Fair Housing Act Design Manual

A Manual to Assist Designers and Builders in Meeting the Accessibility Requirements of the Fair Housing Act

U. S. Department
of Housing and Urban Development
Office of Fair Housing and Equal Opportunity
Office of Housing

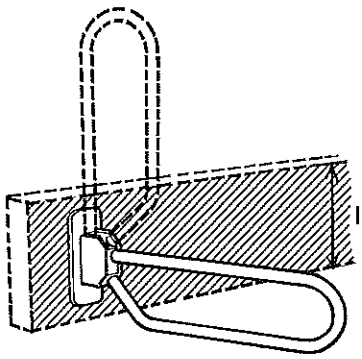
Folding and Floor-Mounted Grab Bars at Toilets

The Guidelines permit the installation of folding wall-mounted, floor-mounted or wall and floor-mounted grab bars where it is not possible to install "appropriate" wall-mounted ANSI, or similar, complying grab bars. This is particularly relevant when there is no wall or a very short wall adjacent to the toilet.

A wide variety of alternative folding grab bars are available. One of the most versatile is the bar that may be pulled down for support and folded out of the way when not needed. Although not quite as stable as the bar that is securely mounted to a wall at both ends, it provides reasonable support for some people.

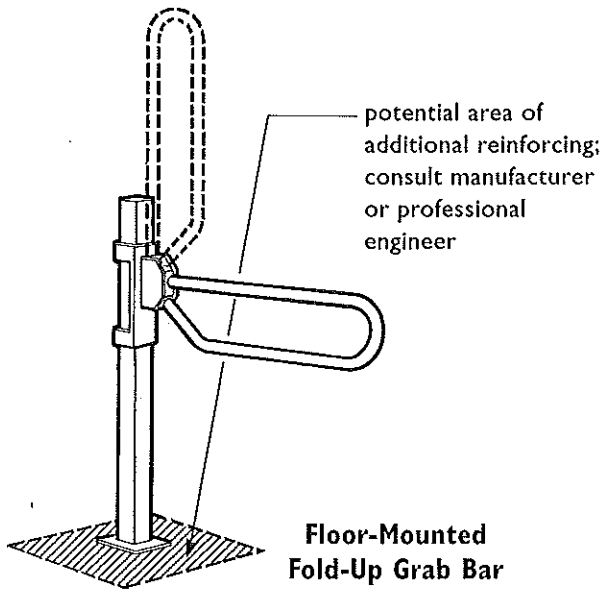
Reinforcing for such folding grab bars must be substantial because of their cantilevered design. See the top illustration in the right column. For a grab bar to be floor-mounted or be hinged and mounted on the wall behind the toilet, larger areas of reinforcing in walls will be necessary and care must be taken to provide for the types of bars that will not encroach upon the necessary clear floor space at fixtures.

It is recommended that reinforcing for all types of folding grab bars be done strictly as recommended by manufacturers. Information about the exact size and location of reinforcement, and the type and size of bars the reinforcement is engineered to accommodate, should be included in the residents' information suggested on page 6.3. See Product Resource List in Appendix A for sources of fold-up grab bars.



Wall-Mounted Fold-Up Grab Bar

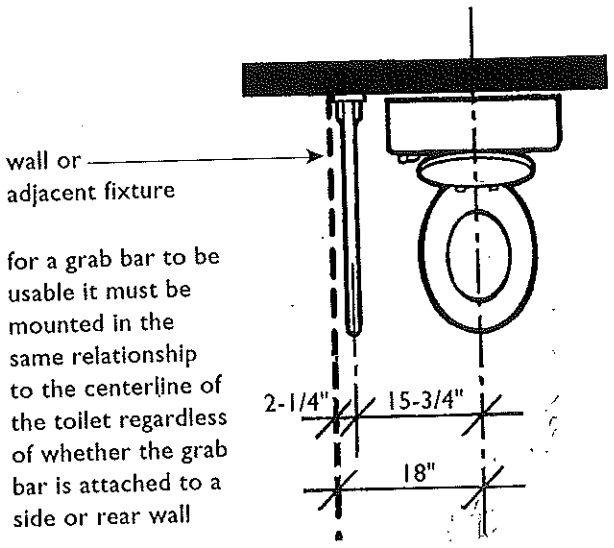
Floor-mounted fold-up grab bars, because of the stresses exerted upon them, will require an extremely secure floor connection. In frame construction, if access to the underside of the floor is available (i.e., from a crawl space or basement), necessary blocking or other reinforcing might be installed at the time the bar is installed. On concrete floor systems additional reinforcing may or may not be necessary. In either case the advice of the manufacturer and/or a professional structural engineer should be followed.



