



(888) 341-7781 (V/TTY) - Technical Guidance  
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

*Participant Workbook*



# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Introduction

Fair Housing Accessibility FIRST program is an initiative designed to promote compliance with the Fair Housing Act design and construction requirements. The program offers comprehensive and detailed instruction programs, useful on-line web resources, and a toll-free information line for technical guidance and support. This training is part of that program.

## Purpose

The purpose of the Fair Housing Accessibility FIRST program is to offer training and technical guidance on accessibility requirements of the Fair Housing Act and to increase the supply of accessible multifamily housing units nationwide. The program provides training and guidance to architects, builders, code officials, and others in the housing industry with the accessibility requirements for designing and constructing dwelling units covered by the Fair Housing Act and other accessibility safe harbors.

## Technical Guidance

The Fair Housing Accessibility FIRST program provides a Design and Construction Resource Center, also known as the DCRC, which is staffed Monday through Friday from 8 AM to 5:30 PM eastern. You can reach the DCRC:

- Toll-free at 888-341-7781
- By emailing [fairhousingfirst@hud.gov](mailto:fairhousingfirst@hud.gov)
- Receive updates by following the DCRC on Twitter at @FHAccessibility and on Facebook at @FHAccessibility
- Subscribe via the website for updates from the Fair Housing Accessibility FIRST program

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Additional Training Events

You can register for events on the website by going to:

[https://www.hud.gov/program\\_offices/fair\\_housing\\_equal\\_opp/accessibility\\_first\\_training\\_calendar](https://www.hud.gov/program_offices/fair_housing_equal_opp/accessibility_first_training_calendar)

Please note that both a morning and an afternoon session are offered to accommodate scheduling. Trainings will be posted as they become available.

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Learning Objectives

This training will help you understand the specific requirements and technical guidance of FHA Requirement 6.

During this session we will cover the following objectives:

- Topic 1 – FHA Overview and Requirement 6
- Topic 2 – Requirement 6 Reinforced Walls for Grab Bars
- Topic 3 – Reinforcing for Grab Bars at Toilets
- Topic 4 – Reinforcing for Grab Bars at Conventional Bathtubs
- Topic 5 – Reinforcing for Grab Bars at Non-Conventional Bathtubs
- Topic 6 – Reinforcing for Grab Bars and Seats in Showers
- Topic 7 – Recommended Reinforcing Methods

*This training relies on the provisions of the Fair Housing Act and its regulations, the Accessibility Guidelines and the Supplemental Questions and Answers, ANSI A117.1 (1986), and the Fair Housing Act Design Manual for the guidance that it provides about compliance.*

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Topic 1: FHA Overview

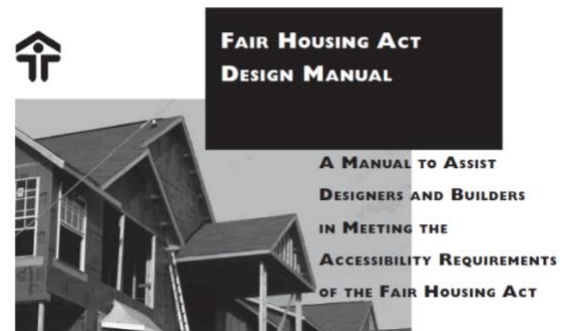
Over 50 years ago, Congress enacted the landmark Fair Housing Act of 1968, which outlawed for the first time private as well as public discrimination in housing. The Fair Housing Act protects people from discrimination when they are renting or buying a home, getting a mortgage, seeking housing assistance, or engaging in other housing-related activities.

### The Broad Objective of the FHA

The broad objective of the Fair Housing Act is to prohibit discrimination in housing because of a person's race, color, national origin, religion, sex, familial status, or disability. To ensure that persons with disabilities will have full use and enjoyment of their dwellings, the Fair Housing Act also includes two important provisions: one, a provision making it unlawful to refuse to make reasonable accommodations in rules, policies, practices, and services when necessary to allow the resident with a disability equal opportunity to use the property and its amenities; and two, a provision making it unlawful to refuse to permit residents with disabilities to make reasonable modifications to either their dwelling unit or to the public and common use areas, at the residents' cost.

### FHA Design Manual

The Fair Housing Act establishes design and construction requirements that protect people with disabilities from discrimination. The law provides that a failure to design and construct certain multifamily dwellings to include certain features of accessible design will be regarded as unlawful discrimination. In fact, the Fair Housing Act Design Manual was published by the U.S. Department of Housing and Urban Development, HUD, the Office of Fair Housing and Equal Opportunity, and the Office of Housing to provide guidance with ways to design and construct housing that complies with the Fair Housing Act.



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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Seven Requirements

The Fair Housing Act's design and construction requirements are broken down into seven basic categories:

1. Accessible building entrance on an accessible route
2. Accessible and usable public and common use areas
3. Usable doors
4. Accessible routes into and through covered unit
5. Light switches, electrical outlets, thermostats, and other environmental controls in accessible locations
6. Reinforced walls in bathrooms for later installation of grab bars
7. Usable kitchens and bathrooms.

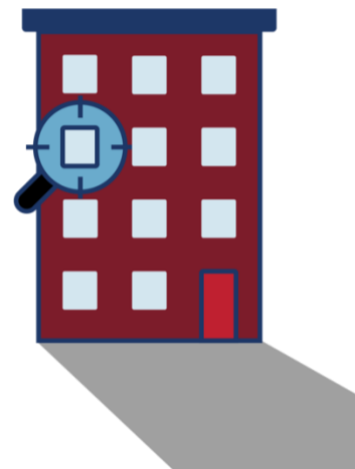
- 1 Accessible building entrance on an accessible route
- 2 Accessible and usable public and common use areas
- 3 Usable doors
- 4 Accessible routes into and through covered unit
- 5 Light switches, electrical outlets, thermostats, and other environmental controls in accessible locations
- 6 Reinforced walls in bathrooms for later installation of grab bars
- 7 Usable kitchens and bathrooms

## Covered Dwelling Definition

The requirements apply to "covered multifamily dwellings" designed and constructed "for first occupancy" after March 13, 1991.

Covered multifamily dwellings are:

- All dwelling units in buildings containing four or more dwelling units if the buildings have one or more elevators AND
- All ground floor units in other buildings containing four or more units, without an elevator.



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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

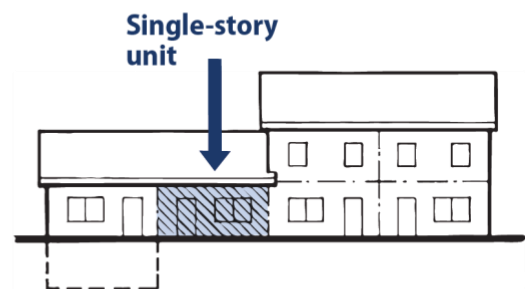
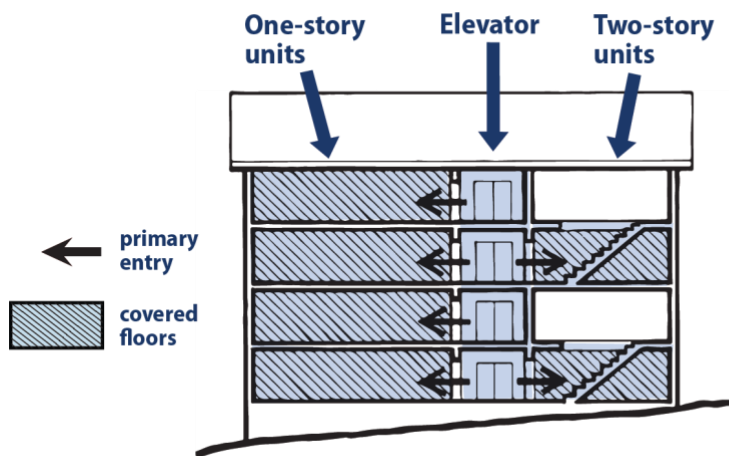
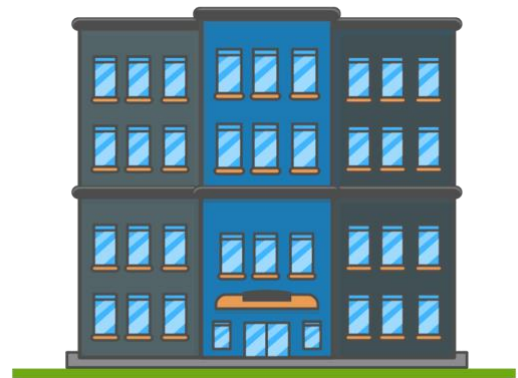
This includes housing that is for rent or sale and applies whether the housing is privately or publicly funded.

Condominiums and apartment buildings are covered by the design and construction requirements. So are time-shares, dormitories, transitional housing, homeless shelters that are used as a residence, student housing, assisted living housing, and others.

## Covered Dwelling Definition - Multistory Units

*In multistory units, the story that is served by the elevator must:*

1. Be the primary entry to the unit,
2. Comply with Requirements 3 through 7 of the Guidelines for all rooms located on the entry floor level, and
3. Contain a usable bathroom or powder room, if provided.



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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Requirement 6 - Bathroom and Powder Room – Definitions

To being an understanding of where grab bar reinforcing needs to be installed, we need to look at the definition of locations within the dwelling unit.

**Bathroom.** A bathroom includes a water closet (toilet), a lavatory (sink), and a bathtub or shower. It does not include single fixture facilities or those with only a water closet and lavatory.

It does include a compartmented bathroom in which the fixtures are distributed among interconnected rooms. A compartmented bathroom is considered a single unit and is subject to the Act's requirements for bathrooms.

**Powder Room.** A powder room is a room with only a water closet (toilet) and a lavatory (sink).



## Requirement 6 - Bathroom and Powder Room – Reinforcing

6

Reinforced walls in bathrooms for later installation of grab bars



Requirement 6 specifies that reinforcing be installed in bathroom walls to allow for future installation of grab bars around toilets, bathtubs, and shower stalls. In some situations, reinforcing for shower seats is also required.

However, the only grab bars that must be installed at the time of construction are in public and common use toilet/powder rooms and bathing facilities.

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

The Guidelines illustrate the minimum areas to be reinforced at toilets, tubs, and showers. Although these minimum areas for reinforcement specified in the Guidelines meet compliance, many standard grab bar lengths may not be able to be safely anchored within these limited reinforced areas.

## Bathroom and Powder Room on Entry Level

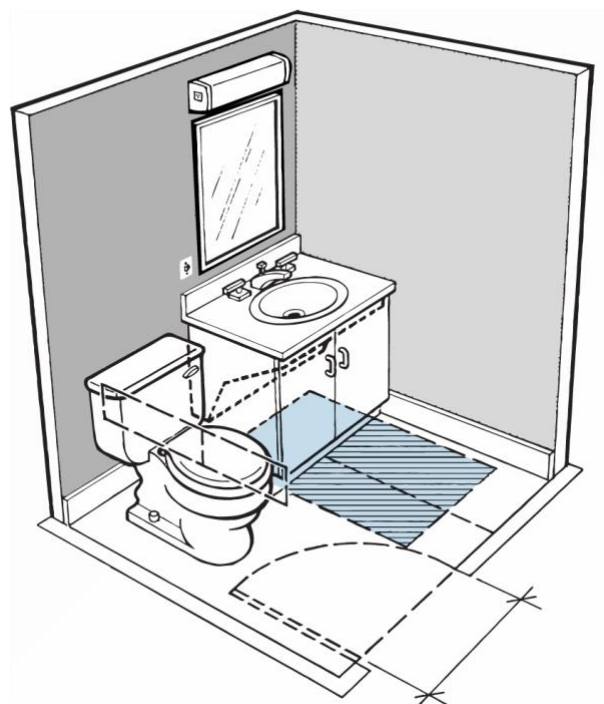
If there is both a bathroom and a powder room on the entry level of a covered multistory unit, then the bathroom must meet Requirements 3 through 7 of the Guidelines and the powder room needs to meet only Requirements 3, 4, and 5 of the Guidelines. In such an instance, the bathroom would be required to have reinforced walls for installing grab bars, but the powder room would not require reinforced walls for the installation of grab bars.

