



NATIONAL PUBLIC TOILET GUIDELINES

“Leave no one behind”

Ministry of Works and Human Settlement
June, 2021



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FOREWORD

Despite incredible development, most people in Bhutan still face difficulty in getting access to basic sanitation facilities. Thus, the “National Sanitation and Hygiene Policy 2020” was recently endorsed with the objective to achieve universal coverage and access to sustainable sanitation and hygiene services for all. This is also in line with “The Constitution of the Kingdom of Bhutan” which obliges the Royal Government of Bhutan (RGoB) to ensure a safe and healthy environment for Bhutanese citizens and with the Sustainable Development Goal 6.

The Government also prioritizes ending open defecation to reduce health and environmental risk focusing mostly on the vulnerable groups. At the household level (urban and rural), the Government facilitates toilet construction. In the urban context, the Government provides services for collection, disposal, and treatment of fecal waste. However, providing a good and accessible public toilet at public places¹, historical sites and along the highways has been an emerging issue with urbanization and increased population. The few public toilets that exist are poorly designed, lack maintenance and unhygienic, compelling people to choose open defecation while away from home. One of the ways in ending/ addressing open defecation is planning, designing and constructing universal accessible toilets across the country. Today, there are no comprehensive guidelines on public toilets that provide information to the implementing agencies on the planning, designing and implementation of user-friendly and accessible public toilets for all.

Therefore, the Ministry of Works and Human Settlement is pleased to publish the “National Public Toilet Guidelines” with the objective to provide technical guidance on planning, designing and implementing universally accessible, clean and environmentally-friendly public toilet amenities to meet the needs of all users.

The Ministry of Works and Human Settlement is very grateful to UNICEF and highly acknowledge their funding support in publishing the guidelines.



Secretary
Ministry of Works and Human Settlement

¹ Public Places such as vegetable markets, shopping areas, bus terminals, stadiums, tourist sites/camping sites, hot spring, petrol stations and cinema halls.

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INTRODUCTION

The provision of universally accessible public toilets is an important initiative of the Government as per the “National Sanitation and Hygiene Policy 2020.” Although there are enabling policies and guidelines at the national level to provide adequate sanitation services, implementers still face challenges in constructing accessible toilets due to absence of adequate and appropriate guidance and information on inclusive public toilet designs specifically suitable to the local context. Thus, most places in Bhutan do not have inclusive user-friendly public toilets that can be used with ease and dignity. Additionally, with the endorsement of the “National Policy for Persons with Disabilities 2019,” it is the responsibility of every agency to mainstream the disability concerns in their respective sectoral plans. Therefore, the Ministry of Works and Human Settlement as the technical agency for infrastructural development in the country has prioritized providing accessible public toilet design guidelines for urban planners, engineers, and other relevant organizations to ensure access to all.

This guideline will encourage implementers to construct accessible public toilets across the country for the convenience of all users. The guideline focuses on design of public toilets considering the safety, privacy and accessibility aspects including the needs of senior citizens, women and people with disabilities. Well designed and built public toilets should be clean, easy to maintain, well maintained and ventilated, easily accessible and can be used by all including pregnant women, people with disabilities, young children and elderly people.

The guidelines can be used in the design of safer, accessible, durable and sustainable public toilets in Bhutan. It will guide the implementers on site selection, orientation, and design of user-friendly public toilets. This guideline is not intended to be prescriptive and should be considered within the location’s context and the particular needs of users.

RATIONALE

The “National Public Toilet Guidelines” is developed to guide planners and implementers to ensure public toilets in urban and other areas are adequate and used by all. The key rationales are to:

- Address the lack of specific guidelines for accessible public toilets.
- Provide guidance for planning, budgeting, resource allocation, designing and implementation.
- Upgrade and improve the existing public toilets to make them more user-friendly for all.
- Create awareness and advocacy at all levels including the roles and responsibilities of all stakeholders.

OBJECTIVE

Guide planners and implementers in planning, resource allocation, designing and construction of accessible, adequate, and sustainable public toilets for all (including children, women and people with disabilities).

1. FEASIBILITY STUDY

The most important factors/checklists to be considered during the feasibility studies for planning, designing and implementation of public toilets but not limited to, are in Table 1:

Table 1: Checklist for feasibility studies

Study Structural Plan/ Local Area plan if available.	To check the availability of space for toilet construction.
Conduct public/ inclusive stakeholders consultations including persons with disabilities.	To obtain social/ necessary clearance. To decide location of the toilet(s) and also to ensure user centric design.
Assess availability of existing utilities such as water supply, sewerage and power supply.	The location of the toilet(s) should not necessarily be determined by water/power supply point.
Modality of execution	Private Public Partnership (PPP)/ Government built-private operated/Government operated.
Propose/Ensure availability of budget.	
Prepare a detailed design, drawing, estimation and specifications for proposed construction.	To find the users' pattern/include feedback from consultation with users.
Explore best Operation and Maintenance modality.	Where possible use human resources within the existing municipalities/town.

Inclusive public consultation is crucial to gather information on location, water and power supply and recommendations from the users' point of view including operation and maintenance aspects to ensure accessibility and sustainability of the facilities.

2. TECHNICAL FACTORS FOR CONSIDERATIONS

It is critical to select appropriate site for public toilet construction so as to cater to the maximum number of users in populated areas (towns/cities). In case of highway toilets, the site should be ideally selected at an appropriate driving interval. Some of the other technical factors to be considered are as follows:

2.1 User to Unit ratio

The number of units for water closets / urinals provided in a facility would depend on the location, number of users and land/space availability. Public gatherings refer to gatherings like *Tshechus*, *Dromchoes*, *Wangs*, *Moenlam Chenmos*, *Duthroes*, *Tsachhus* and any other organized mass gatherings. Table 2 provides information on the number of toilets required at public places and public gatherings:

Table 2: Norms for sanitary facilities in public toilets

Sanitary Unit	For Male	For Female
Toilet cubicles / water closet	One per 100 persons up to 400 persons; for over 400 users, add at the rate of one per 250 persons or part thereof.	Two for 100 persons up to 200 persons; over 200 add at the rate of one per 100 persons or part thereof.
Urinals	One for 50 persons or part thereof.	Nil.
Wash basins	One per two toilet cubicles/ water closet.	
Toilet	Public gathering (Located at a distance of 30 meters from gallery).	
	One per 300 persons.	One per 200 persons.
Toilet	Public gathering dwellers (Located at a distance of 10 meters from dwelling).	
	One per 40 persons.	One per 25 persons.

