ensure that minimum width of the urinals is 300mm.	• Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO
4.4.2.3 Ensure the urinal has a minimum distance of 450 mm from a side wall, partition, vanity or other obstruction.	• Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO
4.4.2.4 Ensure the urinal has a minimum 450 mm centre-to-centre clear space from any wall, fixture, or door.	• Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO
4.4.2.5 Provide modesty boards with minimum 300 mm width and 1800 mm height.	• Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO
4.4.2.6 Ensure the modesty boards do not extend till the floor.	• Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO
4.4.2.7 Ensure urinals have flush valves.	• Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO
4.4.2.8 Provide urinal screen mats to reduce splashes.	-

4.4.3. Toilet Cubicles

Guidelines		Sources
4.4.3.1	For Indian toilets, ensure that the closet pans are of standard design.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.4.3.2	Ensure that Indian WCs have adequate grab rail support.	<ul style="list-style-type: none"> Page no. 120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.4.3.3	For Indian WC, mount the ablation tap at 200 mm and attached jet spray up to the height 450 mm.	<ul style="list-style-type: none"> Page no. 192, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.4.3.4	Provide wall-hung western toilets with manual or automatic flushing systems.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.4.3.5	Extend cubicle partitions to within 5 cm (50 mm) from the floor.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.4.3.6	Ensure minimum height of the cubicle partition is 2134 mm.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.4.3.7	Install toilet roll dispensers adjacent to the water tap.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.4.3.8	Provide an ablation tap coupled with hose and a spring-loaded nozzle.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.4.3.9	Provide a water tap in each cubicle with a bucket and mug.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO Page no. 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 22, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.4.3.10	Make drainage arrangements for the taps.	<ul style="list-style-type: none"> Page no. 9-11, Advisory on Public and Community Toilets by CPHEEO Page no. 41-42, Revised Guidelines for Swachh Bharat Mission - Urban by MoHUA
4.4.3.11	Indicate washroom occupancy with red for occupied and green for vacant.	<ul style="list-style-type: none"> Page no. 25, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 216, 119-120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.4.4. Wash Basins and Related Fixtures

Guidelines	Sources
4.4.4.1 Install vanity top-cum-wash basins.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO
4.4.4.2 Install liquid soap dispensers, paper towel dispenser, hand dryer, towel rails and litter bins adjacent to the wash basins.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO
4.4.4.3 Provide wash basins with mirrors.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO Page no. 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 23, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.4.4.4 Ensure mirror's position does not allow passers-by to view inside the toilet.	<ul style="list-style-type: none"> Page no. 23, 28, Advisory on Public and Community Toilets by CPHEEO Page no. 23, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.4.4.5 Ensure water pressure and tap / washbasin position does not cause water to splash onto the user's body during activation.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO
4.4.4.6 Provide a liquid soap dispenser with a cleaning and refill mechanism at each wash basin.	<ul style="list-style-type: none"> Page no. 32, Advisory on Public and Community Toilets by CPHEEO
4.4.4.7 Provide sensor-controlled taps with precise flow and shut-off settings.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO
4.4.4.8 Avoid sharp or abrasive surfaces under wash basins and sinks.	<ul style="list-style-type: none"> Page no. 27, Advisory on Public and Community Toilets by CPHEEO
4.4.4.9 Provide minimum one hand dryer blower.	<ul style="list-style-type: none"> Page no. 32, Advisory on Public and Community Toilets by CPHEEO Page no. 39-40, 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA

4.4.5. Bathing/Washing Unit

Guidelines	Sources
4.4.5.1 Provide a bathing unit with minimum unit size of 900 mm by 1050 mm.	<ul style="list-style-type: none"> Page no. 9, Advisory on Public and Community Toilets by CPHEEO
4.4.5.2 Provide anti-skid flooring.	<ul style="list-style-type: none"> Page no. 29, Advisory on Public and Community Toilets by CPHEEO Page no. 24, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist Page no. 227, Harmonised Guidelines and Space Standards for Universal Accessibility in India

4.5 Women's Toilet

4.5.1. Doors

Guidelines	Sources
4.5.1.1 Provide easily closable free-swinging or sliding doors.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.5.1.2 Ensure all doors have locks like handles, latches, or sliding bolts.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.5.1.3 Provide user operated locks inside only.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.5.1.4 Provide emergency latches on the outside for only authorised use when needed.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.5.1.5 Provide tightly fitted doors, without any gaps.	• Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.5.1.6 Ensure all doors have strong double hooks that hold a minimum 6.8 kg weight.	• Page no. 24, 29-30, Advisory on Public and Community Toilets by CPHEEO
4.5.1.7 If unable to fix hooks on the doors, fix them on the strongest wall.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
4.5.1.8 Install door handles between the height of 800 to 1100 mm from the floor level.	• Page no. 190, 240-242, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.5.1.9 It is preferable to use Lever shaped or D-type door handles.	• Page no. 190, 242, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.5.1.10 Fix a 140 mm long handle on the outer side of the door.	• Page no. 243, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.5.1.11 Ensure the leading edge of the entrance door is visually contrasting with the remaining door surfaces.	• Page no. 164, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.5.2. Toilet Cubicles

Guidelines	Sources
4.5.2.1 For Indian toilets, ensure that the closet pans are of standard design.	• Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.5.2.2 Ensure that Indian WCs have adequate grab rail support.	• Page no. 120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.5.2.3 For Indian WCs, mount the ablation tap at 200 mm and attached jet spray up to the height 450 mm.	• Page no. 192, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.5.2.4 Provide wall-hung western toilets with manual or automatic flushing systems.	• Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.5.2.5 Extend cubicle partitions to within 5 cm (50 mm) from the floor.	• Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.5.2.6 Ensure minimum height of the cubicle partition is 2134 mm.	• Page no. 24, Advisory on Public and Community Toilets by CPHEEO

Guidelines		Sources
4.5.2.7	Install toilet roll dispensers adjacent to the water tap.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.5.2.8	Provide an ablution tap coupled with hose and a spring-loaded nozzle.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.5.2.9	Provide a water tap in each cubicle with a bucket and mug.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO Page no. 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 22, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.5.2.10	Make drainage arrangements for the taps.	<ul style="list-style-type: none"> Page no. 9-11, Advisory on Public and Community Toilets by CPHEEO Page no. 41-42, Revised Guidelines for Swachh Bharat Mission - Urban by MoHUA
4.5.2.11	Indicate washroom occupancy with red for occupied and green for vacant.	<ul style="list-style-type: none"> Page no. 25, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 216, 119-120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.5.2.12	Provide a foldable platform, shelf, hooks or niche to keep clothing and menstrual adsorbents dry	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 23, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.5.2.13	Provide adequate space in the cubicle for girls to change their napkins/cloth and to wash themselves.	<ul style="list-style-type: none"> Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 23, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance

