

# Bathroom Planning Guidelines with Access Standards

The National Kitchen & Bath Association developed *Bathroom Planning Guidelines with Access Standards* to provide designers with good planning practices that consider the needs of a range of users.

The code references for the Bathroom Planning Guidelines are based on the analysis of the 2015 International Residential Code® (IRC®) and the International Plumbing Code®.

The code references for the Access Standards are based on ICC A117.1–2009 Accessible and Usable Buildings and Facilities.

Be sure to check local, state, and national laws that apply to your design and follow those legal requirements.

Updates to the Guidelines in this edition are easily identified by boldface text.

Drawings for the bathroom planning guidelines were contributed by 2020 and created using 2020 Design ([www.2020spaces.com](http://www.2020spaces.com)).

## BATHROOM PLANNING GUIDELINE 1

### Door/Entry

#### Recommended:

The clear opening of a doorway should be at least 32" (813 mm). This would require a minimum 2'10" (864 mm) door.

If the existing structure precludes changing the opening, then a minimum 2'0" (610 mm) door is allowable.

#### Code Requirement:

State or local codes may apply.

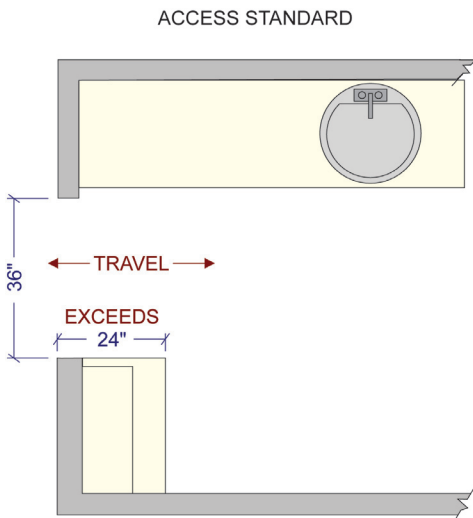
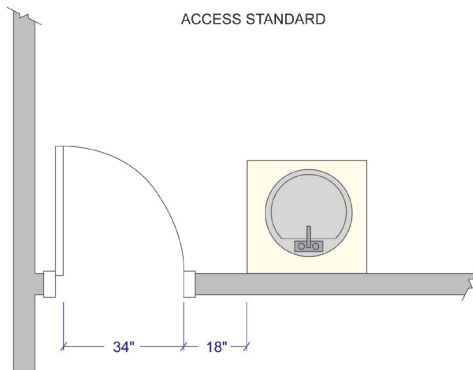
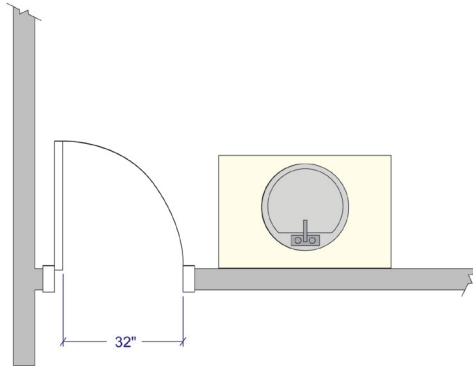
### Access Standard

#### Recommended:

The clear opening of a doorway should be at least 34" (864 mm). This would require a minimum 3'0" (914 mm) door.

#### ICC A117.1–2009 Reference:

- Clear openings of doorways with swinging doors shall be measured between the face of the door and stop, with the door open 90 degrees. (404.2)
- When the depth of a passage exceeds 24" (610 mm), the minimum clear opening increases to 36" (914 mm). (404.2.2)



## BATHROOM PLANNING GUIDELINE 2

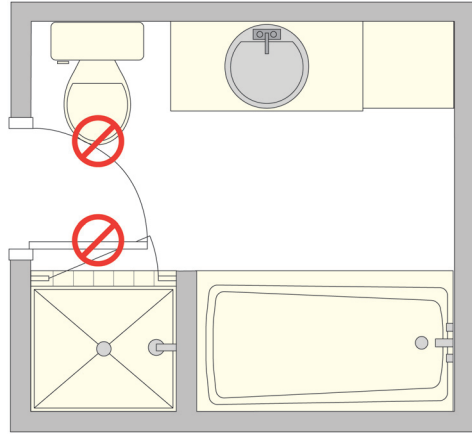
### Door Interference

**Recommended:**

See Code Reference.

**Code Requirement:**

- No entry or fixture doors should interfere with one another and/or the safe use of the fixtures or cabinets. (IRC P 2705.1.6)



### Access Standard

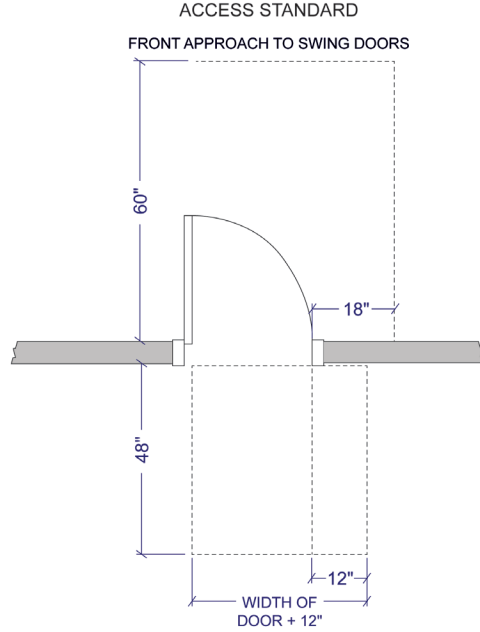
**Recommended:**

The door area should include clear floor space for maneuvering, which varies according to the type of door and the direction of approach.

**ICC A117.1–2009 Reference:**

- For a standard hinged door, the minimum clearance on the pull side of the door should be the width of the door plus 18" × 60" (457 mm × 1524 mm). (404.2.3)
- The minimum clearance on the push side of the door should be the width of the door plus 12" × 48" (305 mm × 1219 mm). (404.2.3)





### BATHROOM PLANNING GUIDELINE 3

## Ceiling Height

**Recommended:**

See Code Requirement.

**Code Requirement:**

- The minimum ceiling height in a bathroom should not be less than 80" (2032 mm); however, in areas where the ceiling is sloping to a height of less than 80" (2032 mm) in the bathroom or toilet room, the ceiling height shall be such that the fixture is capable of being used for its intended purpose. (IRC R 305.1)
- A shower, or tub equipped with a shower head, shall have

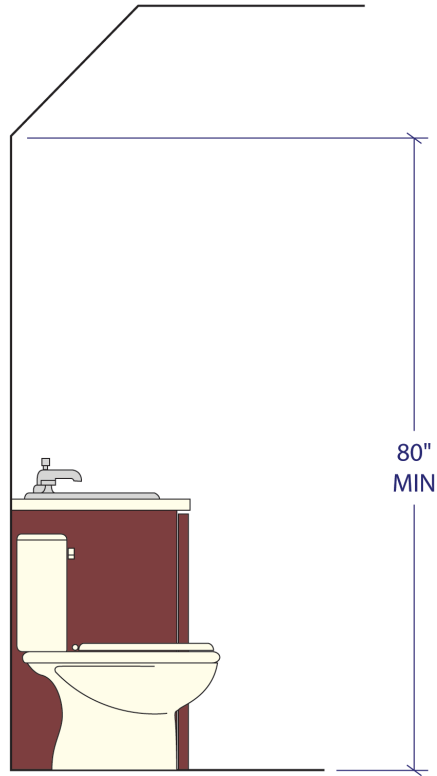
*Bathroom Planning Guideline 3 (continued)*

a minimum floor-to-ceiling height of 80" (2032 mm) above a minimum area 30" x 30" (762 mm x 762 mm) at the shower head. (IRC R 305.1)

### Access Standard

**Recommended:**

Bathroom Guideline code requirement meets Access Standard.