## Powder Room Only

In cases where only a powder room is provided on the entry level, it is treated as a bathroom and must have reinforcing around the toilet for future installation of grab bars.

## Fair Housing Act Guidelines

The Guidelines for Requirement 6 present design standards for installation of reinforcement in bathroom walls to allow for later installation of grab bars around the toilet, tub, shower stall, and shower seat. The guidelines provided that a powder room is subject to the requirement for reinforced walls for grab bars when the powder room is the only toilet facility located on the accessible level of a covered multistory dwelling unit. The guidelines further clarify that reinforced bathroom walls will meet the accessibility requirement, if reinforced areas are provided at least at those points where



## Notes:

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## **The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars**

grab bars will be mounted. Reinforcement for grab bars may be provided in a variety of ways (for example, by plywood or wood blocking) so long as the necessary reinforcement is placed so as to permit later installation of appropriate grab bars.

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Topic 2: Requirement 6 - Reinforced Walls for Grab Bars

The Fair Housing Accessibility Guidelines (the Guidelines) do not require that grab bars be installed in bathrooms in covered dwellings. However, the Guidelines do require that bathroom walls be sufficiently strong to allow for later installation of grab bars for resident use. Covered multifamily dwelling units must contain reinforcements in bathroom walls to allow later installation of grab bars around the toilet, tub, shower stall, and shower seat, where such facilities are provided.

### Importance of Grab Bars

Grab bars are critical for many people with mobility impairments. Safety for everyone is greatly increased by the addition of grab bars at toilets, bathtubs, and showers. The Guidelines do not prescribe the type or size of grab bars, nor the structural strength they must exhibit. The Guidelines state only that the necessary reinforcement must be placed “to permit the later installation of appropriate grab bars.” HUD encourages builders to look at the 1986 ANSI A117.1 Standard, an equivalent or stricter standard, or their state or local building code in planning for or selecting appropriate grab bars.



### Residents' Information

It is recommended that building owners and managers permanently mount directions for the installation of grab bars in every dwelling unit. This information will provide residents with important design specifications and measurements that can be utilized when planning the installation of grab bars. In the notice, the type of reinforcing construction should be described, where the reinforcing is located, and suggestions made for the most effective method for installing grab bars or shower benches. These notices should be laminated and attached to the inside of a linen closet door, the inside of a utility or water heater/furnace door, or in another location inside the unit that is accessible to resident.

### Notes:

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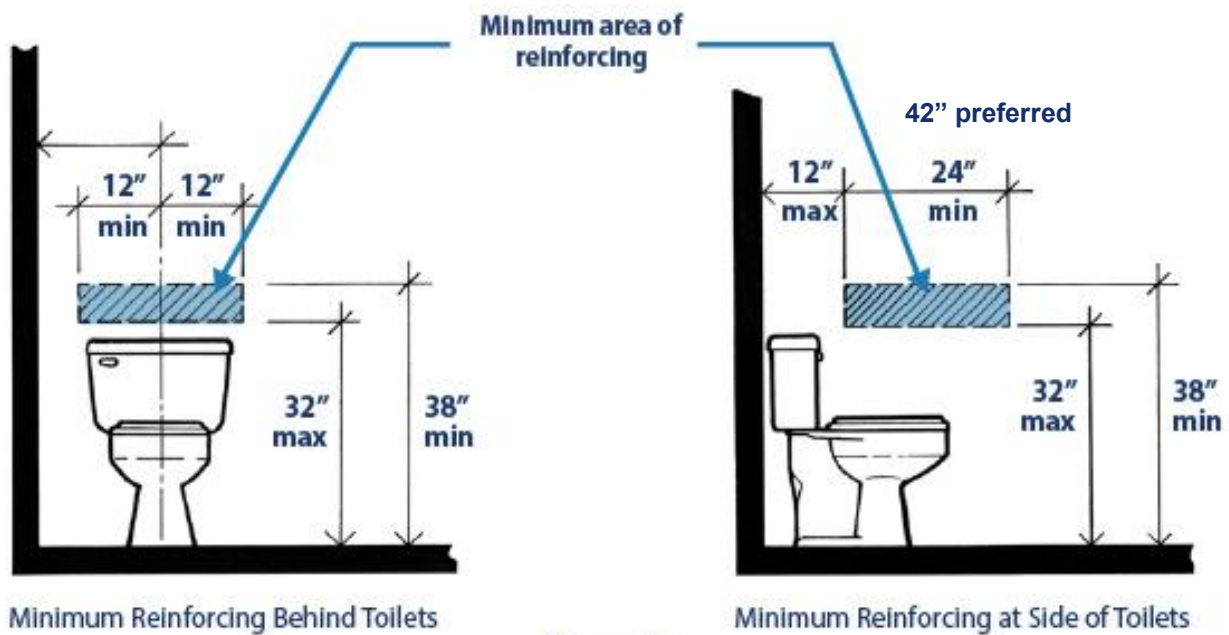
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Topic 3: Reinforcing for Grab Bars at Toilets

The Guidelines specify that reinforcing at least 6-inches wide by 24-inches long, capable of supporting grab bars, be provided behind and beside toilets. These minimal areas to be reinforced are adapted from the 1986 ANSI A117.1 Standard. However, it is a best practice to install reinforcing both longer and wider, so sufficient solid material is available to mount grab bars of differing lengths, mounting configurations, and designs. The Guidelines encourage longer reinforcing, as shown in Figure 3, "Water Closets in Adaptable Bathrooms," where the preferred length of 42-inches for side wall reinforcing is given.



**Figure 3**  
**Water Closets in Adaptable Bathrooms**

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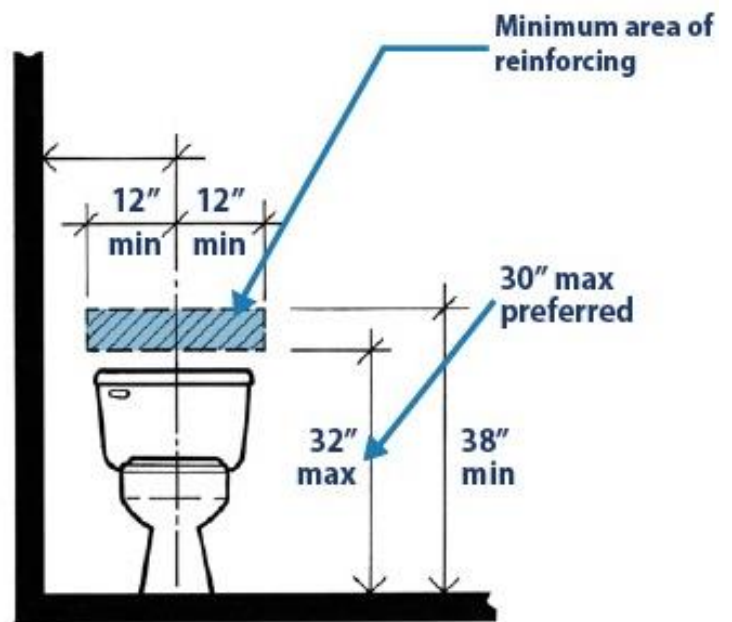


# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Position of Toilet

In a covered bathroom, the position of the toilet about the walls and other fixtures will affect the placement of reinforcing for grab bars as shown in the FHA Design Manual diagrams.

Grab bars, to be within the ranges presented in most accessibility standards, are mounted so the top of the gripping surface is 33-inches to 36-inches above the floor. If the bottom of the reinforced area is 32-inches, and a resident chooses to mount a bar at 33-inches, the mounting plates will extend below the reinforced area by 1/2 inch or more. To avoid a weak and unsafe connection, it is critical that reinforcing be enlarged.



**Minimum Reinforcing Behind Toilets  
Located Beside a Wall**

## Notes:

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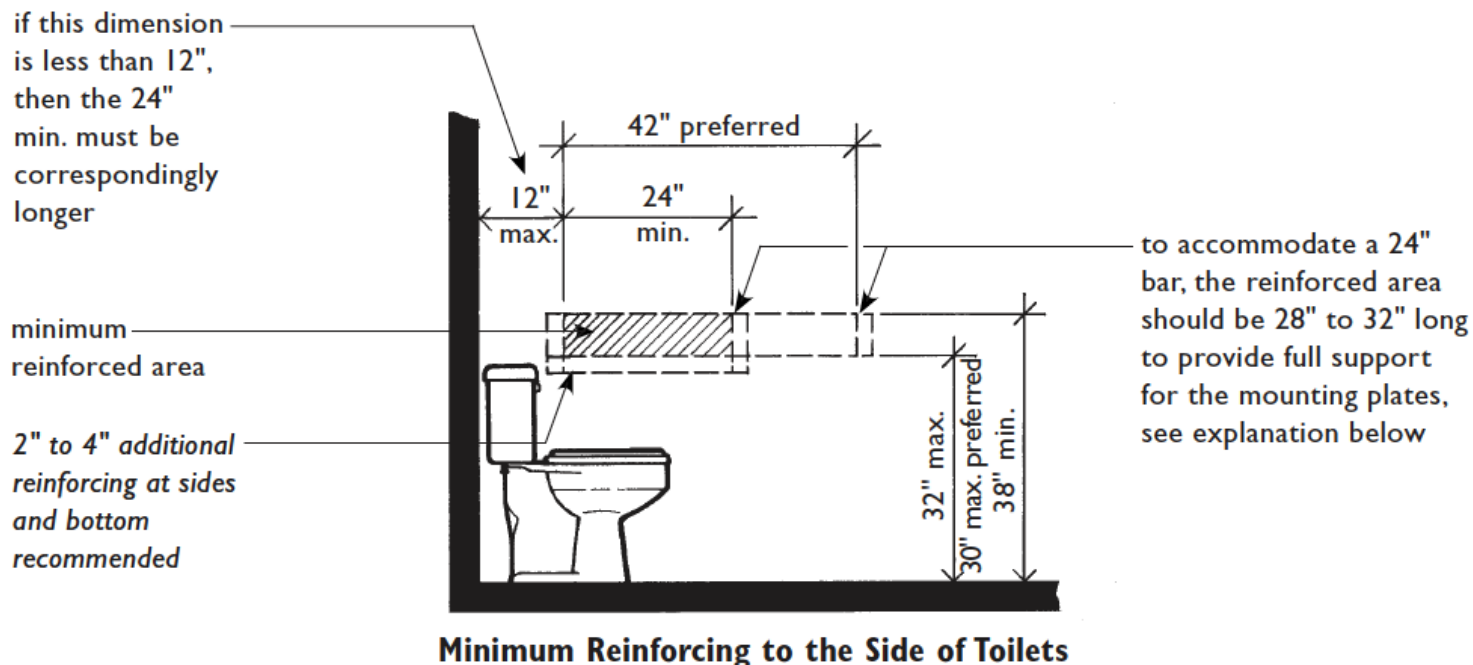
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Position of Reinforcing

The leading edge of the reinforcing beside the toilet should be positioned at least 36-inches from the back wall to accommodate a bar that is a minimum of 24-inches long. If the reinforcing starts 6-inches from the back wall, then the 24-inches of reinforcing should be increased to 30-inches minimum. Whenever a toilet is next to a wall that allows for a longer area of reinforcing (42-inch minimum is preferred), the longer area should be reinforced.