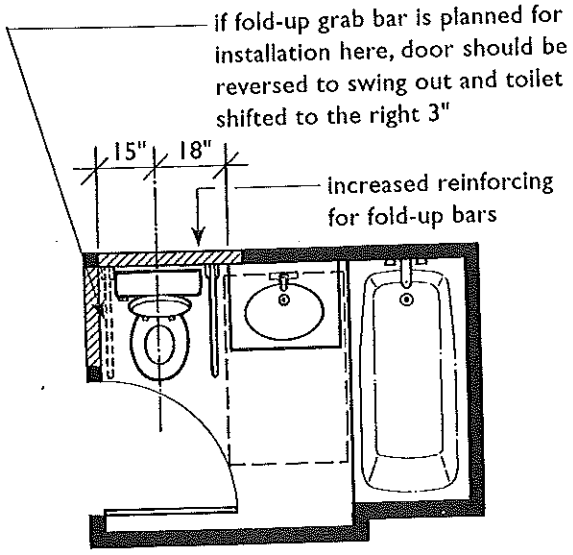
Floor-Mounted Fold-Up Grab Bar

When a toilet is positioned in the room away from a side wall, grab bars must be mounted on the wall behind the toilet or be floor mounted. Reinforcing must be long and wide enough so a folding bar can be installed and, when lowered into position for use, its centerline is 15-3/4 inches from the centerline of the toilet. This dimension is consistent with the requirement that 18 inches be provided from the centerline of the toilet to the wall when that wall is to be equipped with a grab bar.

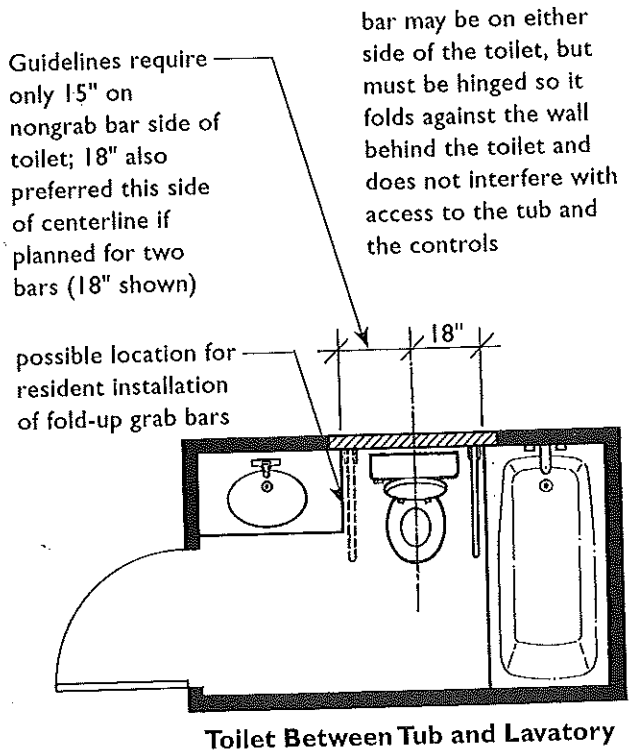
Advance planning will be necessary to determine on which side of the toilet a folding grab bar will be placed so the necessary 18 inches of space and additional reinforcing can be shifted to the grab bar side of the toilet. Although not required, it is recommended that the toilet be centered in a 36-inch space rather than the 33-inch space specified for usable bathrooms in the Guidelines. Adequate reinforcing could then run the full length behind the toilet to allow fold-up bars to be installed on either side, depending upon the needs and desires of the resident.