## BATHROOM PLANNING GUIDELINE 4

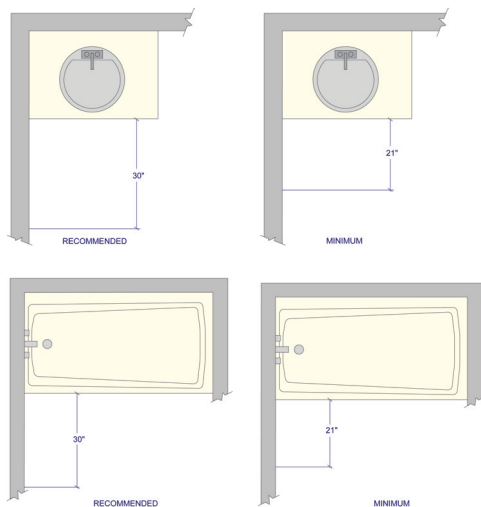
### Clear Space

**Recommended:**

Plan a clear floor space of at least 30" (762 mm) from the front edge of all fixtures (e.g., lavatory, toilet, bidet, tub, and shower) to any opposite bath fixture, wall, or obstacle.

**Code Requirement:**

- A minimum space of at least 21" (533 mm) must be planned in front of lavatory, toilet, bidet, and tub. (IRC P 2705.1.5, IRC R 307.1)



- A minimum space of at least 24" (610 mm) must be planned in front of a shower entry. (IRC R 307.1)

## Access Standard

### Recommended:

Plan a minimum clear floor space of 30" × 48" (762 mm × 1219 mm) centered at each fixture plus space for maneuvering, including approach and turning for a person using a wheelchair.

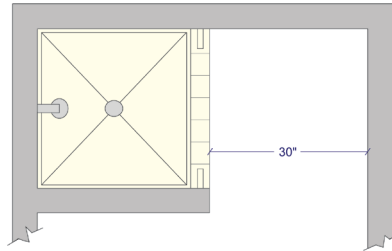
Plan a knee space at the lavatory or work space to allow for a front approach for a seated user.

Recommended minimum size of a knee space is 36" wide × 27" high × 8" deep (914 mm × 686 mm × 203 mm), increasing to 17" (432 mm) deep in the toe space, which extends 9" (229 mm) from the floor. Insulation for exposed pipes should be provided.

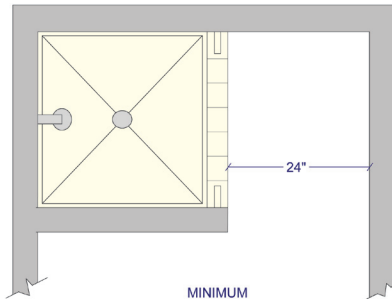
Consider the user's method of transfer to the toilet to plan a clear space to fit the user's needs.

### ICC A117.1–2009 Reference:

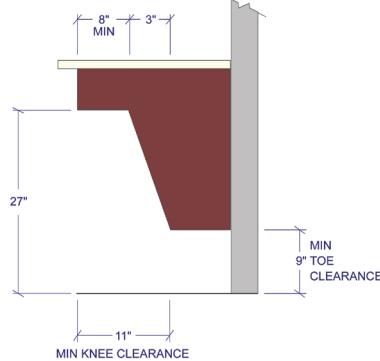
- A clear floor space of at least 30" × 48" (762 mm × 1219 mm) must be provided at each fixture. Clear spaces can overlap. (305.3)
- Include a wheelchair turning space with a diameter of at least 60" (1524 mm), which can include knee\* and toe\*\* clearances. (304.3.0)



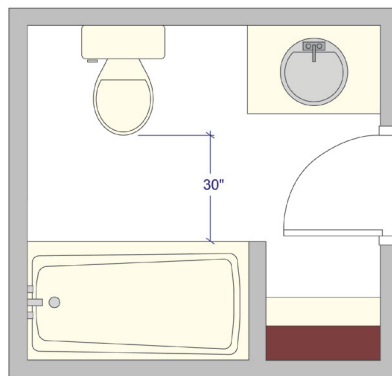
RECOMMENDED



MINIMUM  
ACCESS STANDARD



MIN KNEE CLEARANCE



RECOMMENDED

Bathroom Planning Guideline 4 (continued)

\* Knee clearance must be a minimum 30" (762 mm) wide (36" [914 mm] to use as part of the T-turn) and maintain a 27" (686 mm) high clear space under the cabinet, counter, or sink. At 27" (686 mm) above finished floor (AFF) the depth must be a minimum 8" (203 mm). At 9" (229 mm) AFF, the depth must be a minimum of 11" (279 mm). The space from 9" (229 mm) to the floor is considered toe clearance and must be a minimum of 17" (432 mm) and a maximum of 25" (635 mm). (306.3)

\*\* Toe clearance space under a cabinet or fixture is between the floor and 9" (635 mm) above the floor. Where toe clearance is required as part of a clear floor space, the toe clearance should extend 17" (432 mm) minimum beneath the element. (306.2.3)

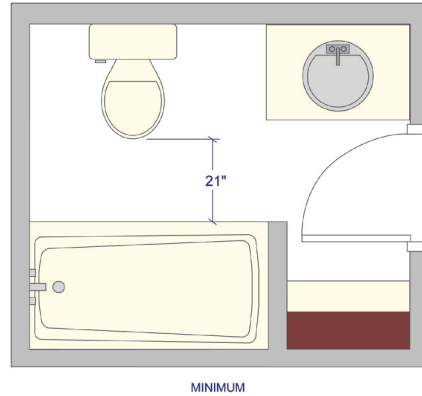
- A wheelchair turning space could utilize a T-shaped space, which is a 60" (1524 mm) square with two 12" wide x 24" deep (305 mm x 610 mm) areas removed from two corners of the square. This leaves a minimum 36" (914 mm) wide base and two 36" (914 mm) wide arms. T-shaped wheelchair turning spaces can include knee\* and toe\*\* clearances on one arm. (304.3.2)

**Grooming**

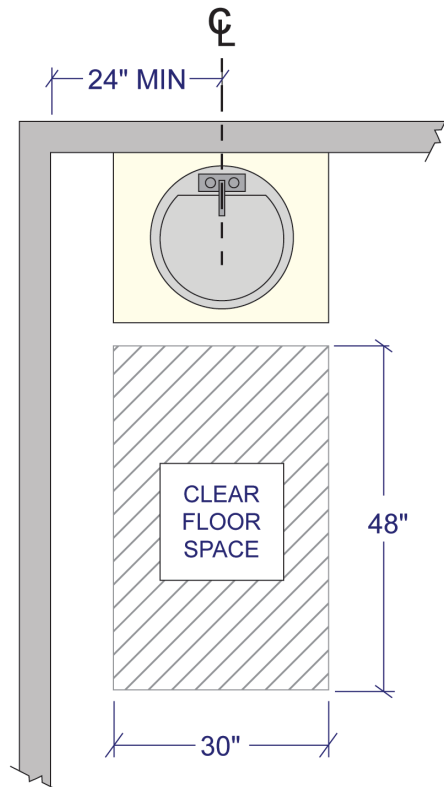
- The clear 30" x 48" (762 mm x 1219 mm) floor space should be centered on the lavatory. (606.2, 1004.11.3)

**Bathing and Showering**

- Clearance in front of bathtubs should extend the length of



**ACCESS STANDARD**



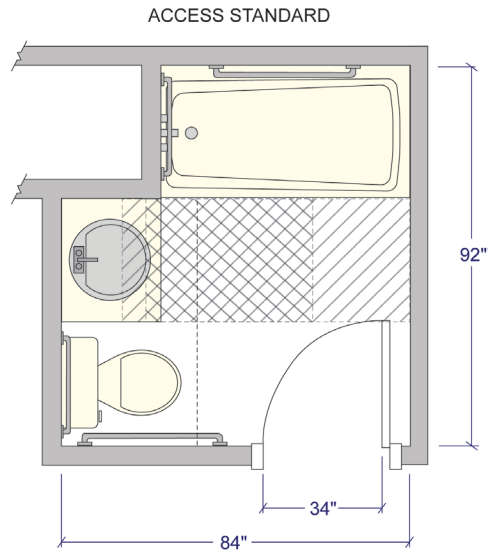
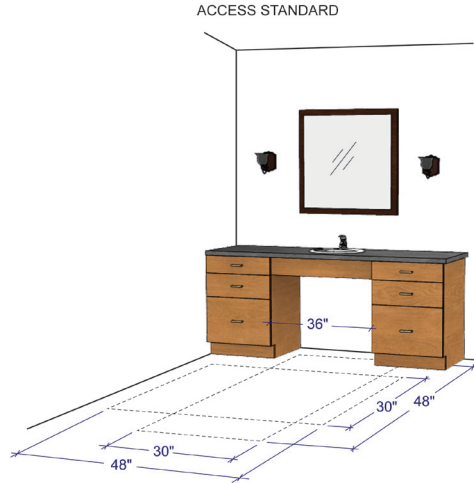
Bathroom Planning Guideline 4 (continued)

the bathtub and be at least 30" (762 mm) wide. (607.2)

- When a permanent seat is provided at the head of the bathtub, the clearance should extend a minimum of 12" (305 mm) beyond the wall at the head end of the bathtub. (607.2)
- The clearance in front of the transfer shower\* compartment should be at least 48" (1219) long measured from the control wall and 36" (914 mm) wide. (608.2)
- The clearance in front of a roll-in shower\*\* compartment should be at least 60" (1524 mm) long next to the open face of the shower compartment and 30" (762 mm) wide. (608.2.2)

\* A transfer shower, 36" x 36" (914 mm x 914 mm), provides support to a standing person or one who can stand to transfer.