## Notes:

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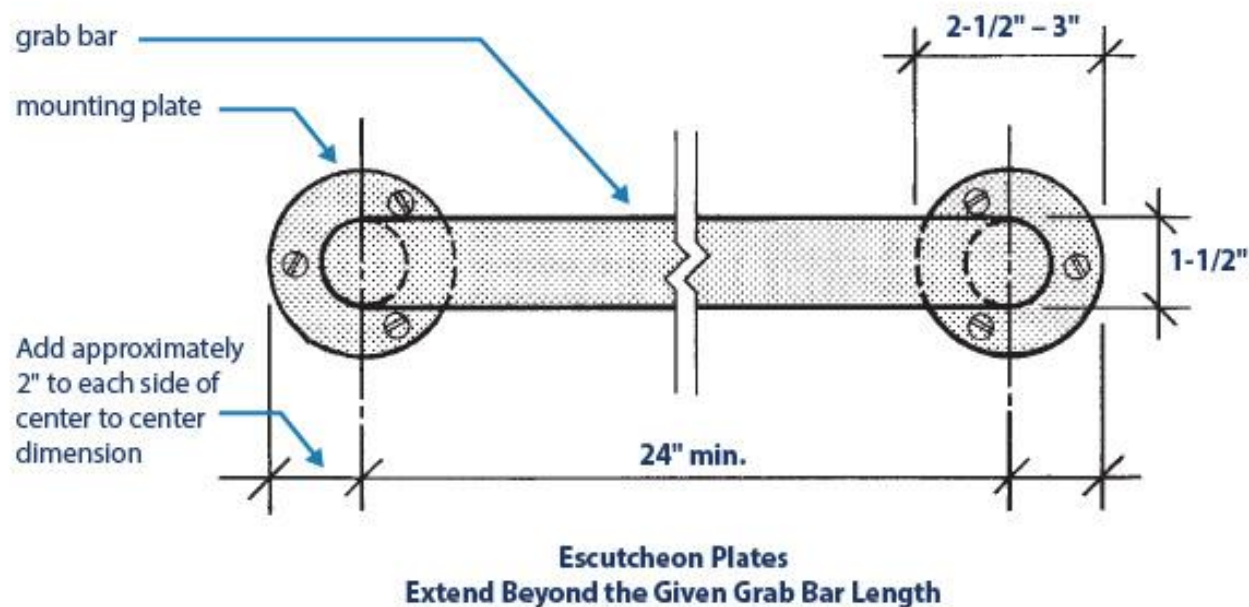
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Mounting Plates

Grab bar flanges or mounting plates or escutcheon plates extend beyond the given grab bar length, so it is important to add approximately 2-inches to each side of center-to-center dimension.



## Notes:

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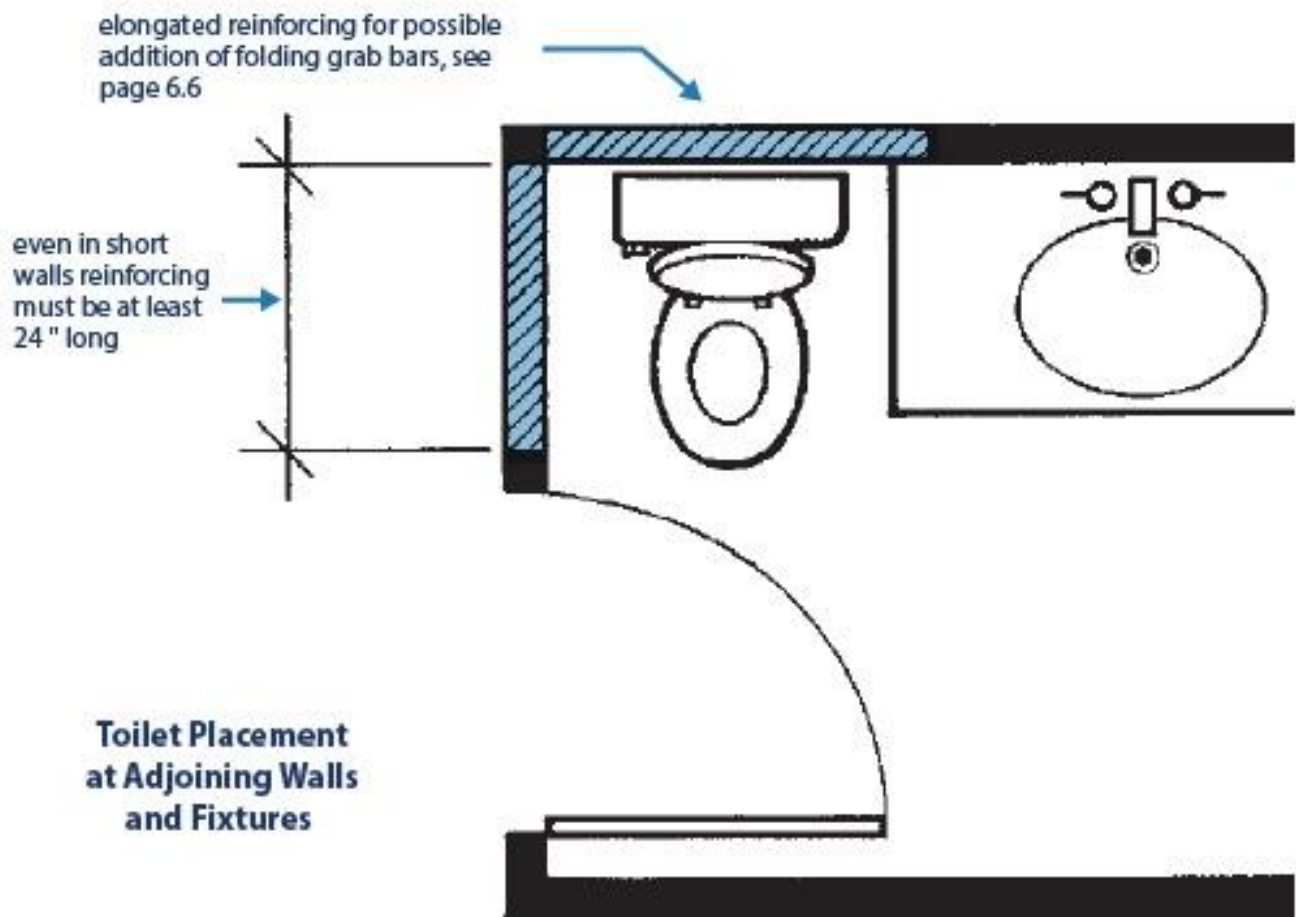
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Highest Degree of Safe Use

Toilets positioned beside a wall offer the highest degree of safe use since a grab bar can be mounted to the side of the toilet. The dimensions describing the distance from the center of the toilet to a side wall and to the nearest fixture or obstruction on the opposite side have been adapted from the ANSI Standard.



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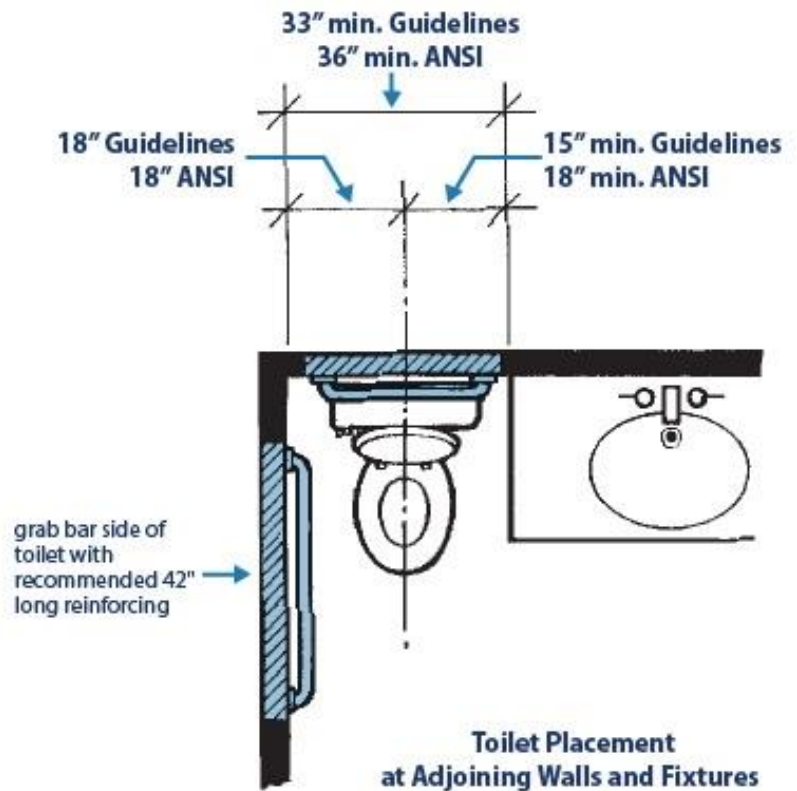
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Optimum Distance

The 18-inches from the centerline of the toilet to the wall has traditionally been considered the optimum distance for use by people who must transfer onto the fixture from a wheelchair as recommended by the Fair Housing Act Design Manual. This distance will accommodate a grab bar and the shoulders of a person seated on the toilet.



## Notes:

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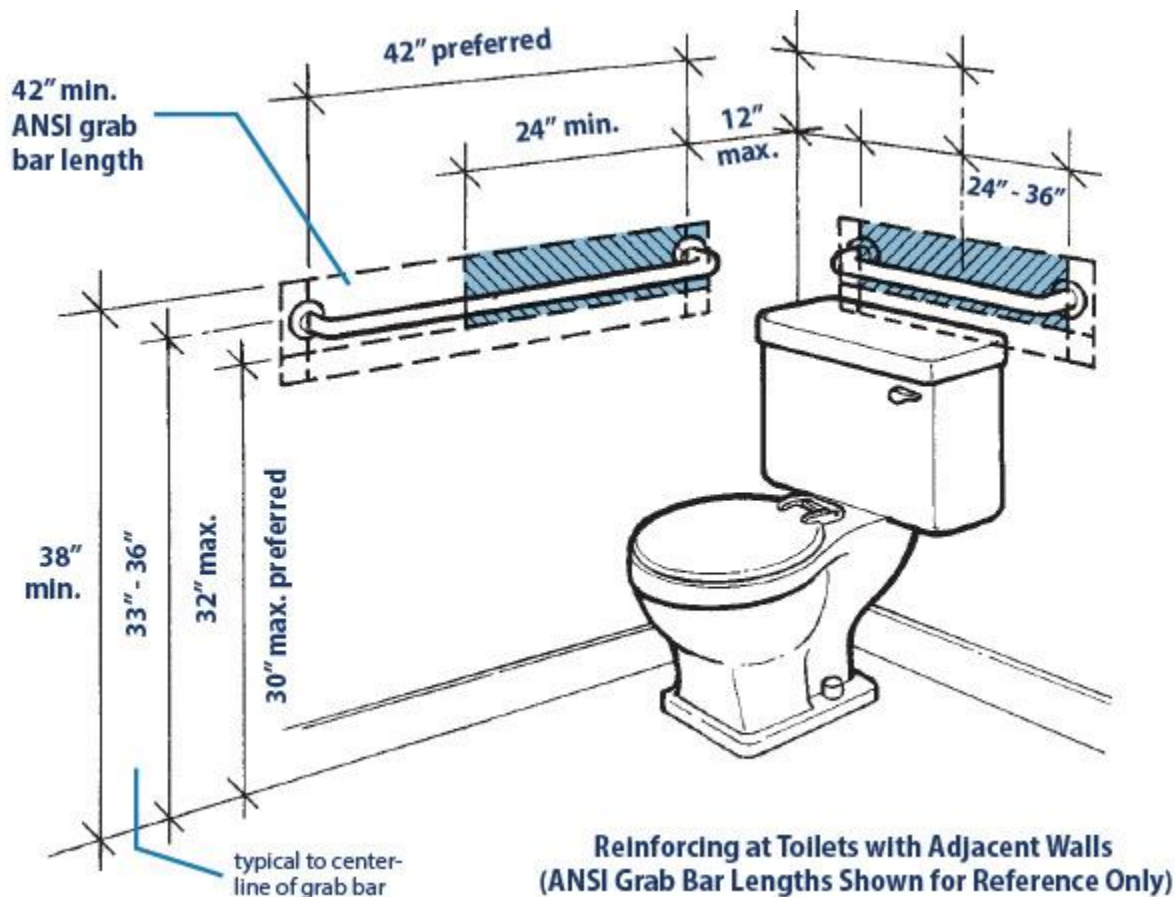
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Exception for Small Bathrooms

In small bathrooms where the door is located in the side wall immediately adjacent to the toilet, full length reinforcing as specified in the Guidelines may not be possible without enlarging the room. While a short grab bar is not preferred, it does work for some people.