2.2 Soil

While constructing the toilets, due consideration should be given during the site selection for structure stability. The toilet should be constructed on a stable soil and if it must be constructed on marshy/land filled areas/sandy soils, suitable foundation should be provided. The selected site should be accessible to vacuum trucks for de-sludging of septic tanks if located in unsewered areas besides ensuring ample spaces for car parking for other users.

2.3 Water bodies

The presence of water bodies needs to be assessed during the site selection for soak pit to avoid contamination from effluent discharge. In waterlogged areas, the facilities constructed should be ensured to stay clear above the water table in order to avoid any chances of underground contaminations and saturation of soak-pit. To prevent contamination of the water bodies, the location of the soak pits/septic tanks should be placed as per Table 3.

Table 3: Minimum distance requirement.

Objects	Minimum distance requirement ² (m)
River/Stream	30
Spring	30
Well	30
Ground Water Table(GWT)	2 above GWT (If applicable)

2.4 Terrain and topography

The most feasible site for toilet construction is a flat area. However, in the event a flat area is not available, consider consultation with relevant agencies considering the accessibility needs of people with disabilities, children and women.

2.5 Climatic condition

The climatic conditions of the selected site should be taken into consideration to implement appropriate treatment technology and selection of construction materials.

The efficiency of the treatment is dependent on climatic condition. For instance, the efficiency of an anaerobic digestion is lower in cold weather compared to hot places. In such a case, options like insulation, heating systems, etc. can be adopted to enhance the efficiency of the system.

The right construction materials need to be chosen depending on the local climatic condition. In cold places, use of locally available materials like stone masonry is recommended for the superstructure.

² Sanitation and Hygiene Guidelines 2014.

3. GENERAL REQUIREMENTS FOR PUBLIC TOILET

3.1 Location and visibility

The public toilet should be located in an open area without dense vegetation and big structures to ensure the user feels safe while using the facilities. It should be easily visible by the users for maximum usage and to deter unsafe activities. The following factors should be taken into consideration while deciding the location of public toilets:

- Flat space suitable for toilet and axillary construction having level access from surroundings or sufficient space for an appropriately graded ramp.
- Visible from most directions.
- An area with maximum users.
- Close as possible to streets, footpaths and car parking areas.
- Site of frequent public activity such as sports, picnic, religious gathering, bus terminals etc.
- Proximity to essential service lines like water supply, sewerage, power supply, etc.
- Proper signage to be provided for direction.

While selecting the site for public toilet along the roads, the facility should be constructed in accordance with right of way as specified in the “*Road Act of the Kingdom of Bhutan 2013.*”

3.2 Aesthetics

To encourage greater acceptance among users, the design of public toilets should incorporate local art and cultural elements. The public toilet should be designed to have orientations, spaces and forms that gel with the local climatic conditions, solar and daylight accessibility. The external appearance of the toilet should be appealing to the eyes and in accordance with the cultural aspect of building colors of Bhutan. The “*Building Color Code of Bhutan 2014*” should be referred to while coloring the public toilet. Landscaping should be done wherever possible in the surrounding with locally available evergreen plants and flowers for improved ambience.

The principles of green building design and construction as instructed in the “*Bhutan Green Building Design Guidelines 2013*” should be taken into consideration while designing and constructing public toilets to ensure that the built environment is in harmony with the country’s pristine environment. This will have less environmental impact by consuming fewer natural resources for construction, operation, and maintenance.

3.3 Ventilation

One of the top priorities in the design of inclusive public toilets is providing proper ventilation to avoid dampness and foul smell. Even if the toilet is well designed, an ineffective ventilation system can make the public toilet un-usable. Ventilation system should be provided in such a way to dispel the air directly outdoors without causing nuisance to neighboring premises. An effective ventilation system ensures that foul air is quickly removed and addresses the removal of dampness and subsequent growth of mold on floors and walls. The ventilation system can be mechanical as well as natural. Natural ventilation can be achieved by providing a louvered window, gap at the bottom of the door, gap at the top and bottom of cubicle partition, or other openings to the outdoors. Openings should be securable in the event the toilet is prone to vandalism. In high altitude areas, it may not be necessary provide ceilings in the toilet structure however, in tropical regions, ceilings should be provided to minimize the impact of heat generated by CGI sheet roofing.

3.4 Signage

Recognizable signage including directional signs and labeling should be provided to indicate the toilet location taking into consideration people with language constraints and people with blindness (use of braille). It should also indicate the direction and distance or time to the toilet e.g. 100 meters or 5 minutes from the current location to the nearest location. The signage provided for all the public toilets should be consistent and be in blue background with white fonts and legends as depicted in Figure 1. The toilet should be gender segregated and should be clearly identified by use of signage symbols for male, female, unisex and accessible. Further, toilet signage must be provided at the toilet site as well as at a noticeable location in public areas to direct the users towards the facility and for information.



Figure 1: An example of signage for public toilets.

3.5 Lighting

The public toilet should be designed to maximize the use of natural light through skylights, gaps, translucent roofing materials and other passive design features to create a softer, friendlier and safer environment. The natural light helps in keeping the toilet floor dry, smell-free, improves indoor air quality and kills potentially harmful bacteria. Where possible, openings such as doors/main entrances should face south-east for maximum sunlight.

The requirement for external and internal lighting will vary from site to site. A well-designed lighting system will not only save electrical energy but also improve the appearance of the toilet. Lighting should also be provided to its surrounding area, the access areas to the toilet and entrance. In places where power supply is not available, alternative power sources such as solar lighting systems etc. should be explored.