\*\* A roll-in shower is a waterproof area large enough for a person in a wheelchair to remain in the chair to shower. A preferred minimum size for a roll-in shower is 36"-42" x 60" (914 mm to 1067 mm x 1524 mm).

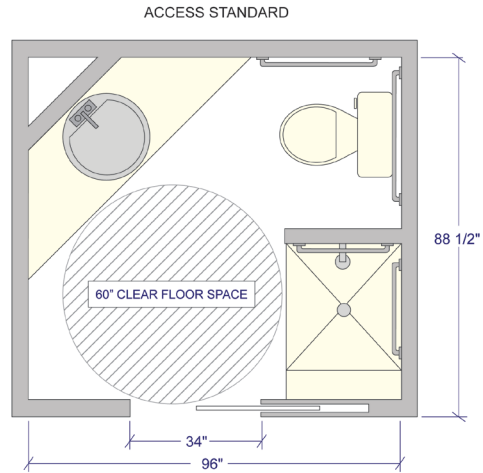


FIXTURE CLEAR FLOOR SPACE

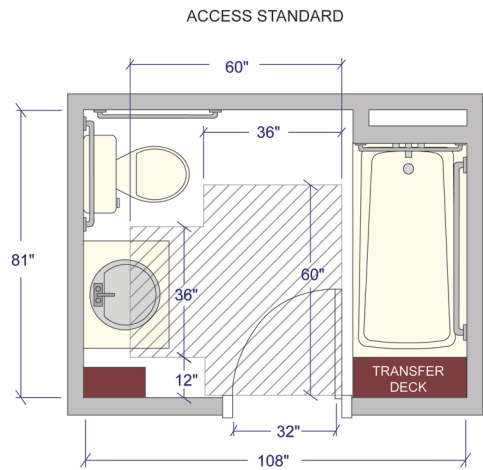


### Toileting

- When both a parallel and a forward approach to the toilet are provided, the clearance should be at least 56" (1422 mm) measured perpendicular from the rear wall, and 60" (1524 mm) measured perpendicular from the side wall. No other fixture or obstruction should be within the clearance area. (604.3, 1002.11.2.4)

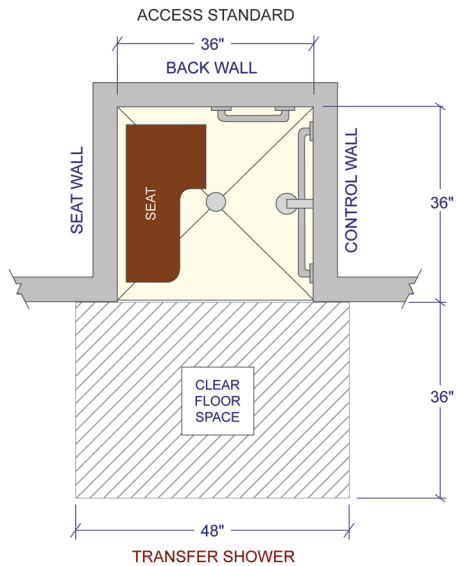
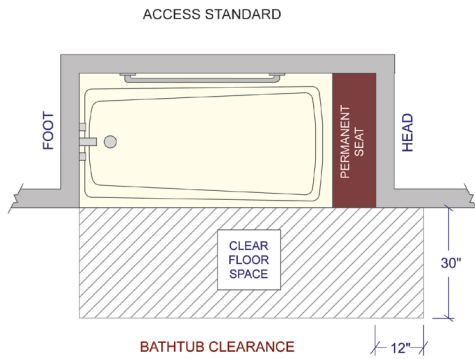
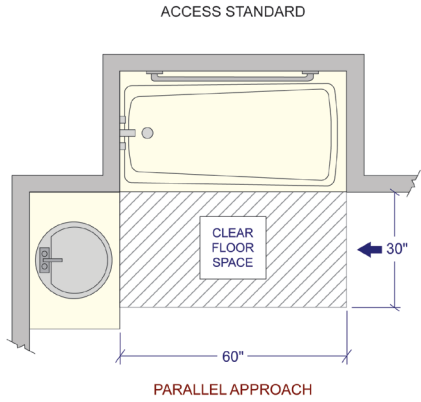


WHEELCHAIR TURNING SPACE

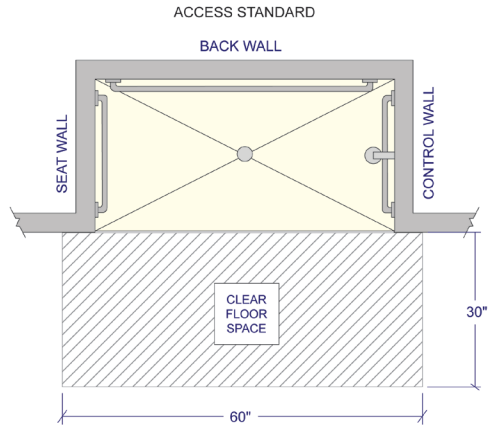


MINIMUM 36" x 36" x 60"  
SPACE FOR T-TURNS

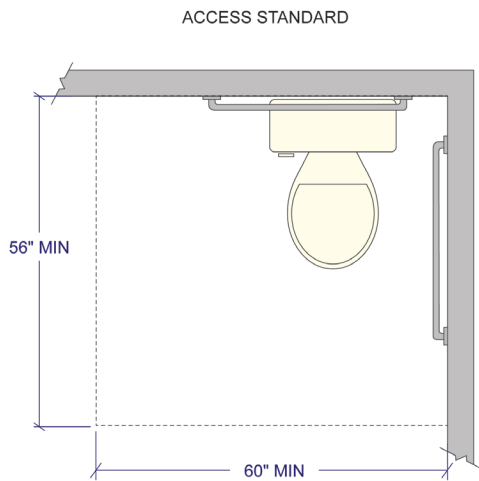
Bathroom Planning Guideline 4 (continued)



Bathroom Planning Guideline 4 (continued)



ROLL IN SHOWER



TOILET APPROACH

## BATHROOM PLANNING GUIDELINE 5

### Single-Lavatory Placement

**Recommended:**

The distance from the centerline of the lavatory to the sidewall/tall obstacle should be at least 20" (508 mm).

Bathroom Planning Guideline 5 (continued)

- The minimum distance between a wall and the edge of a freestanding or wall-hung lavatory is 4" (102 mm).

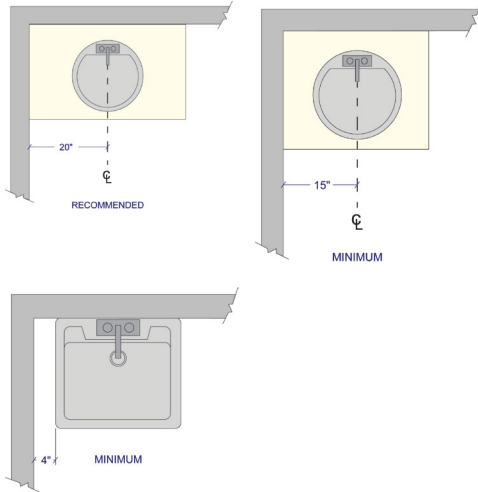
**Code Requirement:**

- The minimum distance from the centerline of the lavatory to a wall is 15" (381 mm). (IRC P 2705.1.5)