Grab Bar Placement



Toilet Between Lavatory and Short Wall



Toilet Between Tub and Lavatory

Possible Locations for Fold-Up Grab Bars

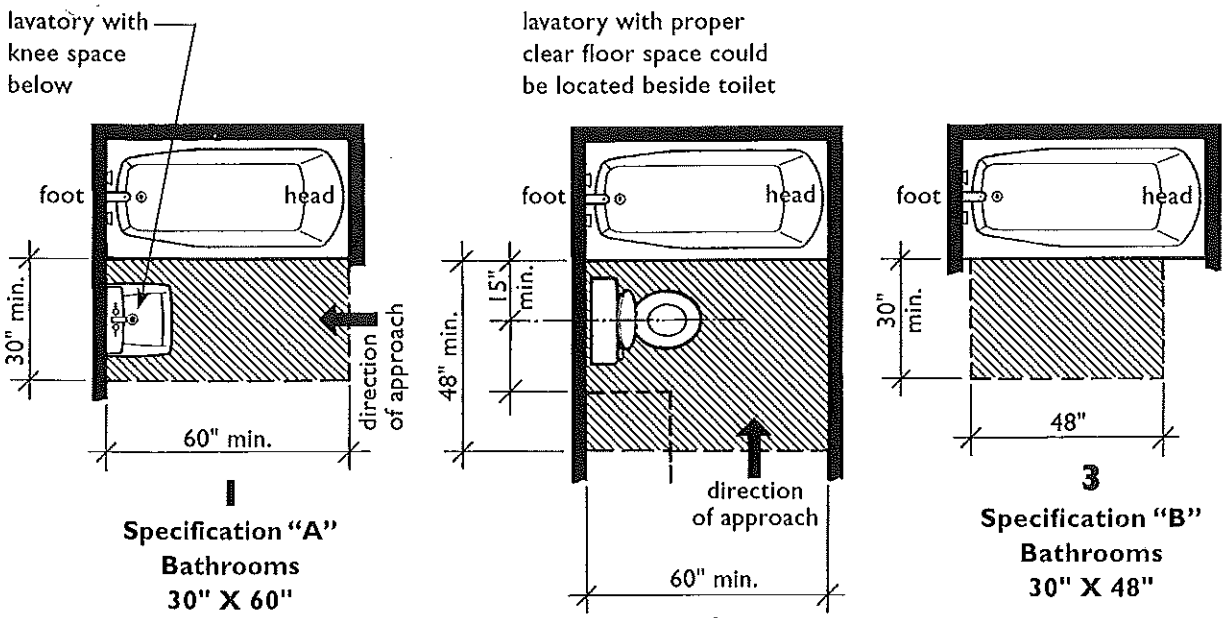
Clear Floor Space at Bathtubs/Showers

The following discussion of bathtubs focuses on bathing fixtures that are a combination of bathtub and shower. It does not cover showers that are separate bathing fixtures; these will be addressed starting on page 7.56.

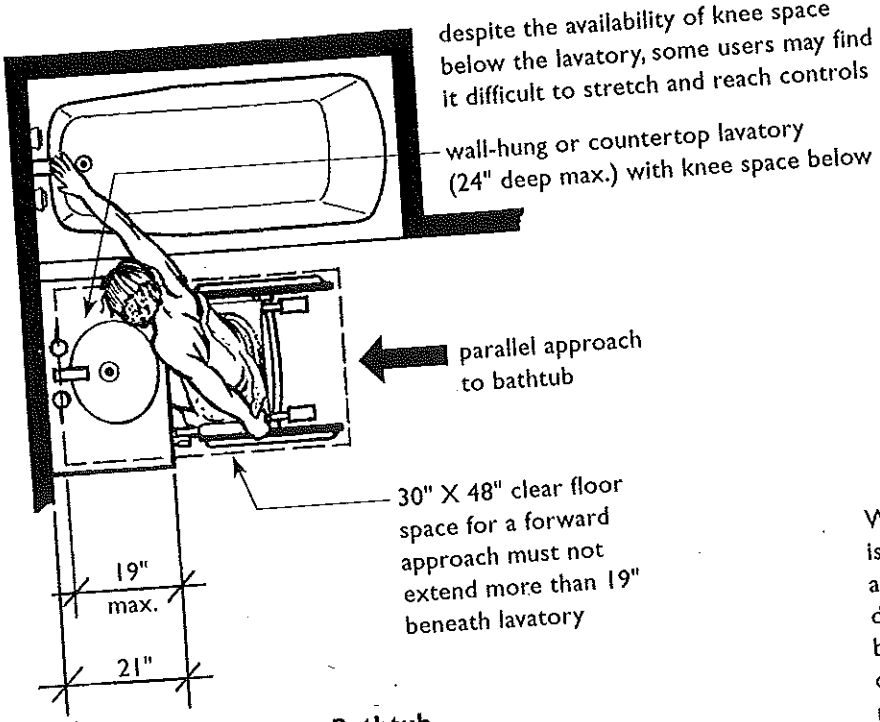
The Guidelines require that one of three different clear floor spaces be provided at bathtubs so people who use wheelchairs or scooters can get close enough to execute transfers into and out of bathtubs. The diagrams below, taken from the Guidelines, show the clear floor space requirements for bathtubs; numbers one and two apply to Specification A bathrooms and number three to Specification B bathrooms.