3.6 Roof and ceiling

Locally appropriate and available materials should be used for roofing viz *shinglap*. Where use of local materials is not possible, CGI sheets may be used. However, energy efficient roofing such as transparent sheets is to be used wherever possible. Gutter should be provided around the roof with down pipe to ensure proper disposal of rainwater.

The ceilings should be light coloured, vandal and fire resistant while providing natural light and ventilation. Locally available low-cost ceiling materials should be preferred. However, if local materials are unavailable, mineral fiber board, fibrous plaster board, aluminum panels or strips can be used. For the water closet and bathroom, the floor to ceiling height should be not less than 2100 mm (Residential Building) and not less than 2300 mm (Institutional and Commercial Building).

3.7 Floor, walls and window

The toilets and bathrooms shall have floors of impervious materials. The use of non-slip ceramic tiles, homogenous tiles, natural stones terrazzo or other floor coats should be used for the public toilet to facilitate easy cleaning. Large surface area tiles are encouraged for easy maintenance. If concrete floors are used, it should be finished with non-slip epoxy paints or similar materials. The flooring should be easy to clean, maintain, non-reflective, and fireproof. The floors should have minimum slope toward the floor trap for ease of cleaning and efficient draining of water.

Wall finishes shall be made of materials, which are impervious and durable such as ceramic tiles, phenolic panels, aluminum panels, which allows easy cleaning.

Windows should be provided at the common room of the toilet to allow natural light and ventilation but should be avoided in cubicle walls to ensure privacy of the users.

3.8 Doors and cubicles

Ideally, main entrance doors for public toilets are not recommended for the purpose of minimal contact to avoid contamination and for toilets that are operated 24 hours. In case exterior doors are provided, it should be robust, scratch resistant and easy to repaint. It should be wide enough to enable easy access for all users including pram and wheelchairs.

Cubicle doors should be wide enough for easy access to all users including people with disabilities and mothers with baby's pram. Cubicle doors and partitions should be tightly fitted to avoid gaps and openings with rigid design and waterproof materials (phenolic panels/block board etc.). All cubicle doors and partitions are to be 100mm minimum above floor level to facilitate ventilation, easy washing and ensuring safety.

Cubicles should have the following fittings:

- Water Closet Pans.
- Cisterns.
- Handheld bidet.
- Toilet roll holder/ dispensers.
- Sanitary/litter bins with covers operated without hand contact.
- Coat/ handbag hook.
- Toilet seat sanitizer.
- Grab bar (for Indian type WC pan).
- Floor grating with trap.
- Air fresheners.
- Water tap point with bucket and jug.

Recommended dimensions of a toilet cubicle are shown in the Table 4.

Table 4: Norms for standard size

Description	Optimum (mm)	Minimum* (mm)
Toilet cubicles	1200 x 900	1080 x 900
Urinals (divided into units by partition walls) Urinal should be separated by a modesty board of not less than 300mmx1800mm (height) to act as a visual barrier between urinals.	675 x 575	600 x 500
Accessible/family toilet cubicles	2500 x 2425	1520x1520
Shower	1200 x 900	1080 x 900
Utility chamber with water tap	1200 x 900	1080 x 900

*In case of space constraint, the minimum sizes may be adopted.

3.9 Utility room

An equipment room should be provided for cleaners to store cleaning equipment. A dedicated sink with tap-point to clean the mop and other cleaning equipment that are used by the maintenance personnel should be provided within or in close proximity to each toilet block.

3.10 Fixtures & Fittings Considerations

Table 5 displays the fixtures & fittings required in an inclusive public toilet.

Table 5: Fixture requirements in Public Toilet

Fixtures	Requirements
Pans	Appropriate mix of Indian and western closets with suitable dimension should be provided. The installed toilet pans should be of appropriate materials to avoid vandalism, be user-friendly and easy to clean.
Cisterns	Appropriate toilet cisterns should be provided in the toilet to reserve and hold the correct amount of water required to flush the toilet bowl. The flush buttons provided should be easily reachable to people with disabilities and senior citizens.
Handwashing Basins	Hand basins should be provided with water efficient tap.
Soap Dispenser/ Soap Holder	For hygiene purposes, sensor dispensers should be considered, if not, soap holders should be provided. At a minimum, for every 2 count of wash basins, 1 soap dispenser/soap holder shall be provided.
Dust bin/Litter bins	Dustbin/Litterbins shall be provided directly below or in close proximity (preferably located in front of the wash basins) to minimize tiny bits of litter on the floor left behind by users.
Toilet roll holder	Toilet roll holders must be robust and well secured for holding toilet papers.
Sanitary/diaper bins	Sanitary/diaper bins with lid/cover are to be provided for menstrual hygiene/ diaper disposal requirements and also to protect the environment by safe disposal.
Urinals	If the usage of the toilet is high, urinals with modesty board must be provided in the men’s block of every public toilet to prevent the user from occupying the toilet in addition to saving water.

4. CONSIDERATIONS FOR ACCESSIBILITY

All public toilets should be easily accessible to all including people with disabilities and children as accessibility is key to ensure that the toilet facilities are used by all. The entrance to the toilet should be oriented towards the highly visible area or most publicly used space such as the playground, picnic area, public gathering areas or car park. It should not be located at a far distance to avoid long travel to the toilet and should be easily accessible during urgency for the users. The main entrance shall preferably have no door for increased accessibility and to minimize contamination. Toilet cubicles, urinals and handwashing basins shall be away from the line of sight from the main entrance.

For people with disabilities, the design should follow the “*Guideline for differently abled friendly construction 2017*” as follows:

4.1 Footpath

The footpath should be paved, safe and accessible to all. It should be even, free from obstacles, and not slippery with appropriate drainage. The maximum slope of the footpath shall be 1:20 and its width, 1500mm with clear unobstructed passage of 900mm as illustrated in Figure 2. Guided strips should be laid parallel to the line of movement to identify the routes. To notify the users of direction change, pedestrian crossing and obstruction, tactile tiling of contrast colour should be used. If drains and manhole covers are provided, the footpath should be flushed (at same level) with the manhole/drain cover level. The spacing of grating of the drain should not exceed 20mm.