4.5.3. Wash Basins and Related Fixtures

Guidelines	Sources
4.5.3.1 Install vanity top-cum-wash basins.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO
4.5.3.2 Install liquid soap dispensers, paper towel dispenser, hand dryer, towel rails and litter bins adjacent to the wash basins.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO
4.5.3.3 Provide wash basins with mirrors.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO Page no. 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 23, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.5.3.4 Ensure mirror's position does not allow passers-by to view inside the toilet.	<ul style="list-style-type: none"> Page no. 23, 28, Advisory on Public and Community Toilets by CPHEEO Page no. 23, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.5.3.5 Ensure water pressure and tap / washbasin position does not cause water to splash onto the user's body during activation.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO
4.5.3.6 Provide a liquid soap dispenser with a cleaning and refill mechanism at each wash basin.	<ul style="list-style-type: none"> Page no. 32, Advisory on Public and Community Toilets by CPHEEO
4.5.3.7 Provide sensor-controlled taps with precise flow and shut-off settings.	<ul style="list-style-type: none"> Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO
4.5.3.8 Avoid sharp or abrasive surfaces under wash basins and sinks	<ul style="list-style-type: none"> Page no. 27, Advisory on Public and Community Toilets by CPHEEO
4.5.3.9 Provide minimum one hand dryer blower.	<ul style="list-style-type: none"> Page no. 32, Advisory on Public and Community Toilets by CPHEEO Page no. 39-40, 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA

4.5.4. Menstruation Hygiene Management (MHM)

Guidelines	Sources
4.5.4.1 Provide sanitary napkin vending machines at toilets with high footfall.	<ul style="list-style-type: none"> Page no. 33, Advisory on Public and Community Toilets by CPHEEO Page no. 39-40, 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 31-32, Advisory on Public and Community Toilets by CPHEEO Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 28, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.5.4.2 Provide signages directing users to dispose feminine products in the sanitary bin.	<ul style="list-style-type: none"> Page no. 26, Advisory on Public and Community Toilets by CPHEEO Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 23, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
4.5.4.3 Provide space for changing clothes, washing oneself and menstrual products.	<ul style="list-style-type: none"> Page no. 26, Advisory on Public and Community Page no. 33, Advisory on Public and Community Toilets by CPHEEO Page no. 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation

4.5.5. Bathing/Washing Space

Guidelines	Sources
4.5.5.1 Provide a bathing unit with minimum unit size of 900 mm by 1050 mm.	<ul style="list-style-type: none"> Page no. 9, Advisory on Public and Community Toilets by CPHEEO
4.5.5.2 Hooks and ledges for hanging clothes, keeping belongings off the floor or keeping menstrual products on a clean surface.	<ul style="list-style-type: none"> Page no. 17-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation Page no. 23, 27-28, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance

4.6 Child-Friendly Facilities

4.6.1. Toilet Cubicle

Guidelines	Sources
4.6.1.1 In the child-friendly toilet cubicle in both men's and women's toilet, provide a child-sized WC.	<ul style="list-style-type: none"> Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA Page no. 39-40, 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA
4.6.1.2 Alternatively, if not possible then provide a seat adaptor with a small seat cover.	<ul style="list-style-type: none"> Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.1.3 Install the cubicle door half the usual height openable from the outside.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.6.1.4 Install additional door fixtures at half the height of the normal doors.	<ul style="list-style-type: none"> Page no. 24, Advisory on Public and Community Toilets by CPHEEO
4.6.1.5 Mount the hanger holding the seat cover at an easily accessible level for young children.	<ul style="list-style-type: none"> Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.1.6 Provide a stable portable stool.	<ul style="list-style-type: none"> Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.1.7 Provide liquid bath dispensers and a flexible hose with water spray head in the WC.	<ul style="list-style-type: none"> Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.1.8 For children's toilets, set the grab bar height between 510 mm and 635 mm.	<ul style="list-style-type: none"> Page no. 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.6.2. Urinals

Guidelines	Sources
4.6.2.1 Mount the child-friendly urinal (same as the accessible urinal) in the men's toilet at a height of 400 mm from the floor level.	<ul style="list-style-type: none"> Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.6.3. Wash Basin

Guidelines	Sources
4.6.3.1 Install the child-sized wash basin at 550 mm from the floor in both men's and women's toilet.	<ul style="list-style-type: none"> Page no. 39-40, 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.3.2 Install sensor-operated taps.	<ul style="list-style-type: none"> Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.6.4. Child Protection Seat

Guidelines	Sources
4.6.4.1 Provide a child protection seat in one of the WC compartments in both men's, women's and the accessible toilet.	• Page no. 229-231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.4.2 Mount the seat on a solid wall with the bottom being at a height of at least 400 mm from the floor.	• Page no. 229-231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.4.3 Provide extendable straps to the seat that go over shoulders and between legs of the baby.	• Page no. 229-231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.4.4 Ensure the child protection seat withstands weight up to 20 kg.	• Page no. 229-231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.6.5. Baby Diaper Changing Station

Guidelines	Sources
4.6.5.1 Provide a stable diaper changing station in both men's, women's toilet and accessible toilet unit.	• Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.5.2 Install it in a way that when opened, the highest edge of the pull-down deck is between 700 mm to 850 mm from the floor.	• Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.5.3 Ensure it has a concave changing surface with barriers along the sides.	• Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.5.4 Ensure it is equipped with safety straps.	• Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.5.5 Ensure it has clear instructions to facilitate safe use.	• Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.6.5.6 Provide bed linens and wet wipe dispensers. (Refer to Section 8.3 for more information on waste disposal)	• Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.7 Accessible Toilet