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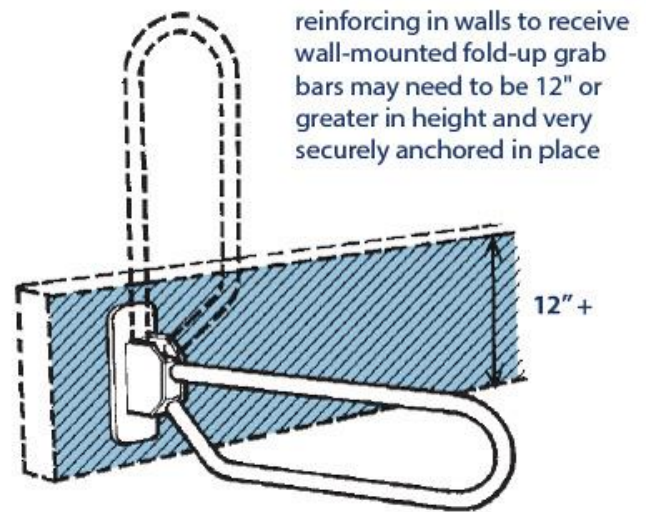
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Folding and Floor-Mounted Grab Bars at Toilets

In bathrooms where there is no wall or a very short wall adjacent to the toilet, the Guidelines permit the installation of folding wall-mounted, floor-mounted, or wall and floor-mounted grab bars. 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.



Wall-Mounted Fold-Up Grab Bar

## Reinforcing in Walls

Reinforcing in walls to receive wall-mounted fold-up grab bars may need to be 12-inches or greater in height and very anchored in place. The reinforcing for such folding grab bars must be substantial because of their cantilevered design. 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.



## Notes:

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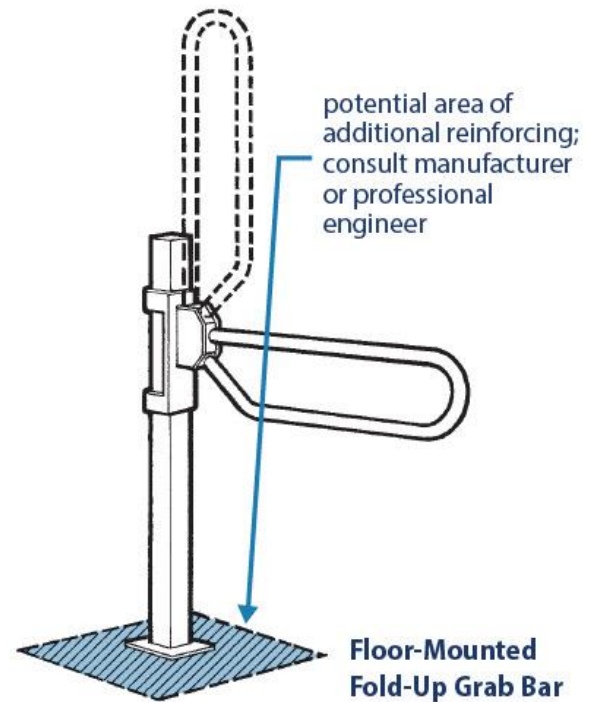
# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Manufacturers' Recommendations

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 of the design manual. The manual also provides a Product Resource List in Appendix A for sources of fold-up grab bars.

## Reinforcing in Floor Systems

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.



## Notes:

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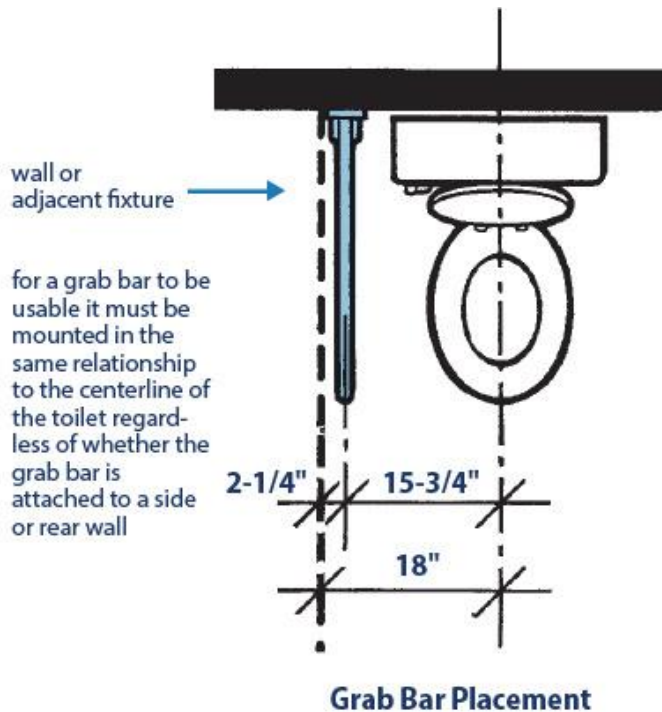
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## The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

### Mounting Dimensions for Usability

For a grab bar to be usable it must be mounted in the same relationship to the centerline of the toilet regardless of whether the grab bar is attached to a side or rear wall. Reinforcing should be long and wide enough so a folding bar can be installed and, when lowered into position for use, with the option to mount its centerline at 15-3/4 inches from the centerline of the toilet. This dimension is consistent with the 18-inches provided from the centerline of the toilet to the wall when that wall is to be equipped with a grab bar.



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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Advanced Planning

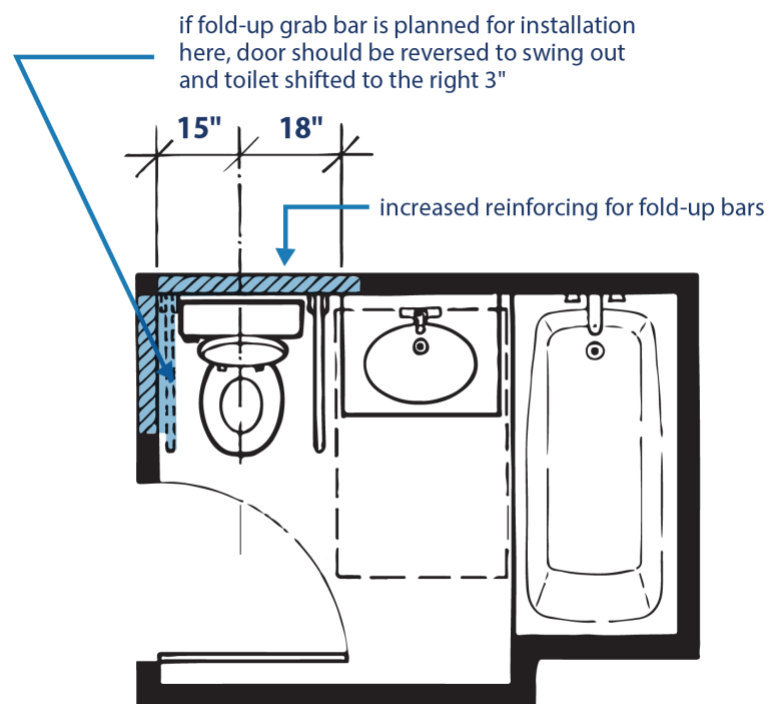
Advanced planning will be necessary to determine on which side of the toilet a folding grab bar will be placed so the necessary 18-inches of space and additional reinforcing can be shifted to the grab bar side of the toilet.

## Center the Toilet in the Space

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.

## Location of Fold-up Grab Bars – Bathroom Door

Special planning should be given to the location of fold-up grab bars. Depending on the location of the toilet in relation to the bathroom door, some instances may require the door to swing out and the toilet to be shifted 3-inches to the right.



**Toilet Between Lavatory and Short Wall**

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

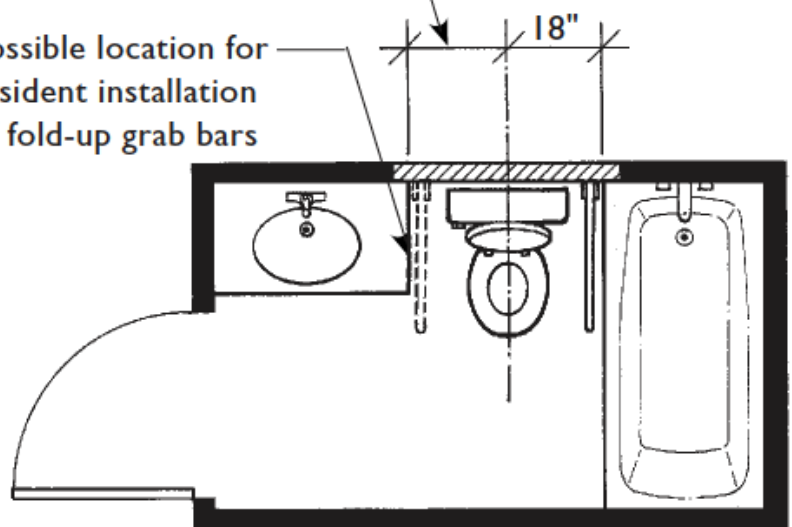
## Location of Fold-up Grab Bars – Toilet Between Tub and Lavatory

In other instances, care should be taken that the grab bar hinge folds against the wall and does not interfere with access to the tub controls.