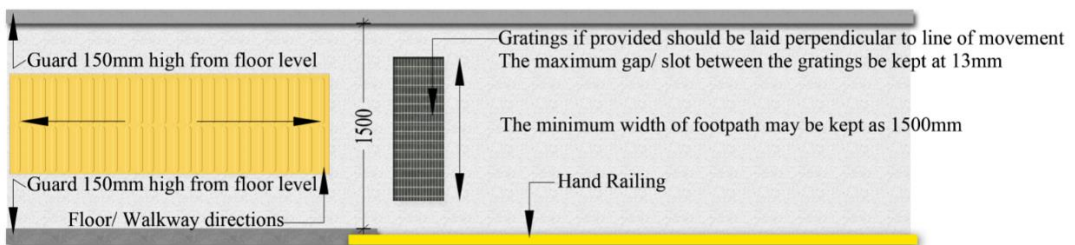


Figure 2: Plan showing grating and minimum width of footpath

If the level difference between the footpath and the surrounding is greater than 13 mm, guards of 150 mm should be provided. Similarly, if the level difference is more than 450mm, handrails of an appropriate height (600-950mm) should be determined/adjusted accordingly as given in Figure 3. The low height handrails are meant for children and elderly persons.



Figure 3: 3D view of the footpath with handrails and guards

4.2. Steps

Stairs are provided on a footpath to accommodate level differences and would also help persons with disability to overcome obstacles in transition of spaces. Figure 4 clearly depicts that the external steps should be placed with 300 mm (minimum) thread and 150 mm (maximum) riser and there should be between 3-10 uniform sized steps along its flight.

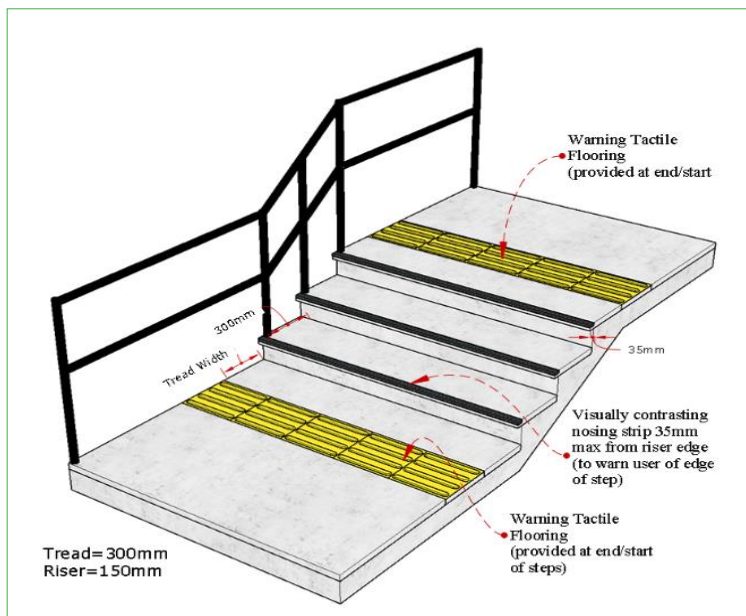


Figure 4: Standard dimension for tread and riser

4.3 Ramp

Ramp is a sloped surface designed to connect two spaces at different heights and is often constructed in addition to stairs/steps to make the spaces accessible as shown in Figure 5. The recommended slope of the ramp is 1:20. However, steeper slopes may be allowed in special cases depending on the length to be covered. Minimum width of the ramp provided should be 1500mm with an unobstructed path of minimum 900mm. After every 14m of horizontal run for a 5% slope, landing of an equal size or greater than the width of the ramp should be provided. For other slopes, refer Table 6. Different types of ramp for accessibility purposes are given in Annexure 1.