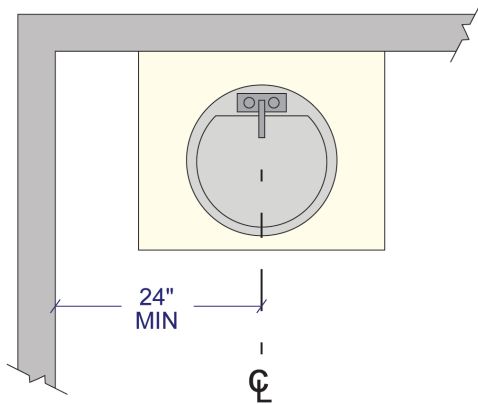
**Access Standard**

**ICC A117.1–2009 Reference:**

- To ensure a clear floor space (30" x 48") (762 mm x 1219 mm), the centerline of the lavatory must be a minimum 24" (610 mm) from the wall. (1004.11.3)



**ACCESS STANDARD**

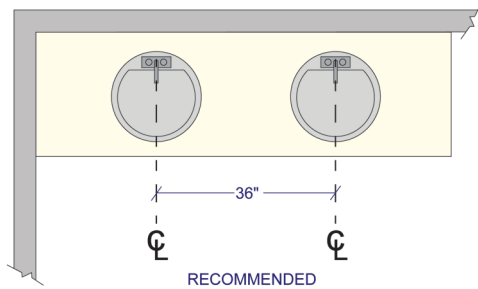


## BATHROOM PLANNING GUIDELINE 6

### Double-Lavatory Placement

#### Recommended:

The distance between the centerlines of two lavatories should be at least 36" (914 mm). The minimum distance between the edges of two freestanding or wall-hung lavatories is 4" (102 mm).



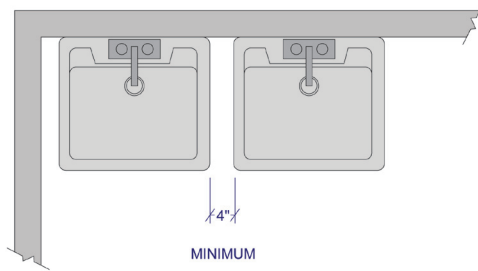
#### Code Requirement:

- The minimum distance between the centerlines of two lavatories should be at least 30" (762 mm). (IRC P 2705.1.5)

### Access Standard

#### Recommended:

Bathroom guideline recommendation meets Access Standard.



## BATHROOM PLANNING GUIDELINE 7

### Lavatory/Vanity Height

#### Recommended:

The height for a lavatory varies between 32" and 43" (813 mm and 1092 mm) to fit the user.

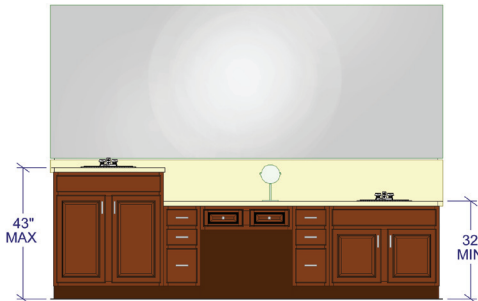
#### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Lavatory controls should be within the user's reach and operable with minimal effort.



**ICC A117.1–2009 Reference:**

- The front of the lavatory sink should be no more than 34" (864 mm) above the floor, measured to the higher of the fixture or counter surface. (606.3)
- Lavatory controls should be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. (309.4)

**BATHROOM PLANNING GUIDELINE 8**

**Counter**

**Recommended:**

Specify clipped or round corners rather than sharp edges on all counters.

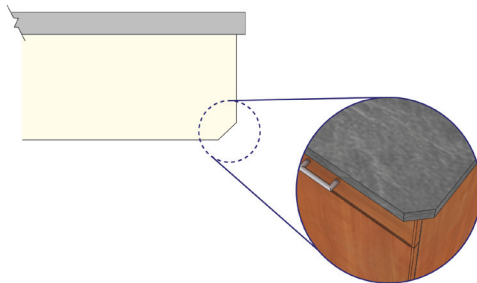
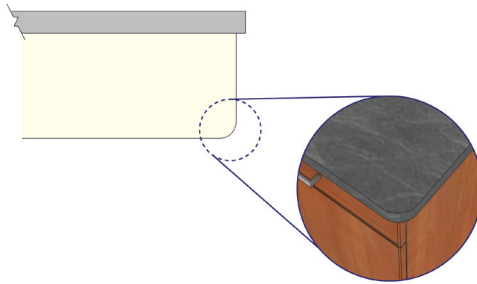
**Code Requirements:**

State or local codes may apply.

**Access Standard**

**Recommended:**

Bathroom guideline recommendation meets Access Standard.



## BATHROOM PLANNING GUIDELINE 9

### Shower Size

#### Recommended:

The interior shower size is at least 36" × 36" (914 mm × 914 mm).

#### Code Requirement:

- The minimum interior shower size is 30" × 30" (762 mm × 762 mm) or 900 square inches (5806 cm<sup>2</sup>), in which a disc of 30" (762 mm) in diameter must fit. (IRC P 2708.1)
- **The shower compartment access and egress opening shall have a clear and unobstructed finished width of not less than 22" (559 mm). (IRC P 2708.1.1)**

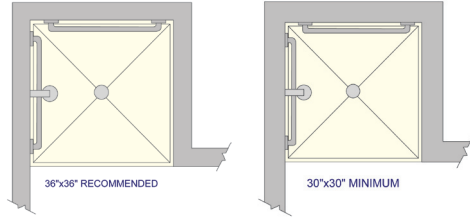
### Access Standard

#### Recommended:

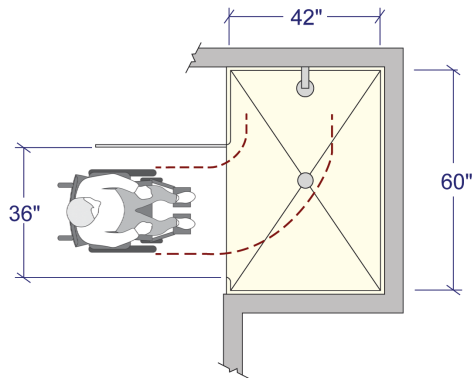
- Plan either a transfer or a roll-in shower.
- Roll-in shower entries: For a 60" (1524 mm) deep shower, a 32" (813 mm) wide entry is adequate. For a 42" (1067 mm) deep shower, the entry must be at least 36" (914 mm) wide to allow for turning space.

#### ICC A117.1–2009 Reference:

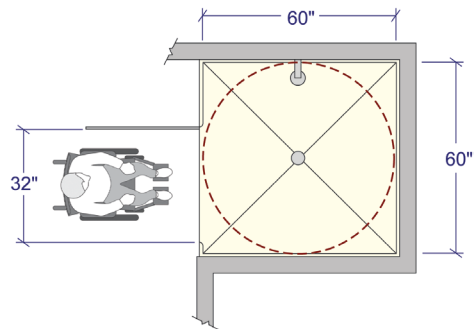
- Transfer shower compartments must have an inside finished dimension of 36" × 36" (914 mm × 914 mm), and have a minimum of 36" (914 mm) wide entry on the face of the shower compartment. A folding seat must be provided within the 36" × 36" (914 mm × 914 mm) area. (608)



ACCESS STANDARD



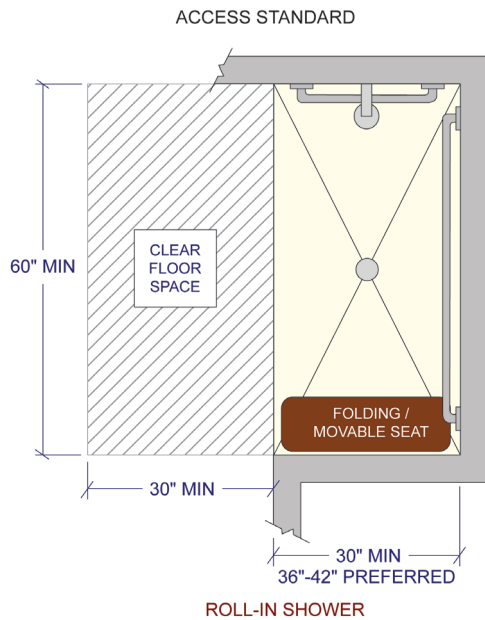
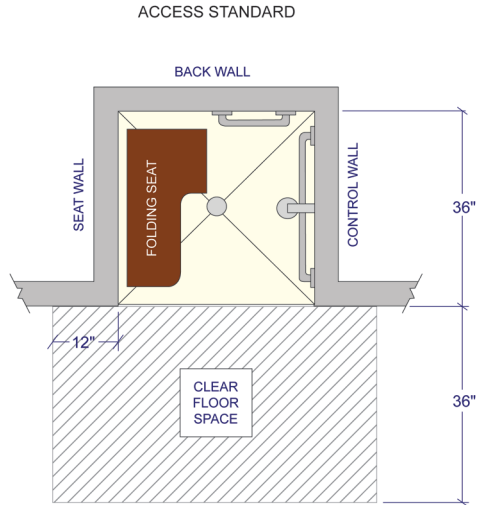
ACCESS STANDARD



