20. UNIVERSALLY ACCESSIBLE/INCLUSIVE LAVATORIES AND BATHROOMS.

Universally accessible lavatories and bathrooms are those normally intended for use by persons with moderate to severe functional physical limitations, usually requiring the use of mobility aids such as wheelchairs. Provision should be made for at least one universally accessible toilet, and one additional accessible unit for every universally accessible bedroom. The preferred facility is ‘unisex’ incorporating a W.C. compartment serving both sexes and allowing, for example, a husband to help a disabled wife or vice versa. The minimum allowable dimensions for a W.C. compartment are 1800 x 1700mm; though ideally this would be greater (see figure 20.1. – 20.3.)

Bathroom and W.C. unit rooms should have floor surfaces that are fixed, slip-resistant and matt. The use of wood, tiles or close pile carpet no longer than 13mm is recommended in order to ensure that the wheelchair user does not slip and injure him/herself on a wet and slippery floor.

The clear opening width of doors into and out of such facilities should be at least 760mm, and ideally 900mm in the 90-degree open position. Ideally doors should open out of bathrooms, and there should be an internal space measuring at least 900 x
1200mm and ideally 1100 x 1500mm to allow for door closure without any obstacle for wheelchair users. The type of door to be used should be operable from the outside, so as to allow access in the case of an emergency. See figures 20.5 – 20.8.

Please note: taps and water-mixing controls intended for universally accessible units should be of a lever-type, with a lever at least 150mm long. All hot water taps should be located on the left-hand side. It is recommended that universally accessible facilities be fitted with a warm air drier.

All grab rails should be constructed of a stainless steel tube with an outside diameter of 32mm, and to be installed only in the positions indicated. Figures 20.9 to 20.12 provide measurements for the various grab rail types.

Figure 20.1: Typical W.C. compartment Layout – Floor mounted pan and cistern.
Figure 20.2.: Typical W.C. compartment layout: Wall hung pan and flushmaster.
Figure 20.3: Typical W.C. compartment layout: Wall hung pan and Geberit cistern.
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Figure 20.4.a-b.: Variations to W.C. Entrances when approached through a lobby.

Figure 20.5.: Hinged door type: hinged door specifics.

Figure 20.6.: Hinged door type: Hinged door pull handle.
Figure 20.7.: Sliding door type: Sliding door specifics
Figure 20.8.: Sliding door type: Sliding door pull handle.

Figure 20.9.: Detail of standard grab bar: flush – valve back rail.
Figure 20.10.: Details of standard grab rails: cistern back rail.

Figure 20.11.: Details of standard grab bars: Dog-leg rail – Side and Front Elevations.
Wash-hand basin

All wash-hand basins contemplated in universally accessible washrooms and bathrooms must comply with the following:

1. The washbasin shall ideally be of a desk-type. If not made of porcelain, insulation will be required to avoid the risk of burns to the thighs.

2. A washbasin should be set adjacent to the W.C. and should sit 800mm A.F.F.L. with 720mm clear space underneath the basin. This is to allow wheelchair users to comfortably manoeuvre under the basin to make proper use of it.

3. It is preferable that lever mixers be specified instead of any other facet type. It is easier for a disabled person to use the taps if they are lever action rather than knobs, which have to be gripped and turned.

4. Basin mirrors should be located with their bottom section at 75mm above the level of the basin, and should extend no higher than 1500mm above the level of the basin. This is to ensure that the wheelchair user is able to see his/her reflection at the basin while seated in the wheelchair.

5. Towel rails should be set at 900 to 1000mm A.F.F.L. and must be positioned so that wheelchair users may comfortably reach the towel rail whilst making use of the wash-hand basin.

Shower

A roll-in shower is preferred over a bath in universally accessible bathrooms and washrooms. The following guidelines should be followed (see figures 20.12 to 20.14):

1. Provision should be made for a 400 x 400mm fold-down shower seat set at a height between 450 and 500mm A.F.F.L. (optimally 480mm A.F.F.L.). The centreline of the shower-seat must be set at 480mm from the wall opposite the transfer space. Ideally the shower seat shall be 500 x 500mm in dimension and be fitted with removable/adjustable arms.

2. Vertical and cranked grab bars should be installed on either side of the shower seat, as shown in the figures below. The vertical grab bar should be 600mm long, and the cranked grab bar should be set at 800mm at its lowest end.