4.7.1. Doors

Guidelines	Sources
4.7.1.1 Ensure the toilet doors have a minimum clear opening width of 900 mm.	Page no. 216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.2 Provide a 600 mm horizontal pull bar on the inside of the door.	Page no. 216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.3 Install the horizontal bar at the height of 1000 mm from the floor and 130 mm from the hinged side.	Page no. 216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.4 Provide a visual lock displaying occupancy.	Page no. 216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.5 Ensure doors are locked easily from the inside with one hand.	Page no. 216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.6 Ensure doors open with one hand using a maximum force of 22N, without the need for fine finger control, tight grasping, pinching, or wrist twisting.	Page no. 216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.7 Preferably provide D-shaped or lever handles, avoid doorknobs.	Page no. 240-242, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.8 Ensure door hardware contrast visually with the surface of the door.	Page no. 216, 240-242, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.9 For power-operated doors, use motion sensors or manual controls like push pads.	Page no 243, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.10 Install a distinct audio signal (beeper/clapper) above the entrance door.	Page no. 231-233, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.1.11 Additionally, a foot-operated door lock could be provided, if possible.	-
4.7.1.12 Provide a braille script for the visual lock, if possible.	-

4.7.2. Accessible Urinals

Guidelines	Sources
4.7.2.1 Provide minimum one accessible urinal.	<ul style="list-style-type: none"> Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO Page no. 194, 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.2.2 Provide stall-type or wall-hung urinals.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.2.3 Install grab bars on both the sides and awt the front of the urinal.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.2.4 Ensure the accessible urinal's cubicle size is 900 mm wide.	<ul style="list-style-type: none"> Page no. 192, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.2.5 Ensure urinal rim's maximum height from the floor is 430 mm.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.2.6 Provide a minimum clear floor space of 760 mm x 1200 mm in front of the urinals.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.2.7 Mount the flush controls at a maximum height of 1200 mm from the floor.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.7.3. Toilet Units/Cubicles

Guidelines	Sources
4.7.3.1 Provide accessible toilet unit measuring 2200 mm x 2000 mm for both Indian and Western WCs.	<ul style="list-style-type: none"> Page no. 190, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.2 Provide wall-hung or corbel type WC with a back support.	<ul style="list-style-type: none"> Page no. 216-218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.3 Ensure the height of the Western WC seat from the floor is 450 to 480 mm.	<ul style="list-style-type: none"> Page no. 216-218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.4 Ensure distance from the adjacent wall to the centre of the WC is 460-480 mm.	<ul style="list-style-type: none"> Page no. 216-218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.5 Provide a clear manoeuvring space of 1800mm diameter in front of the water closet and wash basin. In case it is not possible, provide an uncompromising space of 1500 mm diameter.	<ul style="list-style-type: none"> Page no. 201-216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.6 Provide a lateral interaction space on at least one side of the accessible WC.	<ul style="list-style-type: none"> Page no. 190, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

Guidelines	Sources
4.7.3.7 At places with more than one accessible toilet, provide a left and right-hand transfer option in other accessible toilets.	• Page no. 190, 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.8 Provide minimum 900 mm wide clear space next to the water closet.	• Page no. 201-216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.9 Ensure minimum 1350 mm deep and 900 mm wide clear floor space in front and on the transfer side of WC.	• Page no. 216-218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.10 Install grab bars between the height of 200 to 250 mm from the WC seat.	• Page no. 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.11 Mount one L-shape grab bar firmly on the side wall closest to the WC, with a length of 600 mm horizontally and 750 mm vertically.	• Page no. 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.12 Install a hinged or flip-up horizontal grab bar near the water closet. Ensure it is located 320 mm from the centreline of the WC, positioned between 200 mm and 250 mm above the top of the WC seat, and extending 100 mm to 150 mm beyond the front of the WC.	• Page no. 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.13 Ensure flush is either be lever type or automatic.	• Page no. 216-218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.14 Ensure the flush control is located on the transfer side of WC at a maximum height of 1000 mm from the floor.	• Page no. 216-218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.15 Mount the toilet paper dispenser below the grab bars, within 300 mm from the front edge of the WC seat, and between the height of 600-700 mm from the floor.	• Page no. 191, 221-222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.16 Install cloth hooks on a side wall, with a maximum height of 1200 mm from the floor.	• Page no. 201-216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.17 Ensure cloth hooks do not extend more than 40 mm from the wall.	• Page no. 201-216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.18 If possible, provide a shelf of 400 mm x 200 mm.	• Page no. 201-216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.19 Install the shelf between the height of 900 mm and 1000 mm from the floor.	• Page no. 201-216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.3.20 Indicate washroom occupancy with red for occupied and green for vacant.	• Page no. 216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.7.4. Accessible Bathing/Washing Space

Guidelines	Sources
4.7.4.1 Provide an accessible bathing/washing area of 2000 mm breadth and 2200 mm length if bathing areas are provided.	<ul style="list-style-type: none"> Page no. 24, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 227-229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.4.2 Provide a minimum clear floor space of 1350 mm breadth and 900 mm length in front of the shower entrance.	<ul style="list-style-type: none"> Page no. 227-229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.4.3 Provide slip-resistant flooring.	<ul style="list-style-type: none"> Page no. 227-229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.4.4 Provide minimum 900 mm wide doors.	<ul style="list-style-type: none"> Page no. 234-237, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.4.5 Provide one L-shaped bar or two grab bars in L-shaped configuration between 700 mm and 800 mm from the shower floor.	<ul style="list-style-type: none"> Page no. 227-229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.4.6 Provide one grab bar at least 750 mm long installed vertically with another at least 900 mm long mounted horizontally.	<ul style="list-style-type: none"> Page no. 227-229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.4.7 Provide accessible tap, soap and mug.	<ul style="list-style-type: none"> Page no. 12, 15-19, Menstrual Hygiene Management National Guidelines by Ministry of Drinking Water and Sanitation
4.7.4.8 Provide a wall-mounted shower seat, preferably foldable.	<ul style="list-style-type: none"> Page no. 227-229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.4.9 The distance between the wall and centre-line of the shower seat should be between 450 mm to 480 mm.	<ul style="list-style-type: none"> Page no. 190-193, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.4.10 Install lever-type functioning taps or lever/sensor type faucets.	<ul style="list-style-type: none"> Page no. 234, Advisory on Public and Community Toilets by CPHEEO

4.7.5. Grab Bars

Guidelines	Sources
4.7.5.1 Provide grab bars in accessible toilets as well as in toilet cubicles with Indian-style WCs.	<ul style="list-style-type: none"> Page no. 25, Advisory on Public and Community Toilets by CPHEEO Page no. 25, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 120, 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.5.2 Ensure horizontal grab bar is continuous for its entire length.	<ul style="list-style-type: none"> Page no. 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.5.3 Use Galvanised Iron (GI) or steel pipes with a diameter of 40 mm to 45 mm for grab bars.	<ul style="list-style-type: none"> Page no. 29, Advisory on Public and Community Toilets by CPHEEO