Guidelines require only 15" on nongrab bar side of toilet; 18" also preferred this side of centerline if planned for two bars (18" shown)

bar may be on either side of the toilet, but must be hinged so it folds against the wall behind the toilet and does not interfere with access to the tub and the controls

possible location for resident installation of fold-up grab bars



**Toilet Between Tub and Lavatory**

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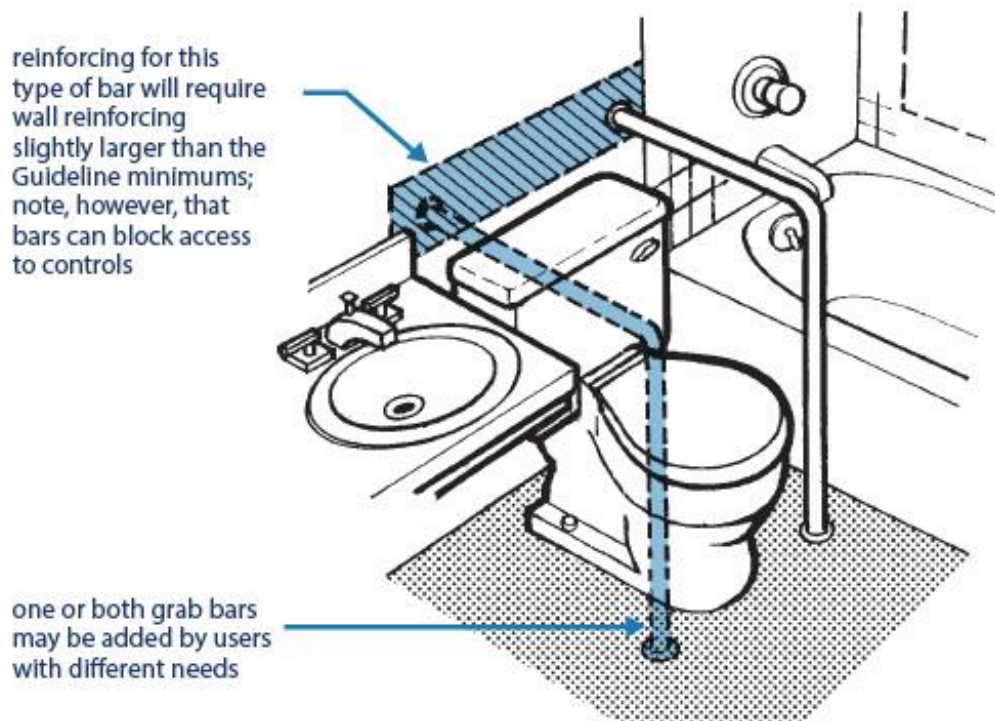
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Mounting Where Toilets are Not Adjacent to Walls

Fixed floor and wall-mounted grab bars also can be installed where toilets are not adjacent to full length walls. This type of installation will require little if any additional areas of reinforcing. However, fixed floor and wall-mounted bars may not be a good choice for many people. Fixed floor-mounted grab bars may encroach on clear floor space and interfere with wheelchair maneuvering.



**Fixed Floor and Wall-Mounted Bars  
Not a Good Choice for Many People**

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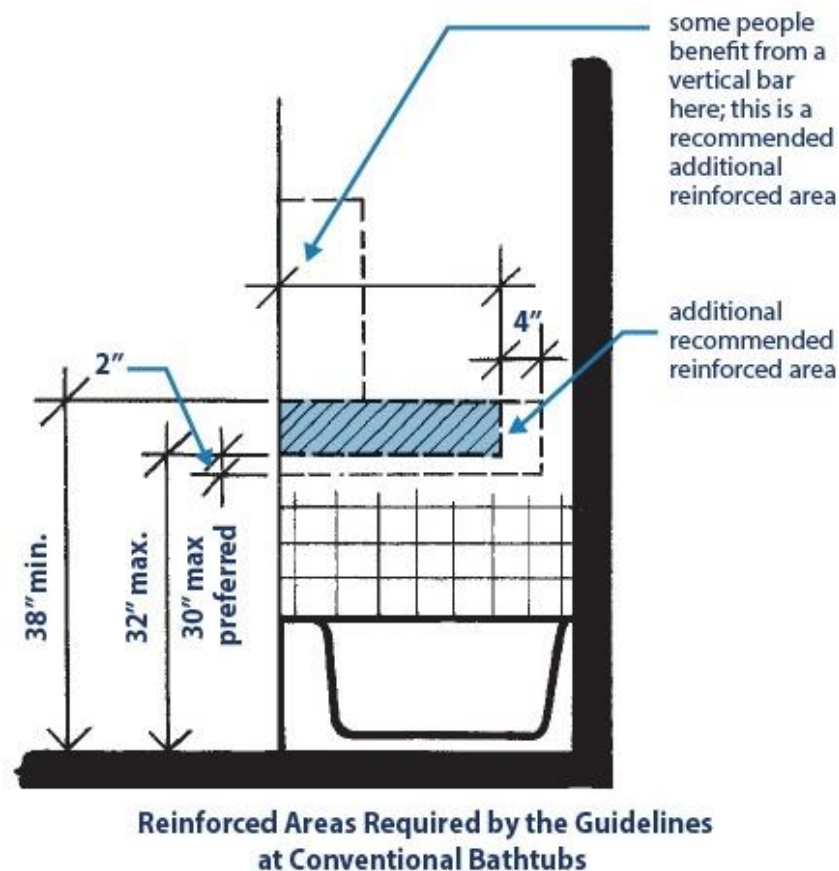
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Topic 4: Reinforcing for Grab Bars at Conventional Bathtubs

For conventional bathtubs, the Guidelines specify wall reinforcing for grab bars as shown in the Fair Housing Act design manual. The intent is to make it easy for a resident to install grab bars similar to those specified in ANSI A117.1 or other equal accessibility standards or codes.



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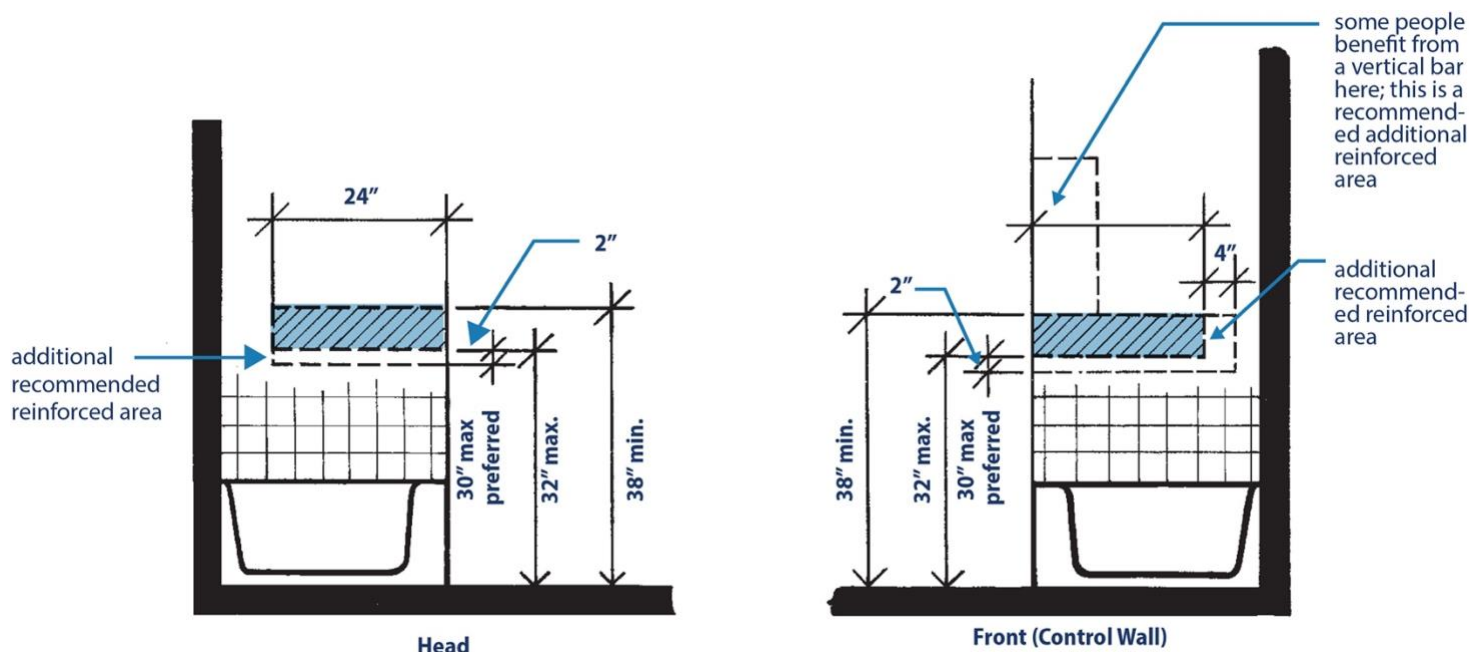
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Reinforcing at Head and Foot of Bathtubs

For the same reasons as discussed at toilets, it is recommended that the reinforced areas specified at the head and foot of tubs be enlarged to provide full support for mounting plates and horizontal bars. The reinforcement area should extend 24-inches to 26-inches across the head or foot wall and be separated 4-inches maximum from the side of the tub wall. This reinforced area should provide full support for the mounting plates and horizontal bars at the lowest position of 33-inches above the room floor. The enlarged reinforced areas are shown here as recommended additional reinforcing.



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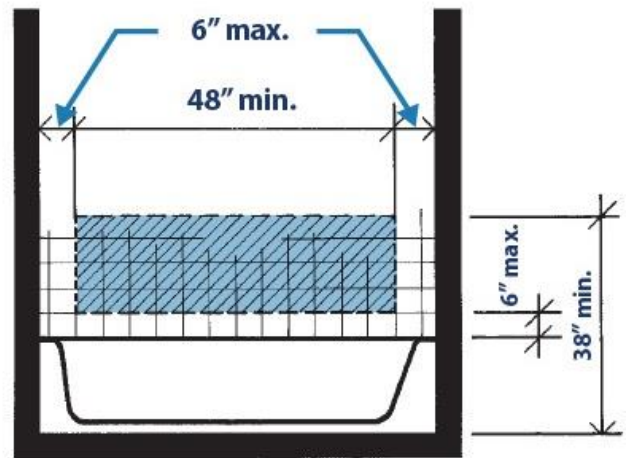
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Reinforcing at Back Wall

Reinforcing on the bathtub back wall should be positioned at 6-inches maximum above the tub rim and 38-inches minimum above the room floor. The reinforcing should extend at least 48-inches along the back wall and be separated 6-inches maximum from the sides of the tub walls. Note that the reinforcing on the back wall is larger than the conventional reinforcement to accommodate two grab bars per the ANSI configuration.



Back Wall

Notes:

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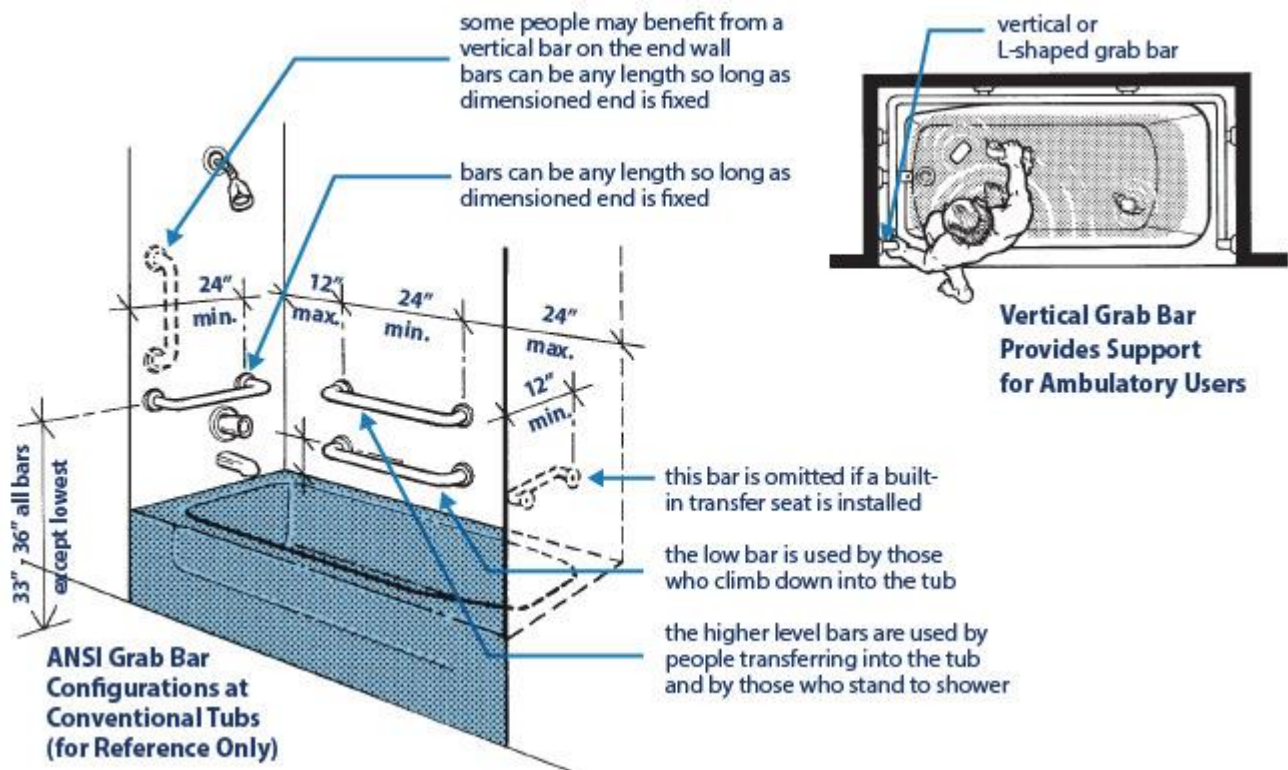
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Length and Shape of Grab Bar

ANSI grab bar configurations are recommended but grab bars can be any length as long as the grab bar ends are fixed within the reinforced areas. Some users may benefit from a vertical or L-shaped grab bar on the end wall, and it is recommended that this area be additionally reinforced.