In all three clear floor spaces, the shaded areas must remain clear, except that in clear floor space diagram number 2, a lavatory that meets all applicable clear floor space requirements for lavatories may be located next to the toilet. In Specification A bathrooms, either a lavatory or a toilet may encroach upon the clear floor space next to the bathtub.

In clear floor space diagram number one, the arrow indicating direction of approach is relevant only if the lavatory is wall-hung and has knee space below. The user pulls forward into the knee space to transfer and/or operate controls, see illustration on the top of the next page.



Clear Floor Space at Bathtubs/Showers
Shaded Areas Must Remain Unobstructed
(Taken from Guideline Figures 7(b) and 8)

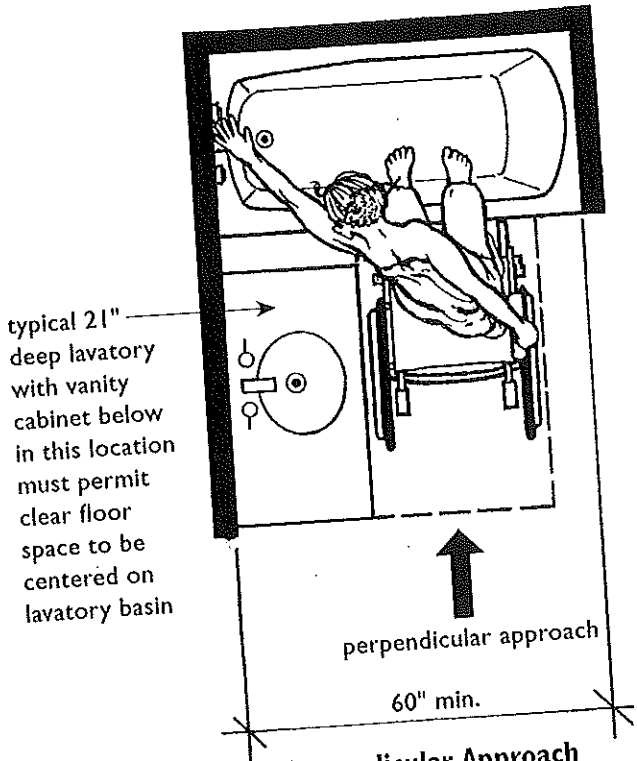


Parallel Approach to Bathtub at Lavatory with Knee Space Permitted in Specification A Bathrooms

When a lavatory with vanity cabinet is adjacent to tub, a person using in a wheelchair must make a perpendicular approach to the tub rim to be sufficiently close to operate the controls. The user will have to remove footrests, place feet in tub, and execute a stretch which may be difficult for some people.

If a countertop lavatory with a vanity cabinet is located adjacent to the bathtub, a person using a wheelchair must be able to execute a close parallel approach centered on the basin. If the lavatory does not afford a full parallel approach to the basin, knee space and clear floor space for a forward approach are required, and any cabinets would have to be removable.

When the lavatory with vanity is adjacent to a bathtub, reach to the controls is possible only from a perpendicular approach which may be difficult for some wheelchair users. To improve access to controls, a resident who uses a wheelchair could have a new vanity with knee space installed or have controls repositioned closer to the tub rim.