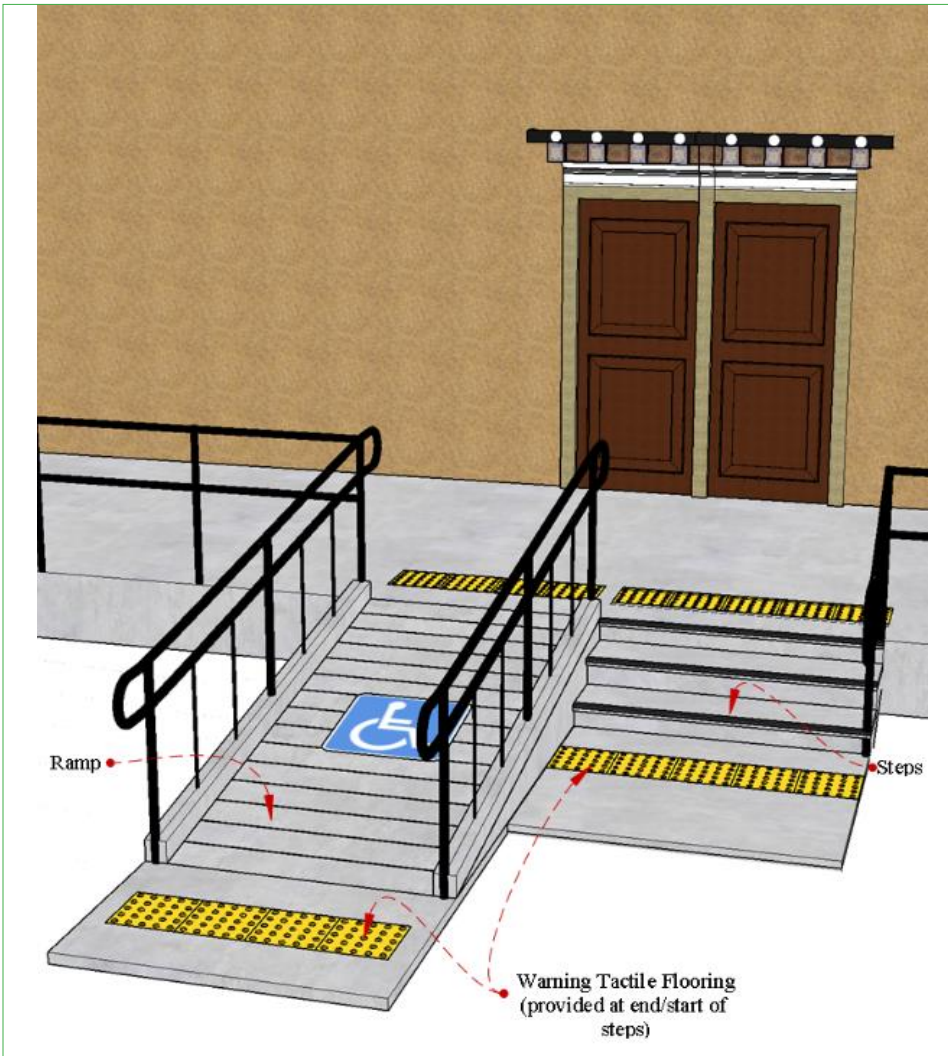


Figure 5: Ramp provided with steps for ensuring accessibility

Table 6: Slope of ramp and running length of the landing

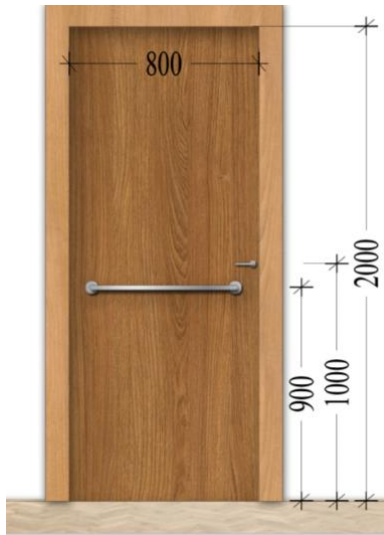
Maximum slope	Maximum running length (m)
1:20 or 5%	-
1:16 or 6 %	8
1:14 or 7 %	5
1:12 or 8 %	2
1:10 or 10 %	1.25
1:08 or 12 %	0.5

4.4 Interior design considerations

At least one toilet that is accessible on a wheelchair for one user in institutional buildings or one toilet for every hundred users should be allocated as depicted in Figure 6.

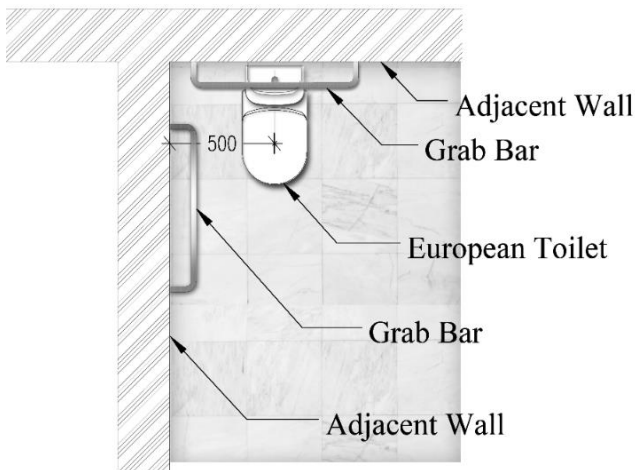


Figure 6: Design of an accessible toilet



In case of accessible toilets, outward swing door should be provided with minimum 800mm clear width as the standard wheelchair width is 660mm (sliding door is preferred) as depicted in Figure 7. The door should have lever action bar and a grab rail at 900mm from the finish floor level.

Figure 7: Accessible door dimension.



The distance between the centerline of the toilet seat and adjacent wall, if provided with a grab bar should be between 450mm-500mm as given in Figure 8. Grab bars should be mounted on the wall behind the water closet, if it is of the tank-less type. If the tank is exposed to the surface, it should be provided on the sidewall closest to the water closet or mounted on the floor at the edge of the seat.

Figure 8: Distance between the grab bar and adjacent walls

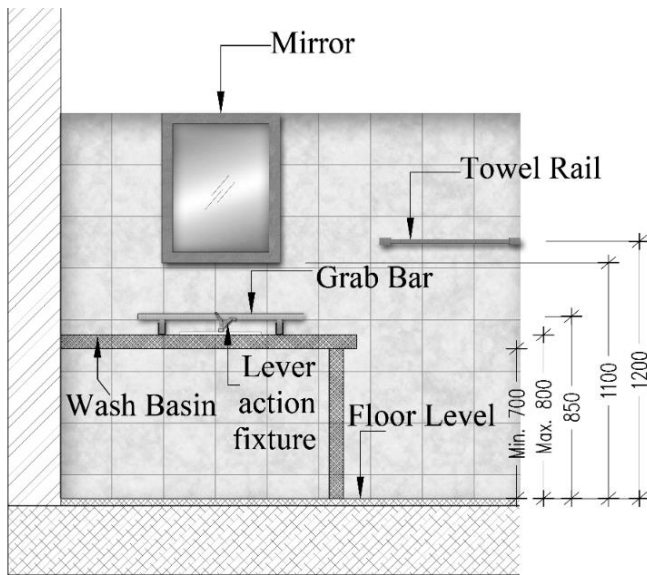


Figure 9: Dimension requirement for mirrors and wash basin.

The washbasin and grab bars should be placed at a height between 800-850mm and 700-850mm respectively from the finished floor level. Mirrors provided should be suitable for use by both standing and seated persons and its bottom edge should be located at a maximum height of 1,100 mm from the finished floor level. Washroom accessories such as paper towel dispensers, soap dispensers, waste bins and others should have all controls, operating or dispensing components mounted no higher than 1,200mm from the floor as depicted in Figure 9.

4.5 Gender and Family-Friendly Toilet

Since the sanitation and hygiene needs of women are significantly different from men, integrating gender dimensions while planning and designing public toilets is critical. For a gender sensitive toilet, along with the size of the toilet facility and its location, safety and privacy aspects are central to the toilet design. Therefore, it is important to use the gender needs checklist given in Annexure 2 during planning and designing of public toilets to address the gender needs. A gender sensitive toilet shall be easily accessible to women with provision for basic facilities like water, electricity, childcare facilities and menstrual hygiene management. Additionally, consider the provision of the gender and family-friendly toilets facilities as given in Table 7.