4.7.6. Wash Basins and Other Fixtures

Guidelines	Sources
4.7.6.1 Provide washbasin near the entrance.	• Page no. 25, Advisory on Public and Community Toilets by CPHEEO
4.7.6.2 Ensure a wheelchair manoeuvring space with a minimum 1500 mm diameter.	• Page no. 191, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.3 Provide a wheelchair parking space of at least 900 mm x 1200 mm.	• Page no. 191, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.4 Allocate a clear floor space of 900 mm wide by 1200 mm deep, with up to 480 mm under the washbasin.	• Page no. 218-221, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.5 Maintain a minimum distance of 460 mm between the fixture's centreline and the sidewall.	• Page no. 218-221, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.6 Install the top edge of the washbasin between the height of 750 mm to 850 mm from the floor.	• Page no. 218-221, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.7 Position the front edge of the wash basin between 350 mm and 600 mm from the wall.	• Page no. 218-221, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.8 Provide a 680 to 700 mm high and 200 mm wide clear knee space..	• Page no. 218-221, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.9 Include at least 230 mm high toe clearance space.	• Page no. 218-221, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.10 Ensure the tap control is within a reachable distance of a maximum 300 mm.	• Page no. 218-221, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.11 Install swing bars on both sides at a height of 800 mm.	• Page no. 191, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.12 Include a full-length mirror with the bottom edge between 900 mm and 1000 mm from the floor.	• Page no. 221-222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.13 Ensure the mirror is tiltable at a 30° angle with an adjustable mechanism.	• Page no. 221-222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.14 Position hand dryers, towel dispensers, and soap dispensers with operable parts and controls near the basin, between the height of 800 mm to 1000 mm from the floor.	• Page no. 221-222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.15 Accessories such as hand towels, soaps, waste bins, etc, should not hamper the use of the grab bars.	• Page no. 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.16 All fixtures and utilities should provide a clear space of 900mm x 1200 mm for wheelchair users.	• Page no. 201-216, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.6.17 Provide sensor-operated soap dispensers.	• Page no. 221-222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.7.7. Adult Diaper Changing Station

Guidelines	Sources
4.7.7.1 Provide a stable diaper changing station.	<ul style="list-style-type: none"> Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.7.2 Install it in a way that when opened, the highest edge of the pull-down deck is between 700 mm to 850 mm from the floor.	<ul style="list-style-type: none"> Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.7.3 Ensure it has a concave changing surface with barriers along the sides.	<ul style="list-style-type: none"> Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.7.4 Ensure it is equipped with safety straps.	<ul style="list-style-type: none"> Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.7.5 Ensure it withstands a static weight of about 130 kg	<ul style="list-style-type: none"> Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.7.6 Ensure it has clear instructions to facilitate safe use.	<ul style="list-style-type: none"> Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.7.7 Provide bed linens and wet wipe dispensers. (Refer to Section 8.3 for more information on waste disposal)	<ul style="list-style-type: none"> Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.7.8. Emergency Warning Alarm

Guidelines	Sources
4.7.8.1 Ensure the emergency alarm system is easily reachable from the changing area or shower seats, WC and by a person lying on the floor.	<ul style="list-style-type: none"> Page no. 222-227, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.8.2 Connect it to an emergency help point, or at a place where a staff member can assist.	<ul style="list-style-type: none"> Page no. 222-227, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.8.3 Install an emergency alarm and call switch in the toilet cubicle, within easy reach on the wall near the water closet, at two levels - 300 mm and 900 mm from the floor.	<ul style="list-style-type: none"> Page no. 218, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.8.4 Design the alarm system as a red pull cord with two red bangles, each with a diameter of 50 mm.	<ul style="list-style-type: none"> Page no. 193, 222-227, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.8.5 Set one bangle at a height between 800 mm and 1100 mm and the other bangle 100 mm above the floor.	<ul style="list-style-type: none"> Page no. 193, 222-227, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.7.8.6 Ensure the system indicates when the alarm is activated, that the emergency assistance call has been acknowledged, and that action has been taken.	<ul style="list-style-type: none"> Page no. 222-227, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.8 Other Inclusive Provisions

4.8.1. Gender-Neutral Toilet Unit

Guidelines	Sources
4.8.1.1 Ensure distinct signage for unisex or gender-inclusive toilets.	<ul style="list-style-type: none"> Page no. 25-26, Inclusive Sanitation: Way Forward for Cities A Framework and a Checklist by NFSSM Alliance Page no. 231, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.1.2 Indicate washroom occupancy with red for occupied and green for vacant.	<ul style="list-style-type: none"> Page no. 216, 119-120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.1.3 Provide a sanitary napkin vending machine.	<ul style="list-style-type: none"> Page no. 27-28, Inclusive Sanitation: Way Forward for Cities A Framework and a Checklist by NFSSM Alliance
4.8.1.4 Provide hooks and ledges for hanging clothes, belongings, and menstrual products.	<ul style="list-style-type: none"> Page no. 27-28, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist
4.8.1.5 Provide a mirror above the wash basin.	<ul style="list-style-type: none"> Page no. 27-28, Inclusive Sanitation: Way Forward for Cities A Framework and a Checklist
4.8.1.6 Ensure mirror's position does not allow passers-by to view inside the toilet.	<ul style="list-style-type: none"> Page no. 27-28, Inclusive Sanitation: Way Forward for Cities A Framework and a Checklist
4.8.1.7 Ensure availability of soap for personal cleansing.	<ul style="list-style-type: none"> Page no. 27-28, Inclusive Sanitation: Way Forward for Cities A Framework and a Checklist
4.8.1.8 Install CCTVs at the entrance of the toilet block.	<ul style="list-style-type: none"> Page no. 27-28, Inclusive Sanitation: Way Forward for Cities A Framework and a Checklist by NFSSM Alliance
4.8.1.9 Provide a separate gender-neutral bathing space in public toilets in places such as long-distance transport hubs or areas homeless people visit.	<ul style="list-style-type: none"> Page no. 27-28, Inclusive Sanitation: Way Forward for Cities A Framework and a Checklist by NFSSM Alliance