Notes:

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Variations for Location of Grab Bar

Many users prefer a horizontal bar or even multiple horizontal bars at high and low heights. Grab bars are installed low to assist with climbing down into and up from the tub basin. Higher level bars are used by people transferring onto tub seats and by those who stand to shower. If a built-in transfer seat is installed, the head wall grab bar is omitted.



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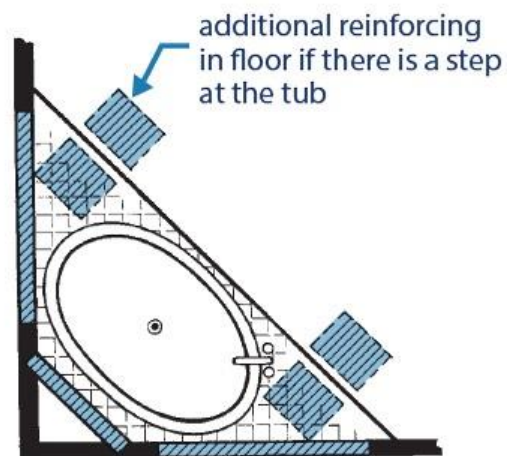
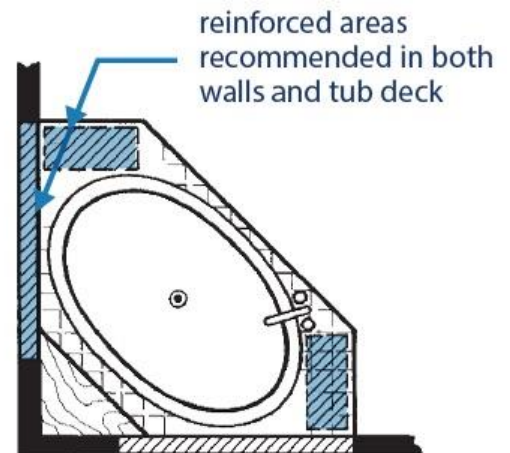


# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Topic 5: Reinforcing for Grab Bars at Non-Conventional Bathtubs

The Guidelines do not limit the size or proportion of bathtubs to the configurations shown. Bathtubs may have shelves or benches at either end or may be installed without surrounding walls, provided alternative methods for mounting grab bars are made. Reinforced areas are recommended in both walls and the tub deck and additional reinforcing in the floor may be necessary if there is a step at the tub.

For example, a sunken bathtub placed away from walls could have reinforced areas in the floor for the installation of floor-mounted grab bars. Whenever walls are adjacent to raised or sunken tubs, reinforcing should be provided that closely matches the sizes given at conventional bathtubs. Additional reinforced areas recommended are a minimum width of 6-inches to 8-inches the full width of the platform. A 24-inch maximum depth wing wall adjacent to a raised or sunken tub should be reinforced to accept grab bars. Standard nonreinforced floors may or may not be able to support one leg of a handrail, so in these cases, an engineering analysis is recommended.



### Notes:

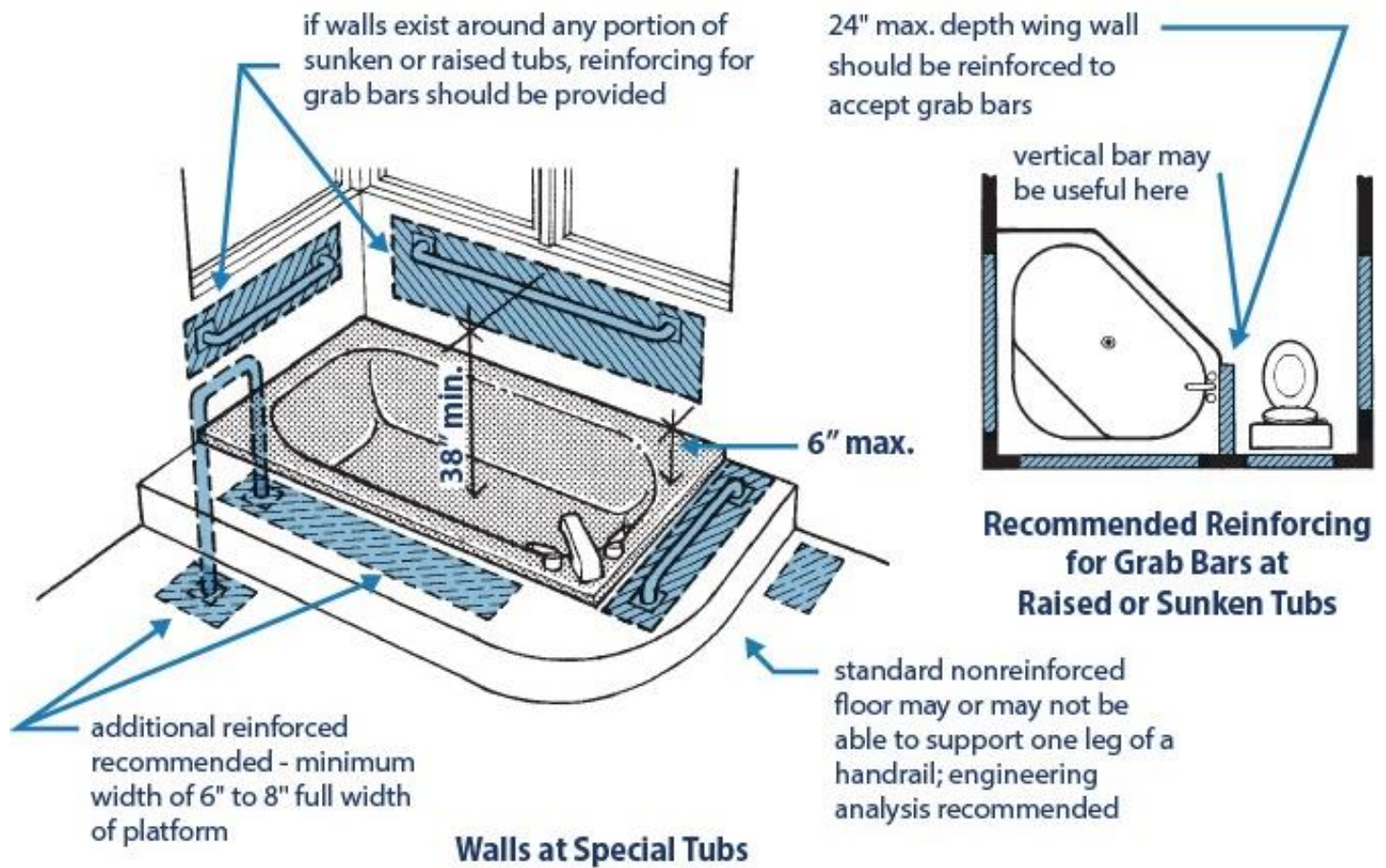
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars



Notes:

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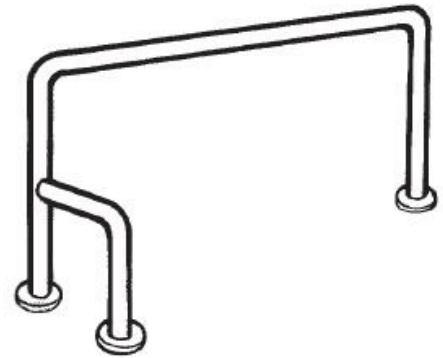
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Floor-Mounted Grab Bars at Special Bathtubs

On the open sides of raised tubs having decks at tub rim level and at floors surrounding sunken tubs, the deck and other designated floor areas should be reinforced so they are structurally capable of receiving floor-mounted grab bars. The floor or deck must provide secure anchorage and such bars should withstand a 250-pound load applied in any direction and at any point. Although not required, any grab bar installation should be able to meet or exceed ANSI structural strength requirements for grab bars.

Floor-mounted bars in these installations may be from 18-inches to 36-inches above the tub rim. Some have a braced double-footed mount as shown in the design manual.



Floor-Mounted Grab Bar

## Notes:

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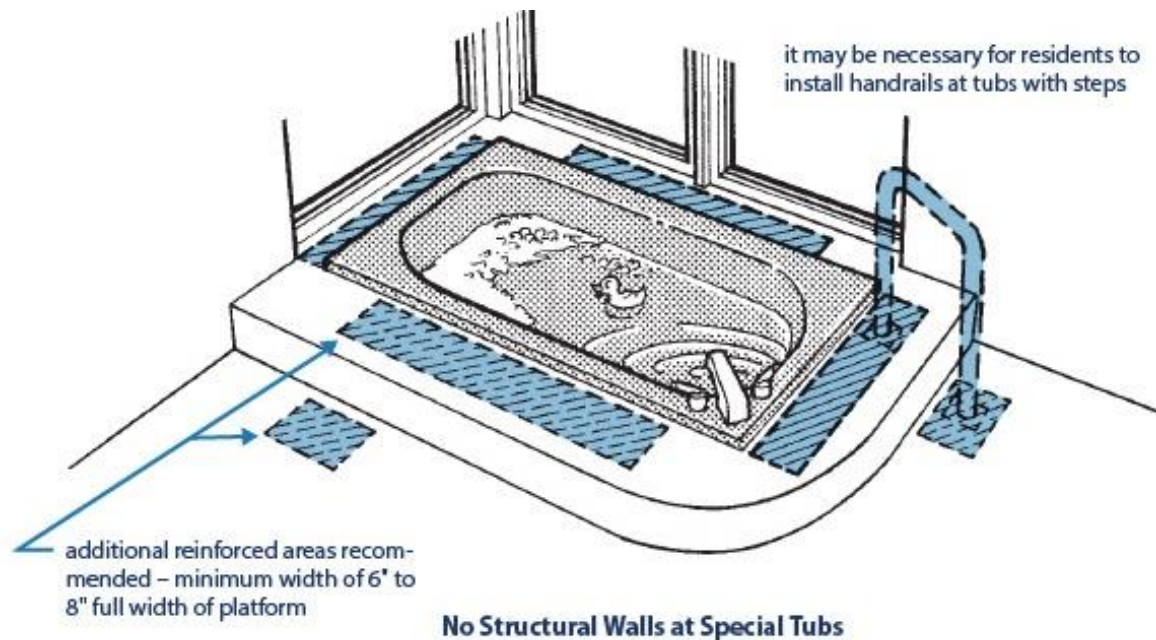
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Planning Reinforcing for Floor Areas

If designated reinforced floor areas are to be provided, their size should be comparable in length to those required for conventional bathtubs, or proportionally longer if the bathtub is larger than a conventional bathtub. The width of the reinforcing may well need to be wider than other reinforced areas for sufficient strength and space to accept braced double-footed mounts. It may be necessary for residents to install handrails at tubs with steps; therefore, additional reinforced areas of 6-inches to 8-inches the full width of the platform are recommended.