Table 7: Gender and Family-friendly toilet facilities

Toilet Baby Holder or baby seat should be provided in the cubicle and signage displayed on the cubicle doors.



Baby diaper changing bed should be placed in both male and female toilets for families to utilize it.



Water Closet (WC) for children should be provide in the family friendly toilet.



Urinal for children should be provided in the family friendly toilet.



Sanitary pad vending machine should be provided in the toilet.



Disposal Bin (pads and diapers) should be provided in the toilet.



5. SUSTAINABILITY OF PUBLIC TOILETS

5.1 Water supply

One of the main reasons why open defecation continues in Bhutan despite having public toilets is the lack of running water in these facilities. Thus, it becomes critical to provide water tanks to store water for use in public toilets for its operation, maintenance and sustainability. The water tank is recommended to be placed above the ceiling level to allow gravity feed to ensure sufficient water flow to all the water points. If a gravity feed is not possible, then an alternative water source (rainwater, ground water, stream/rivers water using pump) should be explored for water supply. All water supply fittings and appliances shall be user-friendly and water efficient. The capacity of cistern should not hold more than 5 litres of water, float valve should be of good quality, waste pipes including urinal pipes shall have inbuilt traps and there should be a separate floor trap and grating to prevent sewer smell from entering the dwellings while minimizing blockages. All pipe works should be concealed except for the final connection to the fixtures. All supply lines and fittings for every plumbing fixture should be installed to prevent backflow and leakages. Only Bhutan Standards Bureau approved pipes and fittings should be used.

5.2 Sewage disposal

Waste from public toilets must to be properly managed to maintain sanitary conditions to prevent adverse consequence on the health of the people and the environment, and for its sustained use. Based on the site conditions, an appropriate technology must be selected to manage human waste from the public toilets. In absence of connectivity to sewer lines, other technologies may be used for on-site disposal of human waste such as septic tanks with soak pit and sewage treatment technologies. The handbook “*Septic Tank Manual 2013*”, which emphasizes the construction of septic tanks and its operation and maintenance can be used for on-site treatment of human waste. The minimum tank sizes for the septic tank is given in Table 8. The septic tanks should be accessible to cesspool vacuum tanker as it may need desludging periodically.

Table 8: Minimum size for users with Desludging every 2 years³

No. of user	Length (m)	Width (m)	Height (m)
5	1.5	0.75	1.3
10	2.0	0.90	1.3
15	2.0	0.90	2.0
25	2.6	1.3	1.8
50	4.0	1.4	2.0
75	5.0	1.5	2.0
100	5.7	2.1	1.7

5.3 Operation and Maintenance

All public toilets require capital investment and recurring expenses as it requires regular maintenance. From the sustainability perspective, successful operating public toilets are those that were leased to private entrepreneurs. Besides generating revenue for the government exchequer, the contractor operates the toilets with utmost care and responsibilities to earn their living, which is a win-win situation for both the parties. This model can be replicated in other urban towns. To ensure proper maintenance, the caretakers should be provided with checklists to be followed as stated in Annexure 3 during regular maintenance.

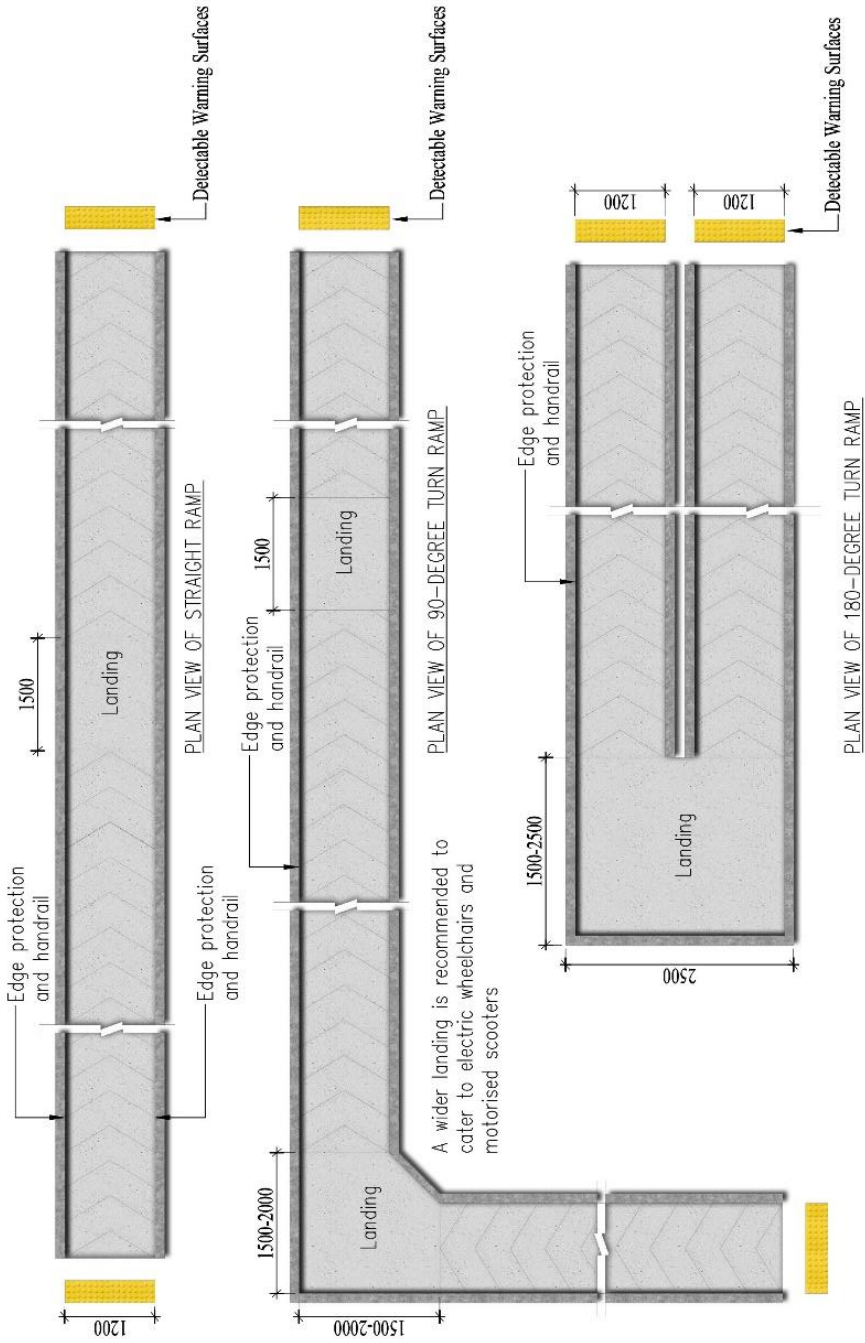
Operators are always mandated to keep the toilets clean and safe. Operators are required to undergo a training on toilet cleanliness and safety.