TRANSFER TYPE SHOWER

Bathroom Planning Guideline 9 (continued)

- Roll-in shower compartments should have a minimum inside finished dimension of at least 30" (762 mm) wide by 60" (1524 mm) deep, and have a minimum of a 60" (1524 mm) wide entry on the face of the shower compartment. (608.2.2)

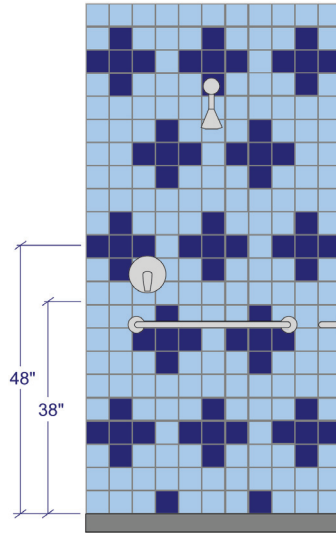




## Tub/Shower Controls

**Recommended:**

- a. The shower controls should be accessible from both inside and outside the shower spray and be located between 38" and 48" (965 mm and 1219 mm) above the floor, depending on user's height.
- b. The tub controls should be accessible from both inside and outside the tub and be located between the rim of the bathtub and 33" (838 mm) above the floor.



**Code Requirement:**

State or local codes may apply.

## Access Standard

**Recommended:**

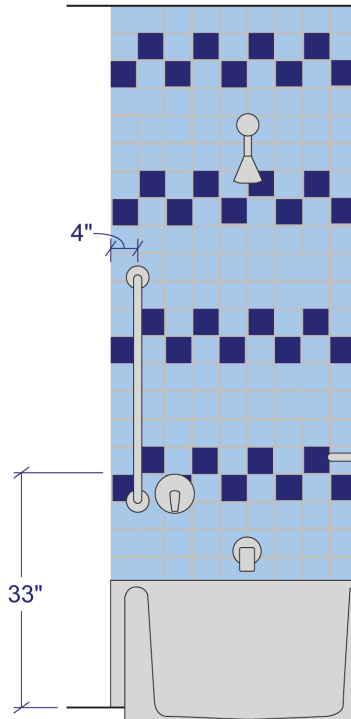
Controls should be offset toward the room and easy to grasp, as with lever or loop handles.

Hot and cold should be identified with red and blue indicators.

Provide a handheld spray at a height accessible to the user.

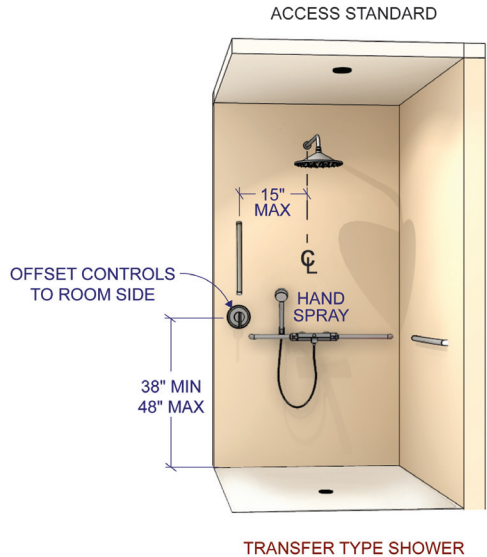
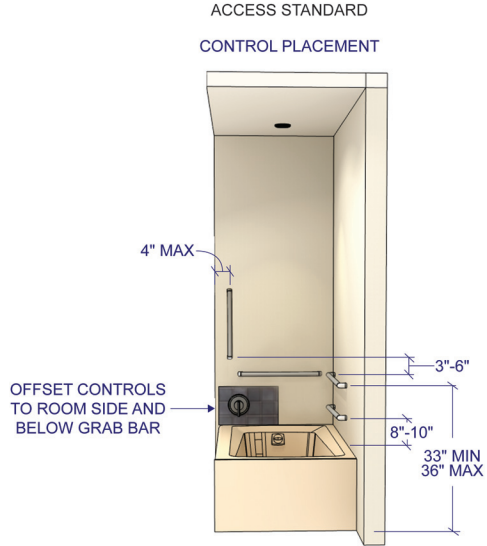
**ICC A117.1–2009 Reference:**

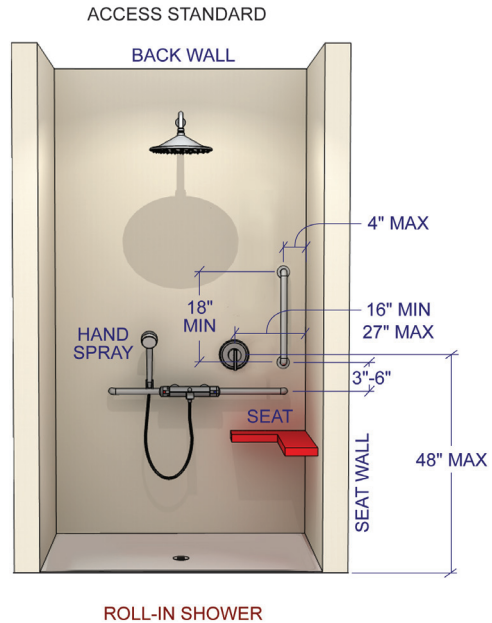
- Tub/shower controls must be operable with one hand and not require tight grasping. (309.4)
- Controls must be on an end wall of the bathtub, between the rim and grab bar, and between the open side of the bathtub and the midpoint of the width of the tub. (607.5)



Bathroom Planning Guideline 10 (continued)

- In transfer shower compartments, controls and the handheld shower head should be on the control wall opposite the seat, between 38" and 48" (965 mm and 1219 mm) above the shower floor, within 15" (381 mm) of the centerline of the control wall toward the shower opening. (608.4.1)
- Controls in roll-in showers should be above the grab bar, but no higher than 48" (1219 mm) above the shower floor and minimum 16" (406 mm), maximum 27" (686 mm) from the end wall behind the seat. (608.4.2)
- A handheld spray unit must be provided with a hose at least 59" (1499 mm) long that can be used as a fixed showerhead and as a handheld shower. If an adjustable height showerhead mounted on a vertical bar is used, the bar should not obstruct the use of the grab bars. (608.5)





## BATHROOM PLANNING GUIDELINE 11

### Water Temperature Safety

**Recommended:**

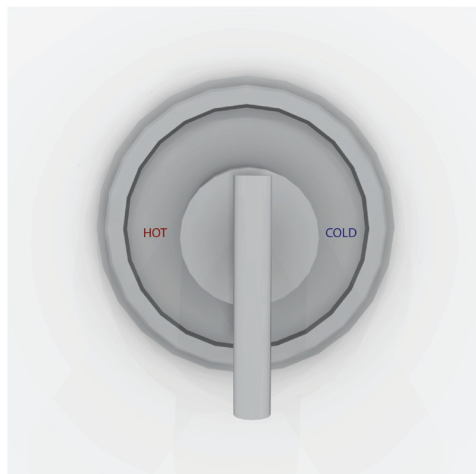
See below.

**Code Requirement:**

Shower and tub/shower control valves must be one of the following:

- Pressure balanced.
- Thermostatic mixing.
- Combination pressure balance/thermostatic mixing valve types. (IRC P 2708.4)

The valve must have a high-limit stop to prevent water temperatures above 120°F (49°C). (IRC P 2708.4)



Hot water delivered to bathtubs and whirlpool bathtubs shall be limited to a temperature of not more than 120°F (49°C). (IRC P 2713.3)

Hot water delivered to bidets shall be limited to no more than 110°F (43°C). (IRC P 2721.2)

## Access Standard

### Recommended:

Bathroom guideline code requirement meets Access Standard. (607.8, 608.8)

## BATHROOM PLANNING GUIDELINE 12

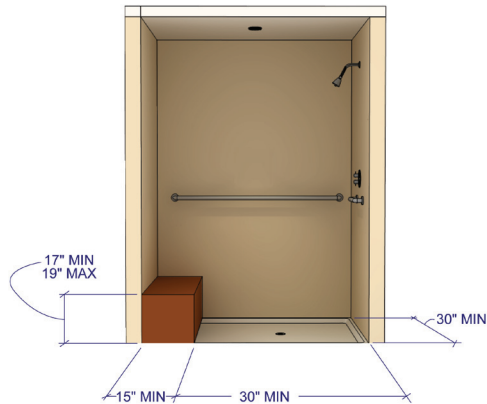
### Shower/Tub Seat

#### Recommended:

Plan a seat within the shower that is 17"–19" (432 mm–483 mm) above the shower floor and 15" (381 mm) deep.