3. Lever action shower mixer and hand shower on an adjustable rail must be specified. The wheelchair user must be able to transfer him/herself from the
wheelchair to the shower seat with ease and it must therefore be at the appropriate height and must not obstruct the ability of the wheelchair to manoeuvre into the shower.

W.C. Pan
The following guidelines should be followed when designing and specifying W.C.’s for universally accessible lavatories and bathrooms:

1. Provision should be made for a 800mm-transfer space on one side of the pan. A wheelchair user would need to be able to manoeuvre the wheelchair beside the W.C. Pan in order to transfer from the wheelchair to the W.C. and back again without any obstacles.

2. The front edge of the pan of the W.C. should project at least 750mm from the rear wall. This will allow for enough space for a wheelchair user to gain access to the W.C. pan.

3. The centreline of the toilet must be no more than 480mm from the wall opposite the transfer space. This is to ensure adequate transfer space from the wheelchair onto the W.C. and back again.

4. The W.C. seat height must be set between 450 and 500mm A.F.F.L. and optimally at 480mm A.F.F.L. A seat raiser may be used, but is not ideal. The seat height is to enable the physically disabled person to comfortably transfer onto the W.C. seat and off again. The ill and the elderly may also be too weak to transfer to a seat, which it too low or too high.

5. An extended flush handle must be specified, and such a handle must be located on the side of the transfer space of the cistern. This item enables the wheelchair user to comfortably reach the flush handle and use it effectively from the position of the wheelchair or the W.C. seat where it may be difficult to reach the conventional type of flush handle. Such a handle should be located between 450 and 500mm A.F.F.L. (optimally at 480mm A.F.F.L.).

6. A cranked grab bar must be installed at 800mm A.F.F.L. This must be measured to the centreline of the horizontal portion to enable the physically disabled person to use the bar to lift him/herself off the W.C. seat and onto the wheelchair and vice versa.
7. The toilet paper holder should be within 1000mm of the seat; this will ensure that a physically disabled person may comfortably reach it. See the figures below for the ideal distance in this regard.

8. A horizontal grab bar should be installed 800mm A.F.F.L. This must be measured to the centreline of the horizontal portion to enable the physically disabled person to lift and support his/her weight to transfer.

Bath

Where provided, the following guidelines must be followed (see figures 20.15 – 20.17):

1. Ideally 1000mm should be provided for access space on one side of the bath; at worst this should be 800mm. The provision of this space is essential in order to ensure that a wheelchair user may transfer comfortably from the wheelchair to the bath without any obstacles at the side of the bath.

2. The height of the bath rim should be between 450 and 500 A.F.F.L. and ideally 480mm A.F.F.L. This would enable the wheelchair user to transfer across from the wheelchair to the bath at the same height and back again – varying heights can make it impossible for the disabled person to transfer into and out of the bath.

3. Provision should be made for a removable 300mm deep seat at the end of the bath; such a seat should be of dimensions 400x400mm. The provision of such a seat would enable a wheelchair user to have support of a suitable width to take a seated position at the height of the edge of the bath when transferring from the wheelchair into the bath – before getting into the bath. As well as allowing a wheelchair user to move into and out of the bath, a bath seat also provides for people with the physical inability to transfer into and out of the bath. Elderly people who are ill or too weak would also require this, as they do not have the strength to get in and out of a bath.

4. The bath facet should be of a lever action type with attached hand shower. The physically disabled person will find it easier to use a hand shower with a lever action mixer rather than having to grasp and turn the different hot and cold knobs, which can often result in getting severe burns from hot water, which cannot be controlled properly.

5. A 'T'-shaped grab bar must be installed opposite the transfer space. The horizontal section of the grab bar must be between 100 and 200mm above
the bath rim so that the disabled person may lift himself from the bath onto the transfer space and across to the wheelchair.

Figure 20.12.: Typical W.C. and shower layout – Floor mounted pan and cistern.
Figure 20.13.: Typical W.C. and shower layout – Wall hung pan and flushmaster.
Figure 20.14.: Typical W.C. compartment and shower layout – Wall hung pan and Geberit cistern.
Figure 20.15.: Typical W.C., Shower and bath layout – Floor mounted pan and cistern.
Figure 20.16.: Typical W.C., shower and bath layout – Wall hung pan and flushmaster.
Figure 20.17.: Typical W.C., shower and bath layout – Wall hung pan and Geberit cistern.