5.4 User Education

Relevant and targeted public hygiene education messages and mediums must be adopted to increase awareness and practice on safe hygiene behavior. Additionally, public hygiene education messages must be placed in the toilets to persuade users to do their part in keeping the toilets clean. Use of simple and eye-catching visuals and subtle nudging through art is an effective approach to get people’s attention. Display of message should be optimized to maximize the effectiveness of the sanitation and hygiene messages only.

³ Septic Tank Manual, Ministry of Works and Human Settlement

ANNEXURE 1: TYPES OF RAMP



To facilitate easy manoeuvring and resting, a wider landing of 2000mm by 2000mm is recommended for a 90-degree turn ramp. A landing of 2500mm by 2500mm is recommended for a 180-degree turn ramp.

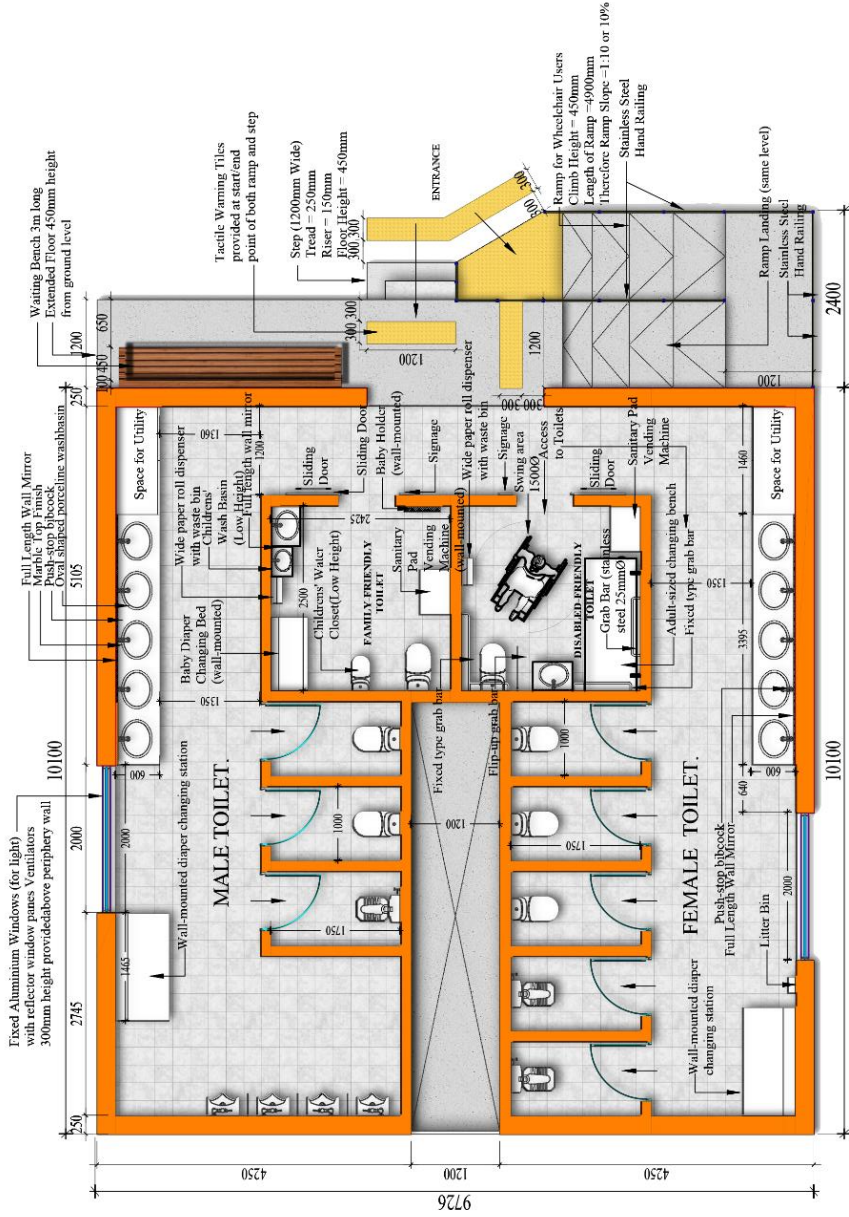
ANNEXURE 2: GENDER NEEDS CHECKLIST FOR PUBLIC TOILETS²

Parameters/ check points		Gender needs Checklist				
		Access to toilet	Privacy & dignity	Safety	Menstrual Hygiene	Maintenance of toilets
Location	Safe and highly visible place.	×		×		
	Within visible walking distance.	×		×		
External design	Entrance-good condition, highly visible.	×		×		
	Separate entrance for men and women.		×	×		
	Waiting area for women to stay in queue.	×	×	×		
Internal design	Working door locks, latches, hooks, door in good condition.		×			
	Sanitary pad dispenser and disposal bins, diaper changing station, child protection seat.		×		×	
	Toilet windows, ventilators and roofs not to compromise on women's safety.		×			
Supporting services	24-hours/day supply of electricity.			×		
	Enough water for usage and cleaning.				×	×
Management	Operational 24 hours.		×	×	×	
	User charges displaced at the entrance all the time.					
	Women caretakers.		×	×	×	×
	Women involved in decision making.					×
	Establish standards related to maintenance and monitoring.				×	×
	Contact numbers for complaints and helpline.			×		×

ANNEXURE 3: OPERATION AND MAINTENANCE CHECKLIST.