#### Code Requirement:

- Shower seat must not infringe on the minimum interior size of the shower (900 square inches) (5806 cm<sup>2</sup>). (IRC P 2708.1)



## Access Standard

### Recommended:

Plan a seat in the shower and/or bathtub to fit the parameters of the space and the needs of the user.

#### ICC A117.1–2009 Reference:

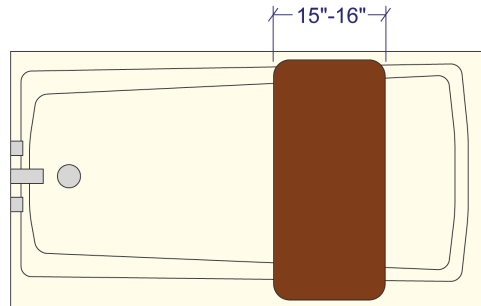
- A removable in-tub seat should be at least 15" to 16" (381 mm

*Bathroom Planning Guideline 12 (continued)*

to 406 mm) deep and capable of secure placement. (610.2)

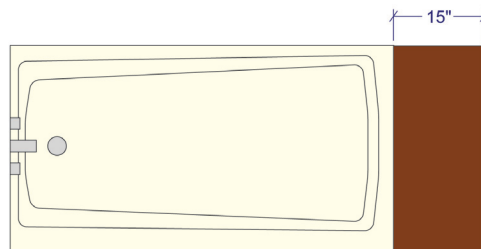
- A permanent tub seat should be at least 15" (381 mm) deep and positioned at the head end of the bathtub. The top of the seat should be between 17" and 19" (432 mm and 483 mm) above the bathroom floor. (610.2)
- A shower seat should be 15" to 16" deep (381 mm to 406 mm) and 17" to 19" (432 mm and 483 mm) above the shower floor (to top of the seat). The seat should extend from the back wall to a point within 3" (76 mm) of the entry. In a transfer shower, the seat should be on the wall opposite the control wall. In a roll-in shower, the fold-down seat should be on a wall, extending from the control wall to the shower entry. (ICC 608, 610)
- The materials and installation of the shower and/or bathtub seat must support a minimum of 250 pounds (113 kg) of pressure. (610.4)

**ACCESS STANDARD**



**REMOVABLE IN-TUB SEAT**

**ACCESS STANDARD**



**PERMANENT SEAT**

## BATHROOM PLANNING GUIDELINE 13

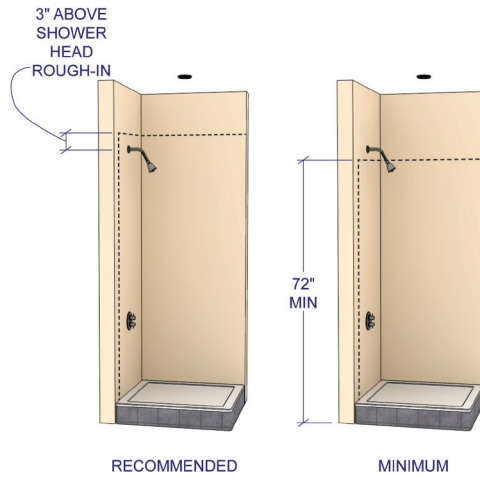
### Tub/Shower Surround

#### Recommended:

The wall area above a tub or shower pan should be covered in a waterproof material extending at least 3" (76 mm) above the showerhead rough-in.

#### Code Requirement:

- The wall area above a tub or shower pan must be covered in a waterproof material to a height of not less than 72" (1829 mm) above the finished floor. (IRC R 307.2)



### Access Standard

#### Recommended:

Bathroom guideline recommendation meets Access Standard.

## BATHROOM PLANNING GUIDELINE 14

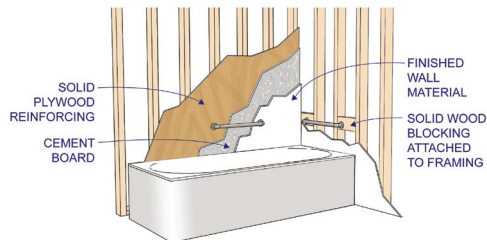
### Grab Bars

#### Recommended:

Plan grab bars to facilitate access to and maneuvering within the tub and shower areas.

Tub and shower walls should be prepared (reinforced) at time of construction to allow for installation of grab bars to support a static load of 250 lbs (113 kg).

Grab bars should be placed at 33" to 36" (838 mm to 914 mm) above the floor.



Grab bars must be  $1\frac{1}{4}$ " to 2" (32 mm to 60 mm) in diameter and extend  $1\frac{1}{2}$ " (38 mm) from the wall.

## Access Standard

### Recommended:

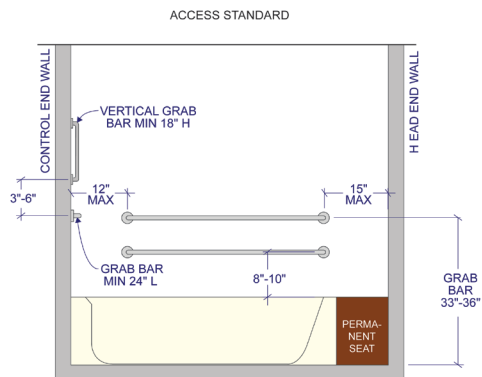
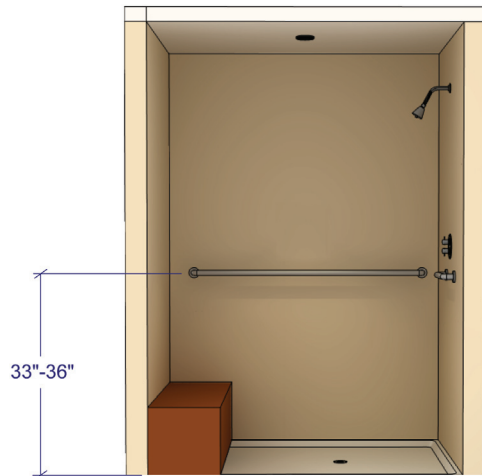
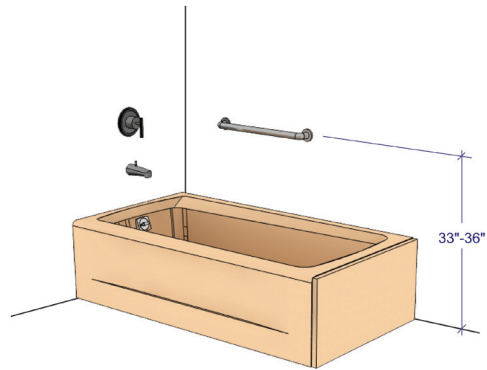
Walls throughout the bathroom should be prepared (reinforced) at time of construction to allow for installation of grab bars to support a minimum of 250 lbs. (113 kg) of force in any direction.

Grab bars should be placed according to the needs and height of the user, particularly near the tub/shower and the toilet.