4.8.2. Family Toilet Unit

Guidelines	Sources
4.8.2.1 Provide a wash basin with liquid detergent and paper towels.	• Page no. 194-201, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.2.2 Provide a child-sized water closet. (Refer to Section 4.6)	• Page no. 194-201, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.2.3 Provide mirrors.	• Page no. 194-201, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.2.4 Provide a diaper changing station. (Refer to Section 4.6)	• Page no. 194-201, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.2.5 Provide a child protection seat. (Refer to Section 4.6)	• Page no. 194-201, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.2.6 Provide a vending machine for diapers. (Refer to Section 4.6)	• Page no. 194-201, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.2.7 Provide a vending machine for sanitary napkins. (Refer to Section 4.5.4)	• Page no. 194-201, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

4.8.3. Lactation Room

Guidelines	Sources
4.8.3.1 Based on space available, designate space for child feeding/child care.	• Page no. 33, Advisory on Public and Community Toilets by CPHEEO
4.8.3.2 Provide comfortable seating, preferably armchairs or similar.	• Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.3.3 Provide diaper changing stations. (Refer to Section 4.6)	• Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.3.4 Provide wash basins with liquid detergent and paper towels.	• Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.3.5 Provide dispensers for hot and cold water.	• Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.3.6 Install vending machines for beverages and diapers.	• Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.3.7 Provide electrical outlets for breast pumps.	• Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
4.8.3.8 Provide mirrors.	• Page no. 229, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

5. Ancillary Provisions

5.1 Staff / Caretaker Room

Guidelines	Sources
5.1.1 Provide staff/caretaker room in the toilet complexes, specially at places that have high footfall and are open round the clock.	• Page no. 27, Advisory on Public and Community Toilets by CPHEEO
5.1.2 If possible, provide it on the first floor.	• Page no. 27, Advisory on Public and Community Toilets by CPHEEO

5.2 Storage Room

Guidelines	Sources
5.2.1 Provide one small room for storing cleaning materials / equipment.	• Page no. 27, Advisory on Public and Community Toilets by CPHEEO
5.2.2 The room size can be decided depending on volume of items to be stored.	• Page no. 27, Advisory on Public and Community Toilets by CPHEEO

5.3 Caretaker/Cleaner Desk

Guidelines	Sources
5.3.1 Ensure that the caretaker/cleaner counter is accessible to all.	• Page no. 157-160, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.3.2 Ensure that the counter has a frontal approach, especially for wheelchair users.	• Page no. 157-160, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.3.3 Install the counter between the height of 750 mm to 800 mm.	• Page no. 157-160, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.3.4 Provide a 680 mm high clear knee space of 680 mm below the counter.	• Page no. 157-160, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

5.4 Advertisement Space

Guidelines	Sources
5.4.1 Use the external wall of the toilet for advertising, considering the design and safety.	• Page no. 43, Advisory on Public and Community Toilets by CPHEEO
5.4.2 Panels / illuminated boards are best preferred.	• Page no. 43, Advisory on Public and Community Toilets by CPHEEO

5.5 Drinking Water

Guidelines	Sources
5.5.1 Provide an easily locatable and reachable drinking water facility through well identified signage.	• Page no. 187-190, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.5.2 Install the drinking water facility at a height of 750 mm that may extend 480 mm from the wall.	• Page no. 187-190, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.5.3 Provide a clear floor space of at least 900 mm x 1200 mm.	• Page no. 187-190, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.5.4 Provide minimum 750 mm wide and 230 mm high toe space.	• Page no. 187-190, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.5.5 Provide tap above 100 mm from the basin.	• Page no. 187-190, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.5.6 Provide lever type taps or sensor-operated taps.	• Page no. 187-190, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

5.6 Shops or Other Services

Guidelines	Sources
5.6.1 Services such as ATMs and shops can be provided in the toilet premises	• Page no. 43, Advisory on Public and Community Toilets by CPHEEO
5.6.2 Provide accessible wayfinding systems for shop locations.	• Page no. 346-350, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.6.3 Provide accessible ramps and staircase at places with level difference.	• Page no. 157-160, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.6.4 Provide non-slippery landing space for wheelchairs (Refer to Section 3.3 and 3.4)	• Page no. 373, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.6.5 Provide access route with TGSI tiles leading up to the shop.	• Page no. 358-359, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.6.6 Ensure goods do not obstruct access routes.	• Page no. 346-350, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.6.7 Ensure signage have contrasting colours and large fonts.	• Page no. 346-350, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.6.8 Provide an entrance door with minimum 900 mm clear width.	• Page no. 152-153, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
5.6.9 Provide a manoeuvring space of 1800 mm for wheelchair users inside the facility.	• Page no. 152-153, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

6. Information Systems

6.1 Information and Wayfinding

Guidelines	Sources
6.1.1 Ensure wayfinding and facility signages for persons with disabilities, transgender individuals, families with children, and the elderly.	<ul style="list-style-type: none"> Page no. 22, Advisory on Public and Community Toilets by CPHEEO Page no. 21, 25, 27 Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 119-120, 231-234, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.1.2 Label different sections with signs like Men’s Toilet, Women’s Toilet, Accessible Toilet, Child-Care Rooms, Diaper Changing Stations, etc.	<ul style="list-style-type: none"> Page no. 22, Advisory on Public and Community Toilets by CPHEEO Page no. 21, 25, 27, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 119-120, 231-234, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.1.3 Use uniform colour codes and standard nomenclature, as per the Harmonised Guidelines and Standards for Universal Accessibility in India, 2021.	<ul style="list-style-type: none"> Page no. 21-22, Advisory on Public and Community Toilets by CPHEEO Page no. 259 - 288, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.1.4 Use legible fonts with high-contrast backgrounds.	<ul style="list-style-type: none"> Page no. 22, Advisory on Public and Community Toilets by CPHEEO Page no. 259-288, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.1.5 Integrate emergency signs within the toilet systems.	<ul style="list-style-type: none"> Page no. 119-120, 222-227, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.1.6 Include messages about proper toilet use and health benefits inside, and outside the facility.	<ul style="list-style-type: none"> Page no. 22, Advisory on Public and Community Toilets by CPHEEO
6.1.7 Include pictograms, arrows, and text in multiple languages, including the local language, in tactile and Braille formats.	<ul style="list-style-type: none"> Page no. 119-120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA Page no. 17-18, Revised Guidelines for Swachh Bharat Mission - Urban by MoHUA Page no. 27, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 231-233, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