Sl. No	Description	Remarks
1	Are the fixtures such as toilets, sinks etc. free of fecal smears, stains and soap scum?	Yes/No
2.	Is there continuous running water?	Yes/No
3.	Is the wash basins, taps, and toilet pots of good quality?	Yes/No
4.	Are the wastes disposed off daily?	Yes/No
5.	Are the soaps, toilet paper, sanitary pads bin provided daily?	Yes/No
6.	Are the toilet bowls, urinals and adjoining areas cleaned with disinfectant daily?	Yes/No
7.	Are the toilet floors kept dry regularly?	Yes/No

ANNEXURE 4: UNIVERSAL PUBLIC TOILET PLAN WITHOUT SHOWER.

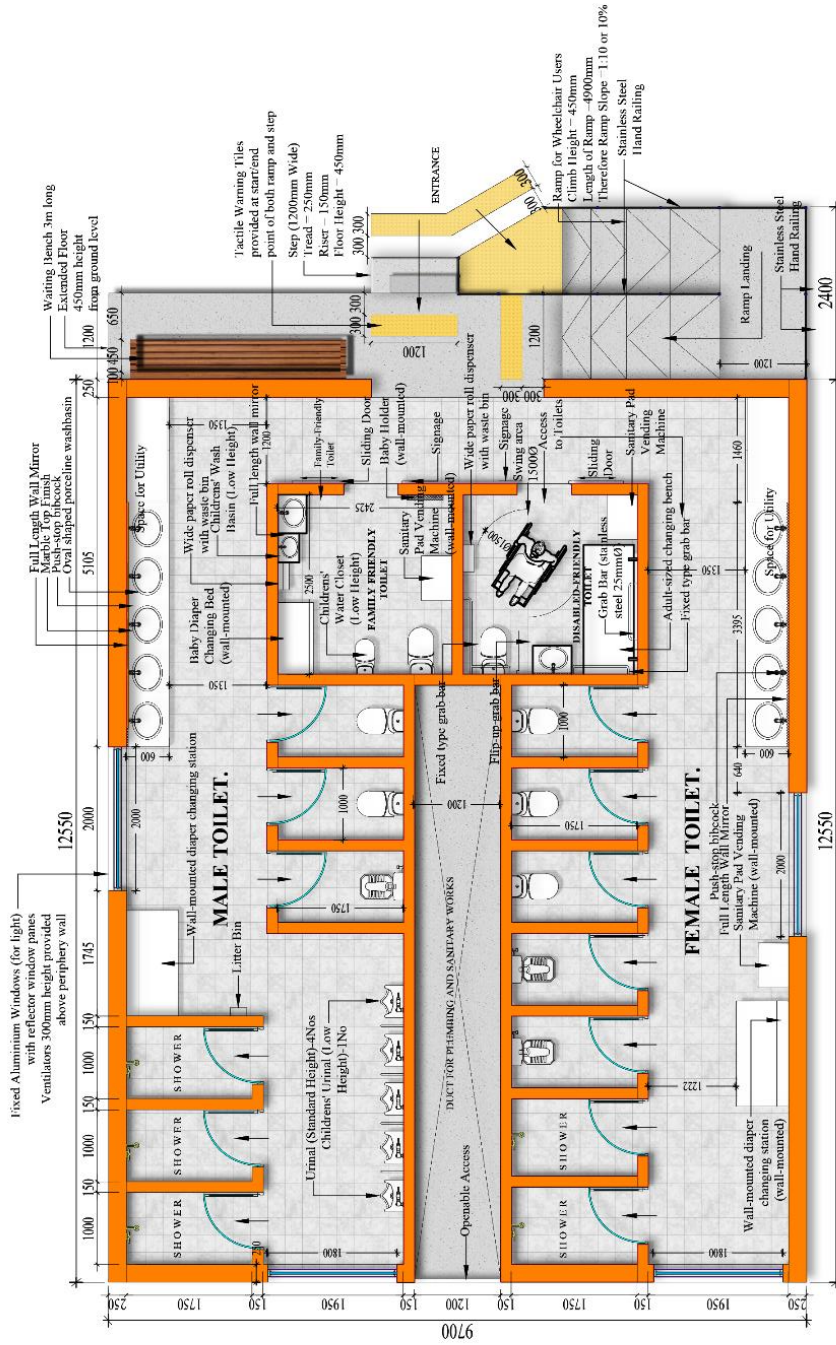


NOTE:

1. Ventilators shall be provided immediate below the roof band for entire perimeter of periphery walls of height 300mm
2. A gap of 100mm may be provided on the walls from the floor for all partition walls of toilet and shower rooms
3. Height of partition walls are 2500mm from floor level and there is no provision of ceiling
4. The floor to roof truss height may vary from 3.0-3.30m
5. Space for Utility caters to wash area for cleaning/ mopping of floors
(Overhead locker may be provided to store cleaning stuffs viz. phenol, soap, toilet papers, brush, diapers, sanitary pad etc.)

UNIVERSAL FLOOR PLAN OF INCLUSIVE PUBLIC TOILET WITHOUT SHOWER FACILITIES FOR SUB-TROPICAL ZONES

ANNEXURE 5: UNIVERSAL PUBLIC TOILET PLAN WITH SHOWER



UNIVERSAL FLOOR PLAN OF INCLUSIVE PUBLIC TOILET WITH SHOWER FACILITIES FOR TEMPERATE ZONES

- NOTE:
- Ventilators shall be provided immediate below the roof band for entire perimeter of periphery walls of height 300mm
 - A gap of 100mm may be provided on the walls from the floor for all partition walls of toilet and shower rooms
 - Height of partition walls are 2500mm from floor level and there is no provision of ceiling
 - The floor to roof muss height may vary from 3.0-3.30m
 - Space for Utility caters to wash area for cleaning/ mopping of floors (Overhead locker may be provided to store cleaning stuffs viz. phenol, soap, toilet papers, brush, diapers, sanitary pad etc.)

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