### ICC A117.1–2009 Reference:

Grab bars should be installed at the tub, shower, and toilet according to the following:

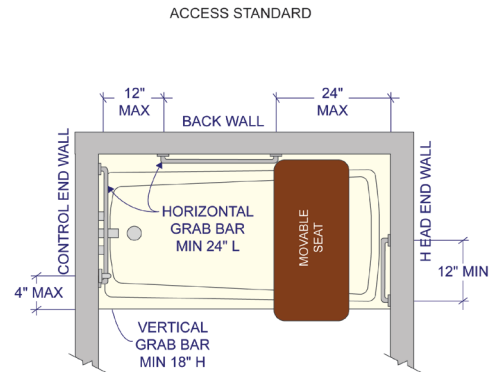
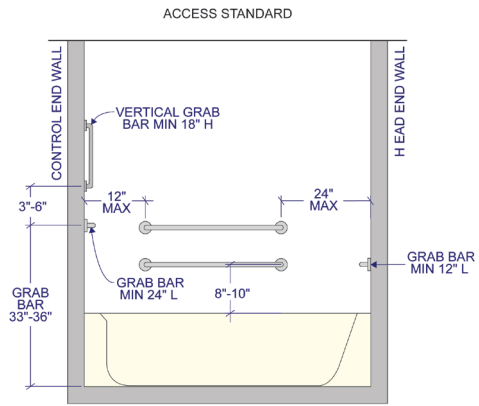
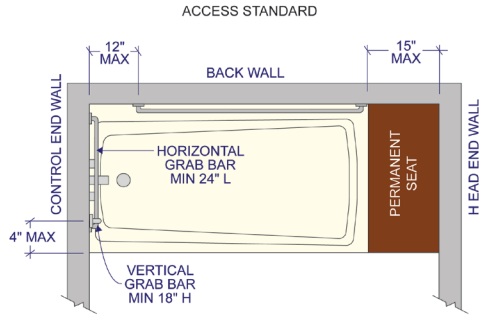
- Bathtubs with permanent seats: Two horizontal grab bars should be provided on the back wall, one 33" to 36" (838 mm to 914 mm) above the floor and the other 8" to 10" (203 mm to 254 mm) above the rim of the bathtub. Each grab bar should be no more than 15" (381 mm) from the head end wall or 12" (305 mm) from the control end wall. A grab bar 24" (610 mm) long should be provided on the control end wall at the front edge of the bathtub. A vertical grab bar minimum 18" (457 mm) shall be placed 3" to 6" (76 mm to



Bathroom Planning Guideline 14 (continued)

152 mm) above and 4" (102 mm) maximum from the front edge of the horizontal bar. (607.4.1)

- Bathtubs without permanent seats: Two horizontal grab bars should be provided on the back wall, one 33" to 36" (838 mm to 914 mm) above the floor and the other 8" to 10" (203 mm to 254 mm) above the rim of the bathtub. Each grab bar should be at least 24" (610 mm) long and no more than 24" (610 mm) from the head end wall or 12" (305 mm) from the control end wall. A horizontal grab bar 24" (610 mm) long should be provided on the foot end wall at the front edge of the bathtub. A horizontal grab bar 12" (305 mm) minimum in length should be provided on the head end wall at the front edge of the bathtub. On the control wall, a vertical grab bar minimum 18" (457 mm) shall be placed 3" to 6" (76 mm to 152 mm) above and 4" (102 mm) maximum from the front edge of the horizontal. (607.4.2)
- Transfer showers: Grab bars should be mounted in a horizontal position, between 33" and 36" (838 mm and 914 mm) above the shower floor, across the control wall, and on the back wall to a point 18" (457 mm) from the seat wall. A vertical grab bar minimum 18" (457 mm) shall be placed 3" to 6" (76 mm to 152 mm) above

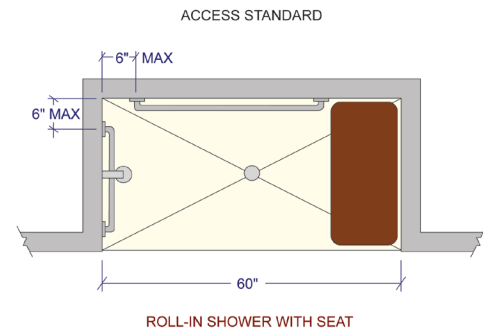
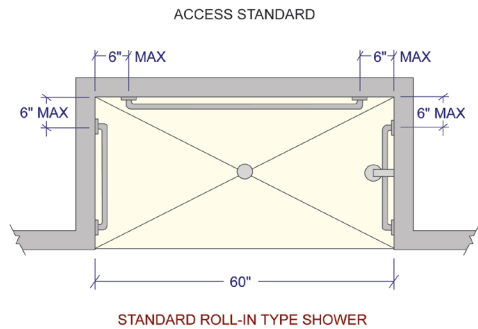
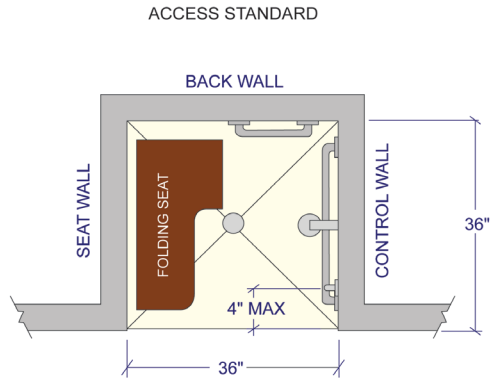


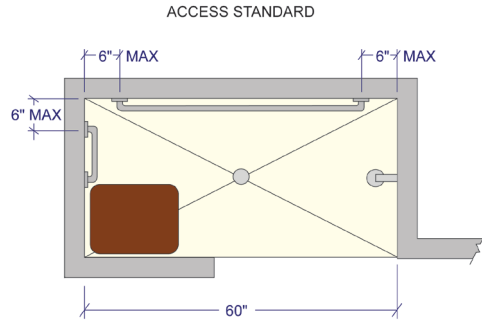


Bathroom Planning Guideline 14 (continued)

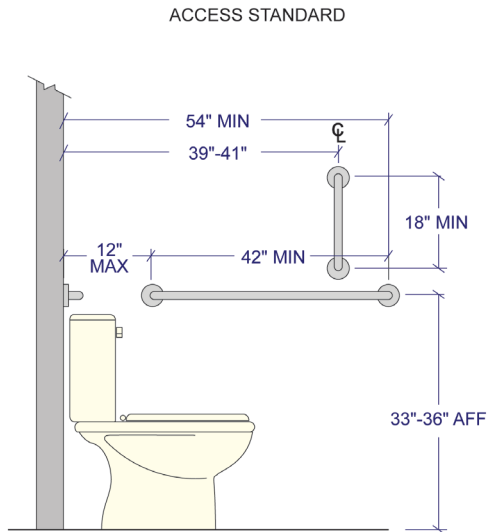
the horizontal bar and 4" (102 mm) maximum from the front edge of the shower. (608.3)

- Roll-in shower: Grab bars should be mounted in a horizontal position, between 33" and 36" (838 mm and 914 mm) above the floor, on all three walls of the shower. An exception is that there be no grab bar on the length of wall behind and for the length of the seat. Grab bars should be no more than 6" (152 mm) from each adjacent wall. (608.3.2)
- Toilet: Grab bars should be provided on the rear wall and on the sidewall closest to the toilet, 33" to 36" (838 mm to 914 mm) high. Sidewall grab bar should be at least 42" (1067 mm) long, located between 12" (305 mm) and 54" (1372 mm) from the rear wall. In addition, a vertical grab bar, 18" (457 mm) minimum length, shall be mounted with the bottom of the bar 39" to 41" (991 mm to 1041 mm) AFF and centerlined between 39" and 41" (991 mm and 1041 mm) from the rear wall. The rear grab bar should be at least 24" (610 mm) long, centered on the toilet. Where space permits, the bar should be at least 36" (914 mm) long, with the additional length provided on the transfer side of the toilet. (604.5)

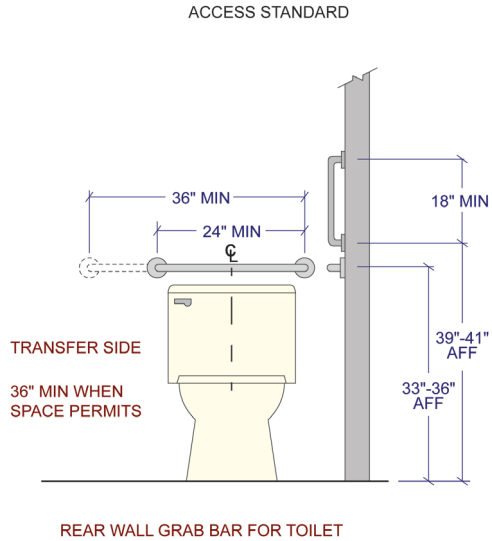




ALTERNATE ROLL-IN TYPE SHOWER



SIDE WALL GRAB BARS FOR TOILET



## BATHROOM PLANNING GUIDELINE 15

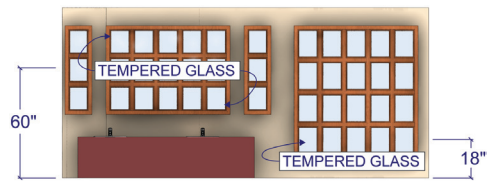
### Glazing

**Recommended:**

See Code Requirement.