The size and exact location of designated reinforced floor areas should be included in the permanently affixed tenant information for installing grab bars recommended at the beginning of this training. The builder/owner/manager also may want to include in that information the height, type of fasteners, type of bar and mount, or even the model number and manufacturer of the bars upon which the adequacy of the structure was engineered.

## Notes:

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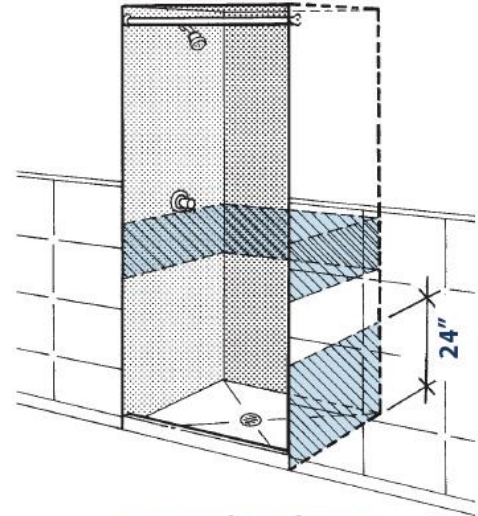
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Topic 6: Reinforcing for Grab Bars and Seats in Showers

Shower stalls in covered dwellings may be any size or configuration unless they are the only bathing fixture provided in the dwelling unit or on the entry level of a multistory dwelling in a building with one or more elevators. The width of both side walls and back wall must support grab bars.

Because of the commonly accepted need to install horizontal grab bars between 33 and 36-inches above the floor, it is recommended that this reinforcing be enlarged so the bottom edge is 30-inches above the floor.



**Required Reinforcing  
When Shower is  
Only Bathing Fixture**

Notes:

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

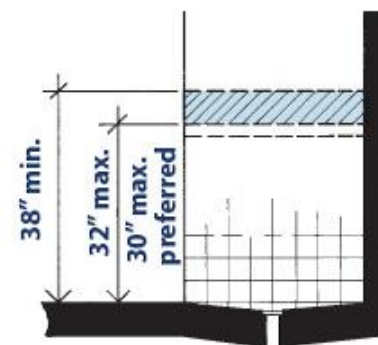
## Reinforcing for Glass Shower Stalls

In glass shower stalls, only those walls that are solid construction, i.e., wood or metal studs with gypsum wallboard and/or tile or solid masonry, must have reinforced areas. Glass walls are not required to be reinforced, nor are shower stalls required to have the waterproof pan or floor seal pierced to receive screws/bolts for floor-mounted grab bars.

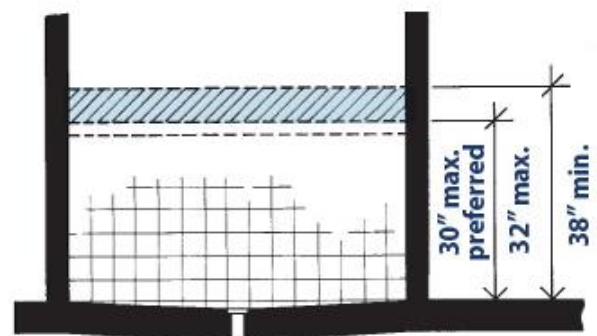
grab bars are helpful for standing users also



**Reinforcing in Glass-Walled Shower Stalls**



**Side**



**Back**

Notes:

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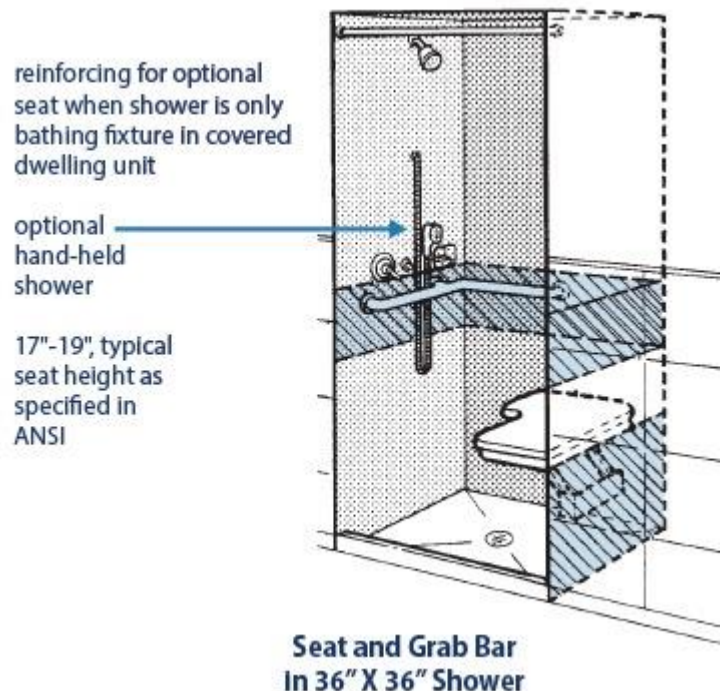
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Additional Requirements for Reinforcing

There are certain situations where the shower stall is required to have reinforcing for later installation of a wall-hung seat or bench. In Specification B bathrooms, when the shower is the only bathing fixture, in a shower measuring a nominal 36-inches square, in addition to the reinforcing for the grab bars, the shower stall is required to have reinforcing for later installation of a bench seat.

The reinforcing is located on the wall opposite the controls and must run the full width of the stall. It stands to logic that the reinforcing start at the floor and extends to a minimum height of 24-inches. Other shower configurations are permitted. For example, the 32-inch x 48-inch shower shown.



## Notes:

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## ANSI Standards for Specifications on Grab Bars

HUD encourages builders to refer to the ANSI Standard or local codes for specifications on grab bars and wall-hung shower benches. The ANSI specified shower seat is a design for safe use by people with disabilities. The builder should attempt to locate several manufacturers and size the reinforced area for the seat to accommodate more than one model.

Information detailing reinforced areas and location, as well as product choices, should be included in the permanently affixed resident information recommended at the beginning of this training.



Notes:

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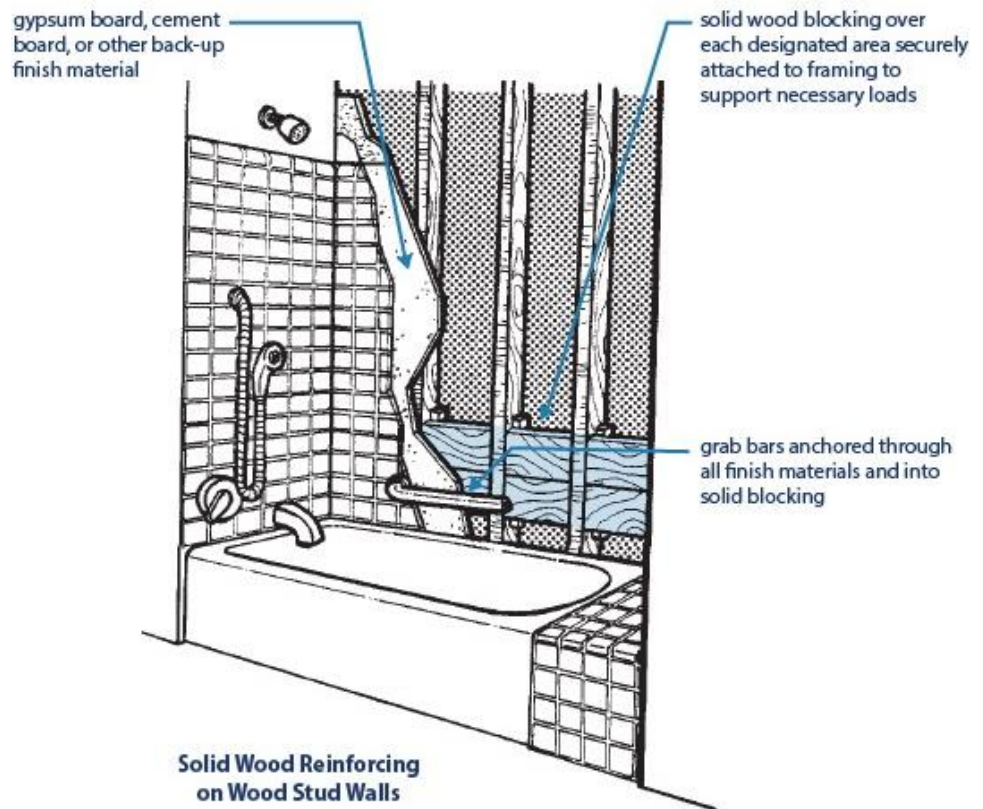
# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Topic 7: Recommended Reinforcing Methods

*The Guidelines do not prescribe the type of material to use or methods for providing reinforcement in bathroom walls. Grab bar reinforcing may be accomplished in a variety of ways.*

### Limited Area Reinforcing with Solid Wood Blocking – Stud Wall

In wood frame construction, the mounting area for grab bars can be reinforced by installing solid wood blocking either between or “let into” the studs and fastening the blocking securely to the studs. Either way, the solid wood reinforcing is installed flush with the face of the stud so finish materials can be applied to the studs and blocking in the normal manner.



### Notes:

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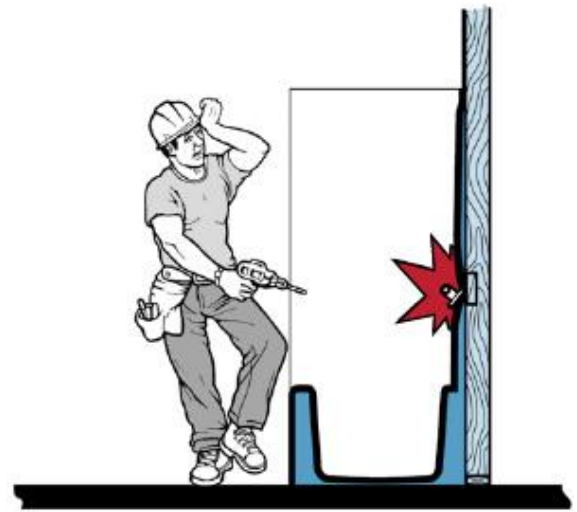
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Limited Area Reinforcing with Solid Wood Blocking – Molded Fixtures

The panels of molded fixtures are too thin to support grab bars, and they do not touch the stud wall except at the top. To attach grab bars to these surfaces, an area of solid wood blocking or other solid substance must be installed in the cavity between the fiberglass or acrylic wall and the wall. Since the space between the panels and the stud wall gets narrower as it approaches the top of the panels where they are fastened to the studs, this blocking must be cut to fit snugly in the space between the studs and the panel. The blocking must contact the plastic panel over the entire reinforced area.



**Fiberglass Tub/Shower Reinforcing**

### *Fiberglass tub/shower units present special considerations:*

1. Most of these bathing fixtures are manufactured with sidewalls that are normally held off the face of the backing wall by as much as 2-inches to 3-inches or more.
2. With blocking placed in the plane of the back wall, the sidewalls of the fiberglass bathing module could buckle or crack if someone tried to anchor a grab bar.
3. Fiberglass tub/shower fixtures frequently have molded elements along the back and side walls that thwart the installation of grab bars. The sidewalls and back wall must be flat in the areas where reinforcing is required.