Perpendicular Approach to Bathtub at Vanity Cabinet Permitted in Specification A Bathrooms Only

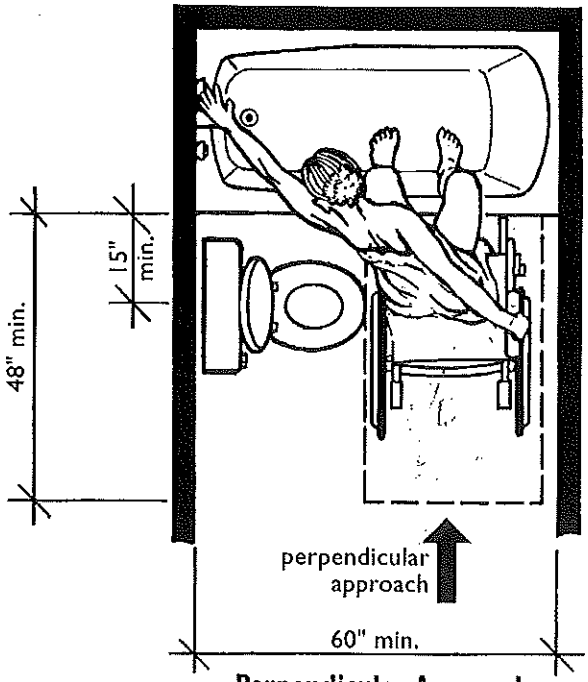
In **Specification A bathrooms**, the Guidelines also allow a toilet to occupy the space next to the bathtub. The approach by a person using a wheelchair is perpendicular to the bathtub. This arrangement of fixtures also makes it difficult to reach the controls, but reach can be improved if users can remove their footrests and position their feet in the tub to get closer to the tub rim.

A second option for some users is to transfer onto the toilet to reach the controls. The user then must transfer back into his or her wheelchair and maneuver to get sufficiently close to the bathtub rim to make a transfer down into the bathtub. Other users may add a bathtub seat that allows them to remain at the height of the tub rim while bathing. Transfers back into a wheelchair may be easier from a tub seat rather than from the floor of the bathtub, but this option does not allow the user to be immersed in water for a soaking bath.

In **Specification B bathrooms**, a 30-inch x 48-inch clear floor space is required adjacent to the bathtub to provide greater access for transferring into and out of the bathtub. The controls must be on the wall at the foot of the bathtub, as shown in the Guidelines' Requirement 7, Figure 8. The edge of the clear floor space should be flush with the control wall surface.

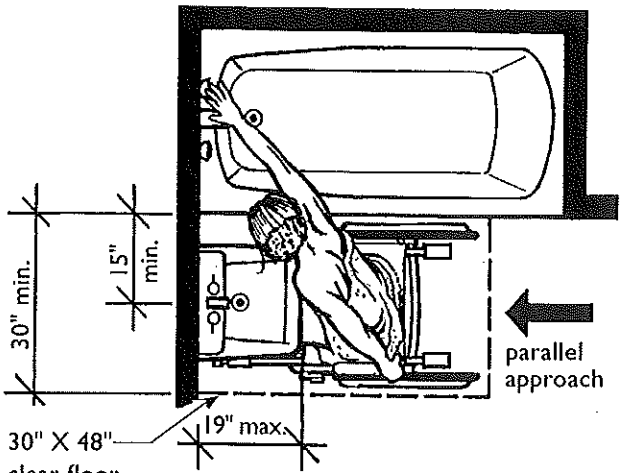
Neither a vanity cabinet nor a toilet may encroach on this clear floor space. However, a wall-hung lavatory with a depth of 17 to 19 inches and with knee space below is the only fixture that may overlap the clear floor space at bathtubs in Specification B bathrooms. A lavatory that is deeper than 19 inches only may be installed if it is recessed into the wall to allow the edge of the 30-inch x 48-inch clear floor space to begin flush with the control wall surface at the foot of the bathtub.

Toilets typically protrude into the room farther than vanity cabinets, making it necessary for a person using a wheelchair to perform, what may be for some people, a difficult stretch to operate tub controls.



Perpendicular Approach to Bathtub at Toilet
Permitted in Specification A Bathrooms Only

The only permissible overlapping element is a 17" to 19" wall-hung lavatory with knee space below.



Parallel Approach at Bathtub with Small Wall-Hung Lavatory
Applies to Specification B Bathrooms Only