6.2 Signages

Guidelines	Sources
6.2.1 Place toilet direction signs at main junctions, busy areas, and road margins.	<ul style="list-style-type: none"> Page no. 22, Advisory on Public and Community Toilets by CPHEEO Page no. 334, Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines Volume 1 by TCPO
6.2.2 Clearly mark toilet locations with appropriate signs.	<ul style="list-style-type: none"> Page no. 21-22, Advisory on Public and Community Toilets by CPHEEO Page no. 131, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 21, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
6.2.3 Use legible universal signage of a man, woman and person in a wheelchair at entrance and passage ways.	<ul style="list-style-type: none"> Page no. 22, Advisory on Public and Community Toilets by CPHEEO
6.2.4 Display the International Symbol of Access (ISA) at all unisex accessible toilets.	<ul style="list-style-type: none"> Page no. 231-233, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.2.5 Preferably place the signages near light sources.	<ul style="list-style-type: none"> Page no. 22, Advisory on Public and Community Toilets by CPHEEO

6.3 Information Display Boards

Guidelines	Sources
6.3.1 Display name and contact details of the Caretakers, Supervisor, the Supervisor's agency, and the area Sanitary Inspector.	<ul style="list-style-type: none"> Page no. 84-88, Advisory on Public and Community Toilets by CPHEEO Page no. 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 22, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
6.3.2 Display toilet operation timings and user charges.	<ul style="list-style-type: none"> Page no. 22, Page 42-43, Advisory on Public and Community Toilets by CPHEEO Page no. 24, 27, 28, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance
6.3.3 Provide and display SMS-based/toll-free numbers allotted for feedback in local and disability-friendly languages.	<ul style="list-style-type: none"> Page no. 22, 84-88, Advisory on Public and Community Toilets by CPHEEO Page no. 131-132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA Page no. 25, 29, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist by NFSSM Alliance Page no. 334, Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines Volume 1 by TCPO
6.3.4 Display the following information prominently for each toilet block: <ol style="list-style-type: none"> Toilet identification number. Name of the ULB (Urban Local Body) under which the toilet falls. Ward number. Maintenance authority. Toilet timings. 	<ul style="list-style-type: none"> Page 84-88, 37, Advisory on Public and Community Toilets by CPHEEO Page no. 39-40, 132, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA

6.4 Tactile Map

Guidelines		Sources
6.4.1	Provide tactile layout of the toilet building at the entrance with braille and audio.	• Page no. 276-278, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.4.2	Indicate its location with a Tactile Guiding Surface Indicator (TGSI).	• Page no. 276-278, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.4.3	Place it in a well-lit and obstacle-free area.	• Page no. 276-278, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.4.4	Locate it at the entrance door, on the right side, near the latch side, within 1000 mm.	• Page no. 276-278, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.4.5	If fixed on a vertical surface, place it between the height of 1250 mm and 1750 mm above the floor.	• Page no. 276-278, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
6.4.6	If fixed on a horizontal or inclined surface, place it between 900 mm and 1200 mm from the floor, with a 15° to 30° inclination.	• Page no. 276-278, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

7. Materials and Finishes

Guidelines	Sources
7.1 Ensure all sanitary fixtures, surfaces and accessories are made of durable materials to withstand possible abuse, extra weight and heavy usage.	• Page no. 34, Advisory on Public and Community Toilets by CPHEEO
7.2 Tile the inner walls of the toilet unit up to a minimum height of 3ft (900mm).	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
7.3 Ensure bathroom walls are tiled up to the roof height.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
7.4 Avoid using paint as a finishing option.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
7.5 If paint is necessary, limit it to areas that are out of reach, such as the ceilings.	• Page no. 31, Advisory on Public and Community Toilets by CPHEEO
7.6 Use anti-skid flooring materials.	• Page no. 29, Advisory on Public and Community Toilets by CPHEEO • Page no. 24, Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist • Page no. 227, Harmonised Guidelines and Space Standards for Universal Accessibility in India
7.7 Non-slippery materials such as ceramic tiles, natural stones, homogeneous tiles, and terrazzo are recommended for flooring.	• Page no. 34, Advisory on Public and Community Toilets by CPHEEO
7.8 Water-proof natural stone is recommended for flooring in common areas.	• Page no. 29, Advisory on Public and Community Toilets by CPHEEO
7.9 Cement flooring is recommended for toilet units.	• Page no. 29, Advisory on Public and Community Toilets by CPHEEO
7.10 Provide non-staining, skid-resistant mats with grid design.	
7.11 For walls, consider using materials such as ceramic tiles, natural stone, anti-slip homogeneous tiles, stainless steel, enamelled steel panels, glass block, aluminium panels, or phenolic cladding.	• Page no. 34, Advisory on Public and Community Toilets by CPHEEO
7.12 Ceramic tiles are recommended for wall cladding.	• Page no. 34, Advisory on Public and Community Toilets by CPHEEO
7.13 For ceiling, materials such as mineral fibre board, fibrous plaster board, aluminium panels or strips is recommended.	• Page no. 34, Advisory on Public and Community Toilets by CPHEEO
7.14 For Indian toilet closet pans, use materials such as ceramic or an equivalent material allowed by standards.	• Page no. 24, Advisory on Public and Community Toilets by CPHEEO
7.15 Use materials such as wood, plastic, and GI sheets for doors.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
7.16 Use suitable corrosion prevention paints for doors with GI sheets.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
7.17 To prevent decay in wooden doors, consider adding aluminium sheets up to 2ft (600mm) from the door bottom.	• Page no. 29-30, Advisory on Public and Community Toilets by CPHEEO
7.18 If possible, materials and lighting to contribute to the toilet colour scheme making the toilet bright and conducive.	• Page no. 31, Advisory on Public and Community Toilets by CPHEEO
7.19 The colour of the tile or stone finishes, or the applied finishes such as the enamelling on steel or aluminium to contribute to the colour scheme.	• Page no. 31, Advisory on Public and Community Toilets by CPHEEO

8. Building Services

8.1 Bathroom Fixtures

Guidelines	Sources
8.1.1 Provide faucets and other controls that are either hand-operated or electronically controlled (sensor based).	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.1.2 Ensure hand-operated controls are operable by one hand without tight grasping, pinching, or wrist-twisting and require a force less than 22 N to activate.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.1.3 Use lever-type handles (non-self-closing) allowing operation with a closed fist.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.1.4 Ensure controls are colour-contrasted.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.1.5 Ensure the surrounding face plate panel and the faceplate should similarly contrast with the background wall on which the controls are mounted.	<ul style="list-style-type: none"> Page no. 222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