For these reasons, fiberglass bathing modules should be specified and provided with an integral reinforcing cast into the side walls in the factory at compliant locations. Models are currently available that provide such areas of reinforcing.

## Notes:

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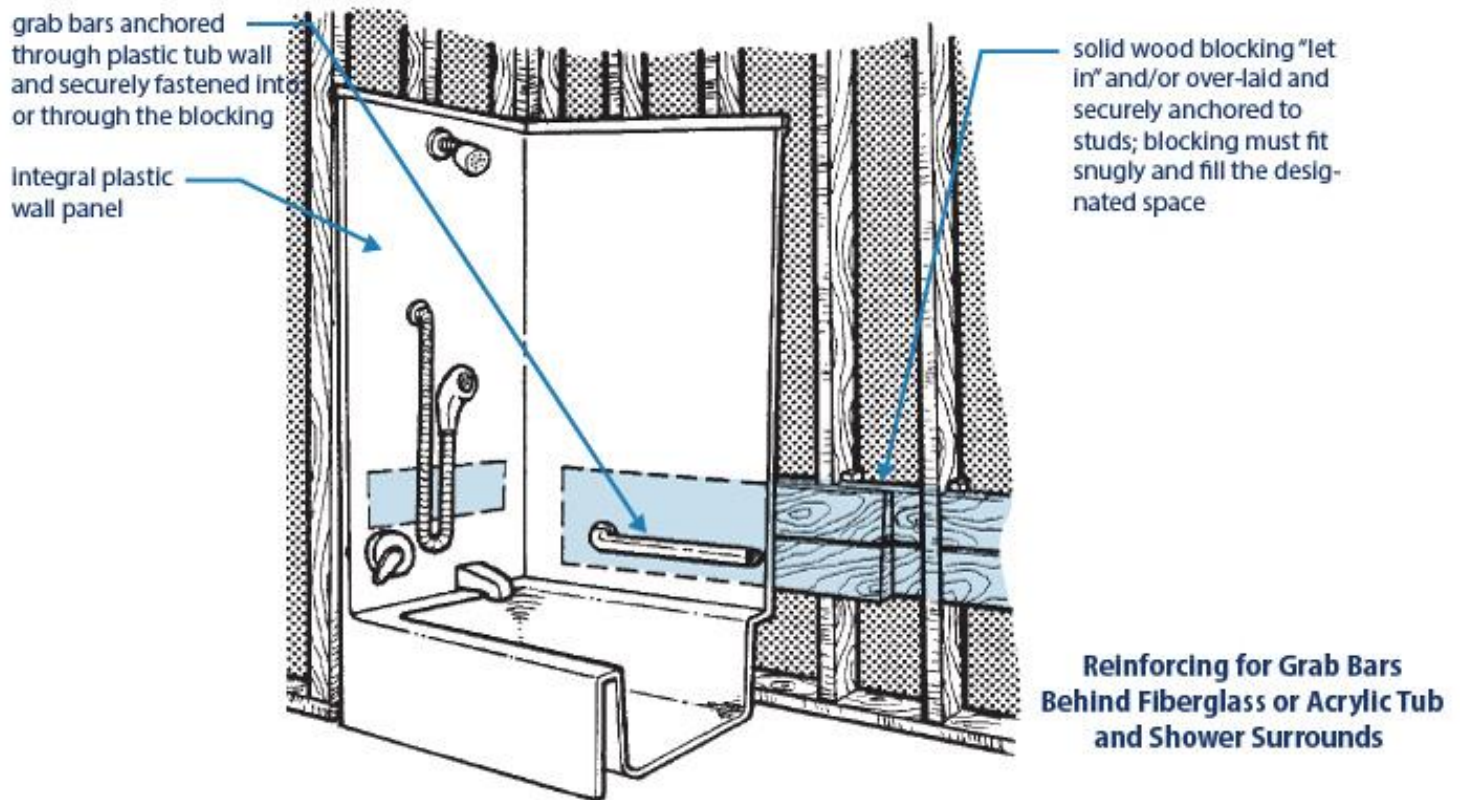
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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Reinforcing Already in the Wall Sections

Some fiberglass and acrylic tubs, showers, and wall sections are now made with reinforcing already in the walls to stiffen the fixture. If the reinforced fiberglass or acrylic wall is not specifically labeled as built for grab bars and meeting the ANSI load requirements, additional reinforcing may need to be installed.



## Notes:

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

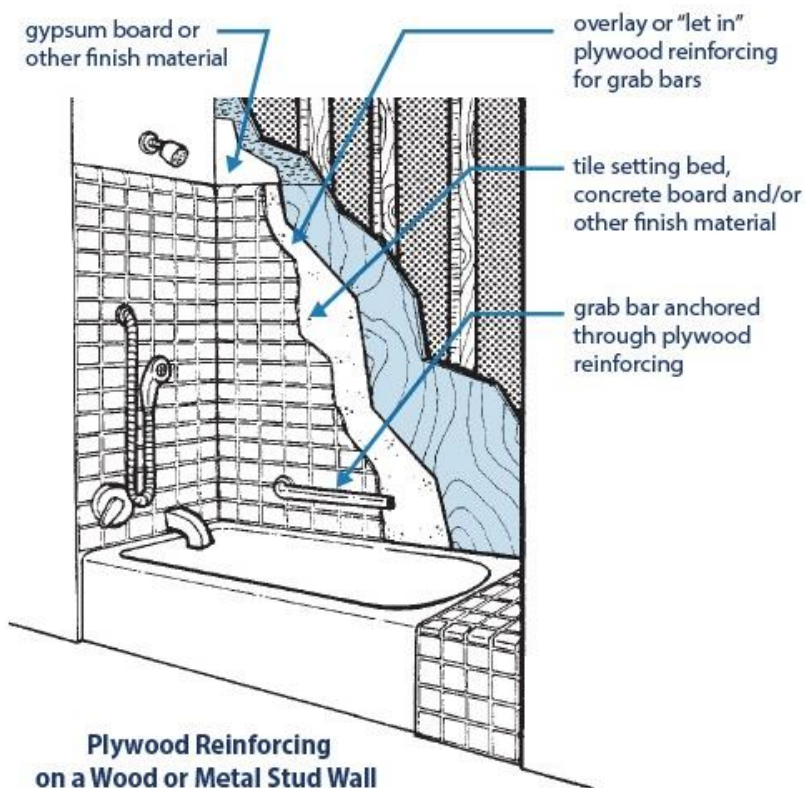
## Whole Wall or Large Area Reinforcing with Plywood

Although the location and the limited size of the wall areas that must be reinforced are specified by the Guidelines, it may be necessary or desirable to extend the reinforcing over a larger area or throughout the entire wall. Some people may want to locate grab bars in areas other than those specified in the Guidelines and other accessibility standards. Other people may have difficulty finding the minimum reinforced wall areas concealed inside a finished wall and install the grab bars in an unreinforced area. A larger reinforced area provides greater flexibility in placement and easier installation of grab bars.

## Thickness of Plywood Used to Provide Support

Heavy plywood applied to the studs over a larger area can support grab bars and provide a base for the installation of finish materials such as ceramic tile or plastic wall panels. Plywood can be applied to the face of studs or "let in." In either case, the plywood must be of sufficient thickness and should be securely attached to withstand the forces specified in the 1986 ANSI's section 4.24, or an equivalent or stricter standard.

Anchors for securing the grab bars to the reinforced walls should be a through-the-wall type or another type capable of meeting the ANSI structural strength requirements.



## Notes:

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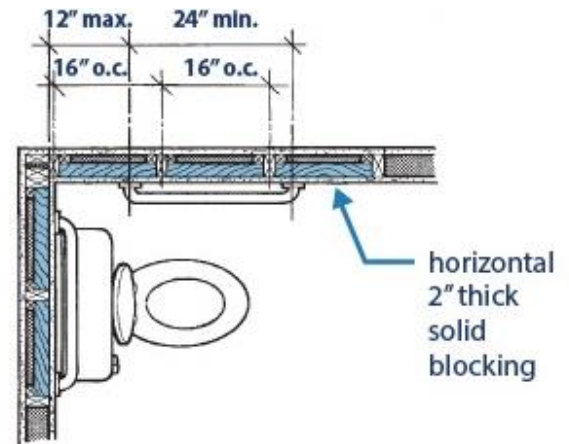
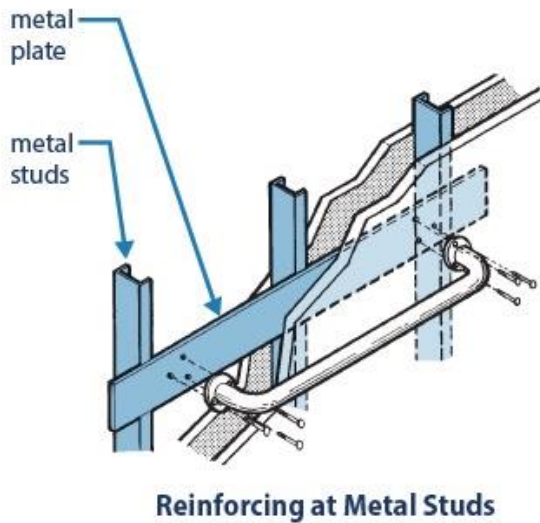
# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Additional Stud Support Behind Reinforcing

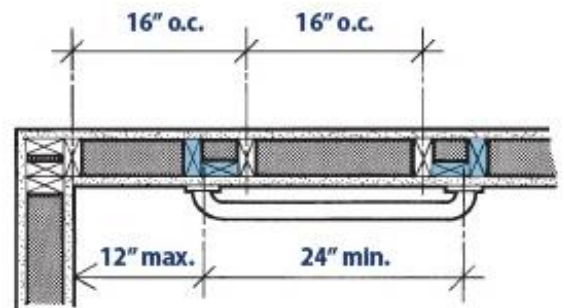
Because of standard stud spacing, reinforced areas often will have to be longer than specified to support necessary blocking.

Additional vertical studs can be placed at the ends of each specified reinforced area. This method is more expensive, difficult to install accurately, and more difficult to find after construction. It provides less flexibility in bar placement and is more likely to result in a weak connection.

A manufactured, formed metal reinforcing plate can be spot welded or screwed to studs.



**Plan View of Extended Horizontal Blocking  
Between Conventional Wood Studs**



**Additional Stud Method  
of Reinforcing for Grab Bars**

Notes:

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Materials for Reinforcing

The Guidelines do not specify materials or methods for reinforcing. Builders commonly use excess lumber from the framing process, plywood, or metal plates.

Notes:

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# The Fair Housing Act's Requirement 6: Reinforced Walls for Grab Bars

## Resources

This presentation was created utilizing the Fair Housing Act Design Manual and the Fair Housing Accessibility Guidelines. We have provided a link to the manual on the screen. You can also find this in the handouts section of the GoToWebinar Platform. We will be posting this training to the Fair Housing Accessibility FIRST website within the next few weeks.

## Additional Training Events

You can register for events by going to the Training Calendar on the Fair Housing Accessibility FIRST website: [https://www.hud.gov/program\\_offices/fair\\_housing\\_equal\\_opp/accessibility\\_first\\_training\\_calendar](https://www.hud.gov/program_offices/fair_housing_equal_opp/accessibility_first_training_calendar)

## Contacts

Please contact us with further questions via the Design and Construction Resource Center (DCRC) by calling 888-341-7781 or by emailing us at [fairhousingfirst@hud.gov](mailto:fairhousingfirst@hud.gov).

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## Notes:

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