8.2 Switches and Controls

Guidelines	Sources
8.2.1 Place controls, electrical sockets, and switches between 800-1200 mm from the floor.	<ul style="list-style-type: none"> Page no. 251-252, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.2.2 Ensure that the operable part of these items is at least 350 mm away from internal corners or obstructions.	<ul style="list-style-type: none"> Page no. 251-252, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.2.3 The switch plate should contrast with the wall by at least 30 points in Light Reflectance Value (LRV).	<ul style="list-style-type: none"> Page no. 251-252, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.2.4 It shall be possible to activate it with an elbow.	<ul style="list-style-type: none"> Page no. 251-252, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

8.3 Waste Collection and Disposal

Guidelines	Sources
8.3.1 Place bins within toilet cubicles or next to washbasins, prioritising foot-operated bins over hand-operated ones.	<ul style="list-style-type: none"> Page no. 32, Advisory on Public and Community Toilets by CPHEEO
8.3.2 Prefer sanitary bins with non-touch opening mechanisms like motion sensors.	<ul style="list-style-type: none"> Page no. 221-222, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.3.3 Provide covered sanitary bins in women's and unisex toilet areas for napkin disposal.	<ul style="list-style-type: none"> Page no. 33, Advisory on Public and Community Toilets by CPHEEO
8.3.4 Install incinerators for toilets with more than 10 seats and those near women's colleges and hostels.	<ul style="list-style-type: none"> Page no. 88, Advisory on Public and Community Toilets by CPHEEO
8.3.5 Include waste containers for diaper disposal.	<ul style="list-style-type: none"> Page no. 32, Advisory on Public and Community Toilets by CPHEEO
8.3.6 For sanitary napkin disposal, implement a proper disposal mechanism with local biomedical waste agencies.	<ul style="list-style-type: none"> Page no. 33, Advisory on Public and Community Toilets by CPHEEO

8.4 Illumination & Lighting

8.4.1. General Considerations

Guidelines	Sources
8.4.1.1 Ensure constant interior and exterior lighting, especially at night.	<ul style="list-style-type: none"> Page no. 28-29, Advisory on Public and Community Toilets by CPHEEO
8.4.1.2 Well-lit entrances, exits, walkways, paths, and open areas leading to the toilet should have natural light or bright artificial lighting, especially for night time use.	<ul style="list-style-type: none"> Page no. 28-29, 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.1.3 Consider using energy-efficient lighting options like LEDs and CFLs when feasible.	<ul style="list-style-type: none"> Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO

8.4.2. Natural Lighting

Guidelines	Sources
8.4.2.1 The design should include features that provide natural daylight to illuminate at least half of the toilet space during the day.	<ul style="list-style-type: none"> Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO

8.4.3. External Lighting

Guidelines	Sources
8.4.3.1 Adequate lighting in the wider area surrounding the toilet block.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.3.2 Provision of carefully placed fixtures and lamps.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.3.3 Regular electricity supply (backed by power support) throughout the path.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.3.4 Toilet gate to be adequately lit.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.3.5 Illumination at the top and bottom and along of the flight should be at least 200 lux.	• Page no. 164-168, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.4.3.6 Installation of flood-lights / mass lights near public toilets for night, especially the access points.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.3.7 Advertisements to have illumination provisions for night.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO

8.4.4. Internal Lighting and Fittings

	Guidelines	Sources
8.4.4.1	Internal lighting should be bright enough to illuminate entrances, exits, wash areas, cubicles and publicly accessible areas.	• Page no. 28-29, 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.4.2	All toilet units and cubicles should be well-lit.	• Page no. 28-29, 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.4.3	Each toilet seat should have its own functional light point.	• Page no. 28-29, 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.4.4	Warm colour lighting to be used for general lighting.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.4.5	Down lights to be used above the washbasin / mirror in all toilets.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.4.6	Minimum general lighting level is 300 lux.	• Page no. 30-31, Advisory on Public and Community Toilets by CPHEEO
8.4.4.7	Adequate colour contrast of 30 points difference in LRV between flooring, walling and fixtures.	• Page 120, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.4.4.8	Minimum 100 lux illumination level in access routes leading to washrooms.	• Page 120-122, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA
8.4.4.9	Wherever possible, motion sensor lighting is recommended to avoid manual controls and automated response.	• Page no. 251-252, Harmonised Guidelines and Space Standards for Universal Accessibility in India 2021 by MoHUA

8.4.5. Emergency Lighting

Guidelines	Sources
8.4.5.1 Emergency lighting in both men and women blocks.	· Page no. 31, Advisory on Public and Community Toilets by CPHEEO
8.4.5.2 Illumination design should reflect exit signs to indicate a path for exit from the toilet safely.	· Page no. 31, Advisory on Public and Community Toilets by CPHEEO
8.4.5.3 Functional alternative backup energy systems like generators and inverters for toilets open at night.	· Page no. 31, Advisory on Public and Community Toilets by CPHEEO
8.4.5.4 Wiring system design to accommodate these requirements.	· Page no. 31, Advisory on Public and Community Toilets by CPHEEO

8.2 Water and Drainage Systems

Guidelines	Sources
8.2.1 Conceal all internal water supply and drainage pipes connected to fixtures.	· Page no. 27, Advisory on Public and Community Toilets by CPHEEO
8.2.2 Secure pipes with durable hangers, supports, and fasteners designed for repeated human use impact.	· Page no. 27, Advisory on Public and Community Toilets by CPHEEO
8.2.3 In hilly areas with cold winters, provide a water heating system.	· Page no. 27, Advisory on Public and Community Toilets by CPHEEO
8.2.4 Ensure plumbing designs have backup or alternative facilities to support toilet operations in case of frozen pipes.	· Page no. 27, Advisory on Public and Community Toilets by CPHEEO
8.2.5 For urinals, install scupper drains or stainless-steel grating over the drainage beneath the urinal bowls.	· Page no. 25-26, Advisory on Public and Community Toilets by CPHEEO
8.2.6 For WCs, place a floor trap within the toilet, especially if it has an ablution tap, bucket, and mug.	· Page no. 24, Advisory on Public and Community Toilets by CPHEEO
8.2.7 Ensure proper grading of flooring in toilet cubicles towards the floor trap for effective drainage.	· Page no. 24, Advisory on Public and Community Toilets by CPHEEO

8.6 Ventilation

8.6.1. General Considerations

Guidelines	Sources
8.6.1.1 Provision of adequate ventilation facilities such as vents, slanted glass slats and/or exhaust fan.	· Page no. 30, Advisory on Public and Community Toilets by CPHEEO
8.6.1.2 Ventilation systems should not compromise privacy	· Page no. 30, Advisory on Public and Community Toilets by CPHEEO

8.6.2. Natural Ventilation

Guidelines	Sources
8.6.2.1 Windows, doors, louvres or other openings to the outdoors for natural ventilation.	• Page no. 30, Advisory on Public and Community Toilets by CPHEEO
8.6.2.1 Provision of access to operating mechanisms of such openings.	• Page no. 30, Advisory on Public and Community Toilets by CPHEEO

8.6.3. Mechanical Ventilation

Guidelines	Sources
8.6.3.1 Ensure replacement air for exhaust systems to create a slight negative pressure.	• Page no. 30, Advisory on Public and Community Toilets by CPHEEO
8.6.3.2 This replacement air can come from outside or from adjacent spaces that are either air-conditioned or naturally ventilated.	• Page no. 30, Advisory on Public and Community Toilets by CPHEEO
8.6.3.3 Replacement air can be drawn through features like louvres in doors, walls, door undercuts, or other suitable means.	• Page no. 30, Advisory on Public and Community Toilets by CPHEEO
8.6.3.4 The exhaust system should release air directly outdoors without causing disturbances to neighbouring premises.	• Page no. 30, Advisory on Public and Community Toilets by CPHEEO
8.6.3.5 Maintain a minimum air exchange rate of 15 air changes per hour or 35.4 litres per second of exhaust per toilet cubicle.	• Page no. 30, Advisory on Public and Community Toilets by CPHEEO
8.6.3.6 Discharge the exhaust air to the building's exterior at a location at least 2000 mm above the external surface level and at least 5000 mm away from any building openings like windows, doors, or air intakes where the discharged air might re-enter the building.	• Page no. 30, Advisory on Public and Community Toilets by CPHEEO

9. Utilities

9.1 Water Supply and Storage

Guidelines	Sources
9.1.1 Ensure water storage for half-day use	• Page no. 27, Advisory on Public and Community Toilets by CPHEEO
9.1.2 For reliable municipal supply, use underground sump and overhead tanks.	• Page no. 27, Advisory on Public and Community Toilets by CPHEEO
9.1.3 If there is no municipal supply, install a bore well and pump.	• Page no. 27, Advisory on Public and Community Toilets by CPHEEO
9.1.4 Include standby pumping with a covered pump house if needed.	• Page no. 27, Advisory on Public and Community Toilets by CPHEEO

9.2 Stormwater Drainage

Guidelines	Sources
9.2.1 Direct all down pipes from the roof and floor cleaning/wash water used for maintenance, except those going to the sewer network, toward the stormwater drainage.	• Page no. 28, Advisory on Public and Community Toilets by CPHEEO
9.2.2 Provide rainwater harvesting system based on the roof area size.	-

9.3 Wastewater Management

9.3.1. General Considerations

Guidelines	Sources
9.3.1.1 If there is an existing sewerage system within 30 metres of the proposed individual household, community, or public toilets, only build the toilet structure itself and connect it to the existing sewerage system.	• Page no. 12-14, Swachh Bharat Mission - Urban 2.0: Operational Guidelines by MoHUA
9.3.1.2 No discharge of untreated faecal sludge/septage and sewage from the toilet to be dumped in drains, open areas or water bodies.	• Page no. 52-53, Advisory on Public and Community Toilets by CPHEEO
9.3.1.3 Organise safe disposal of septage in tandem with city-wide infrastructure to sewer systems or on-site treatment solutions.	• Page no. 27-28, Advisory on Public and Community Toilets by CPHEEO
9.3.1.4 Choose technology based on site conditions, hydro-geological factors, and nearby infrastructure.	• Page no. 27-28, Advisory on Public and Community Toilets by CPHEEO
9.3.1.5 Different options include; Connection to sewer where wastewater will be collected and conveyed by laying underground pipes. OR On-Site Sanitation is suitable for areas where sewer networks are impractical due to topography or any other factors.	• Page no. 27-28, Advisory on Public and Community Toilets by CPHEEO

9.3.2. On-Site Sanitation System

Guidelines	Sources
9.3.2.1 For public toilets that cannot be connected to a sewer line, consider using on-site treatment systems such as Septic Tank System with Soak Pit, Anaerobic Bio-Digester Toilets developed by Defence Research and Development Organisation (DRDO), Aerobic Bio Tank.	Page no. 27-28, Advisory on Public and Community Toilets by CPHEEO
9.3.2.2 On-site treatment technologies for human wastes include septic tanks, bio-digesters, and decentralised wastewater treatment systems, etc.	Page no. 27-28, Advisory on Public and Community Toilets by CPHEEO
9.3.2.3 Connect only toilet and urinal waste to the septic tank system.	Page no. 27-28, Advisory on Public and Community Toilets by CPHEEO
9.3.2.4 The effluents from the septic tanks should be directed to a soak pit or dispersion trench.	Page no. 27-28, Advisory on Public and Community Toilets by CPHEEO
9.3.2.5 Wastewater from washing and bathing should be directly connected to the soak pit.	Page no. 27-28, Advisory on Public and Community Toilets by CPHEEO

9.3.3. Design Period for Sewerage Systems Components

Guidelines	Sources
9.3.3.1 30-year recommended design period for collection system i.e., Sewer Network.	• Page no. 8-9, Manual on Sewerage and Sewage Treatment Systems, 2013
9.3.3.2 30-year design period for Pumping stations (civil works).	• Page no. 8-9, Manual on Sewerage and Sewage Treatment Systems, 2013
9.3.3.3 15-year design period for pumping machinery.	• Page no. 8-9, Manual on Sewerage and Sewage Treatment Systems, 2013
9.3.3.4 30-year design period for sewerage treatment plant.	• Page no. 8-9, Manual on Sewerage and Sewage Treatment Systems, 2013
9.3.3.5 30-year design period for effluent disposal and utilisation.	• Page no. 8-9, Manual on Sewerage and Sewage Treatment Systems, 2013
9.3.3.6 15-year of design period for Decentralised Wastewater Management System (DWWM), if possible. Another way is to design a DWWM by estimating the present-day capacity and plan the system for an additional 20% capacity.	• Page no. 8-9, Manual on Sewerage and Sewage Treatment Systems, 2013



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