**Code Requirement:**

- Glass used in tub or shower enclosures (e.g., tub or shower door) or partitions must be tempered or an approved equal and must be permanently marked as such. (IRC R 308.1)
- If the tub or shower surround has glass windows or walls, the glazing must be tempered glass or approved equal when the bottom edge of glazing is less than 60" (1524 mm) above any standing or walking surface. (IRC R 308.4.5)
- Any glazing (e.g., windows or doors) whose bottom edge is less than 18" (457 mm) above



the floor must be tempered glass or approved equal. (IRC R 308.4.3)

## Access Standard

### Recommended:

Consider line of sight of user when planning height of bottom of glazing.

## BATHROOM PLANNING GUIDELINE 16

## Tub/Shower Door

### Recommended:

See Code Requirement.

### Code Requirement:

Hinged shower doors shall open outward. (IRC P 2708.1)

## Access Standard

### Recommended:

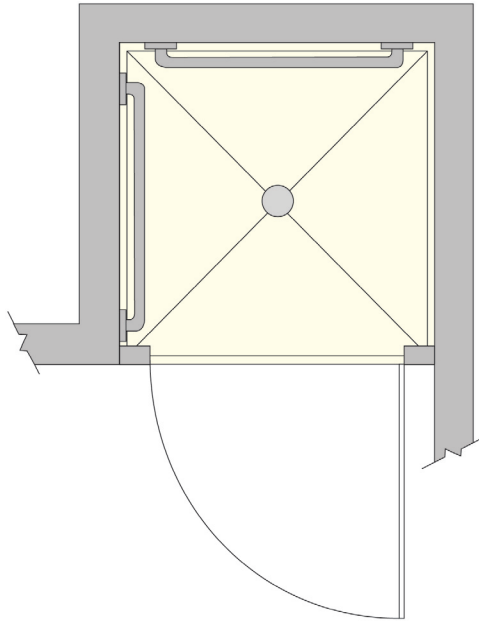
Minimize thresholds at the shower entry to no more than  $\frac{1}{2}$ " (13 mm).

### ICC A117.1–2009

#### Requirement:

- Shower compartment thresholds should be no more than  $\frac{1}{4}$ " to  $\frac{1}{2}$ " (6 mm to 13 mm) high.

Changes in level between  $\frac{1}{4}$ " and  $\frac{1}{2}$ " (6 mm to 13 mm) high should be beveled with a slope not steeper than 1:2. (608.6.303)



## BATHROOM PLANNING GUIDELINE 17

### Steps

**Recommended:**

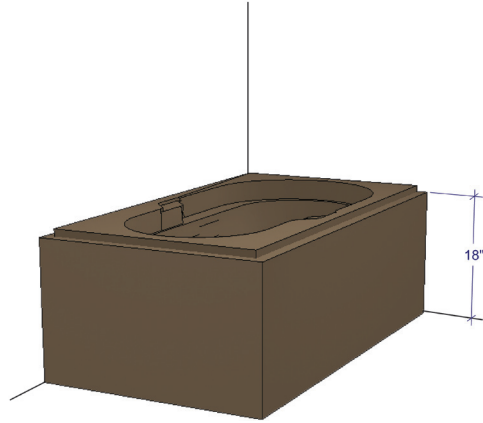
Steps should not be placed outside a tub.

If steps are used, a grab bar/handrail is mandatory.

**Access Standard**

**Recommended:**

Bathroom guideline recommendation meets Access Standard.



## BATHROOM PLANNING GUIDELINE 18

### Flooring

**Recommended:**

Slip-resistant surfaces should be specified for the general bath flooring, shower floors, and tub/shower bottoms.

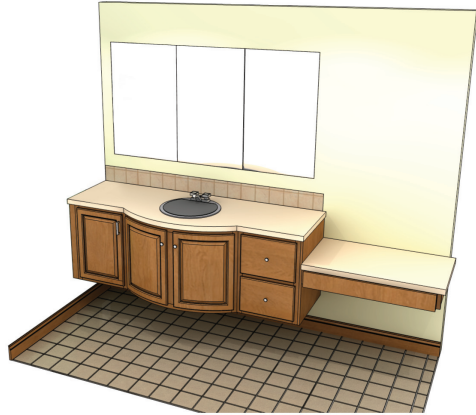
**Code Requirement:**

State or local codes may apply.

**Access Standard**

**Recommended:**

Bathroom guideline recommendation meets Access Standard.



## BATHROOM PLANNING GUIDELINE 19

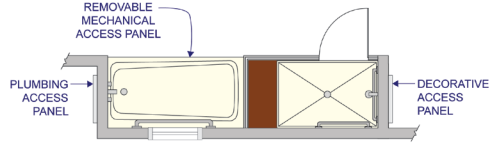
### Equipment Access

#### Recommended:

See below.

#### Code Requirement:

- All equipment, including access panels, must be installed as per manufacturers' specifications. (IRC P 2720.1)
- All manufacturers' instructions must be available for installers and inspectors and left for homeowners. (IRC P 2720.4)



### Access Standard

#### Recommended:

Equipment controls should be placed between 15" and 48" (381 mm and 1219 mm) above the finished floor.

## BATHROOM PLANNING GUIDELINE 20

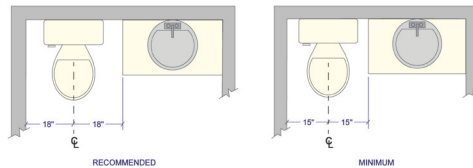
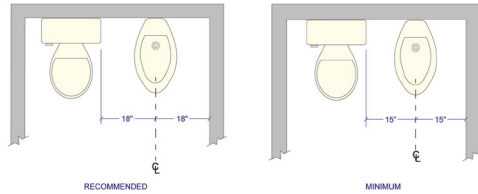
### Toilet/Bidet Placement

#### Recommended:

The distance from the centerline of toilet and/or bidet to any bath fixture, wall, or other obstacle should be at least 18" (457 mm).

#### Code Requirement:

- A minimum distance of 15" (381 mm) is required from the centerline of toilet and/or bidet to any bath fixture, wall, or other obstacle. (IRC R 307.1, IRC P 2705.1)



## Access Standard

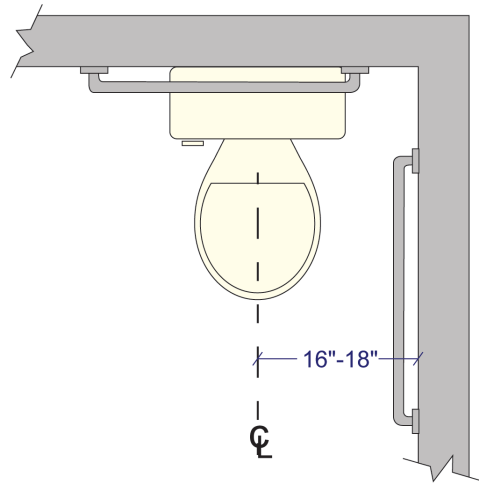
### Recommended:

Consider user height and ability when determining toilet height.

### ICC A117.1–2009 Reference:

- The toilet should be centered 16" to 18" (406 mm to 457 mm) from a side wall. (1003.11.2.4)
- The toilet seat should be between 15" and 19" (381 mm and 483 mm) from the floor. (1003.11.2.4.5)

### ACCESS STANDARD



## BATHROOM PLANNING GUIDELINE 21

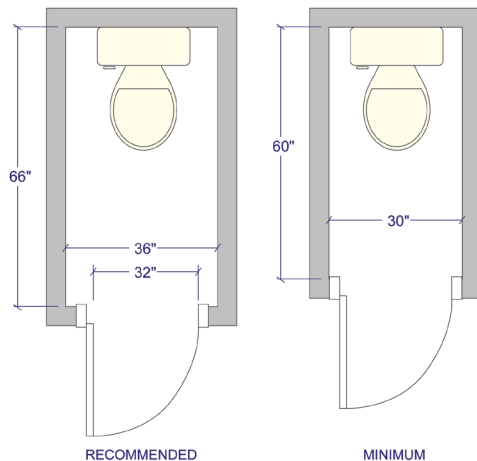
## Toilet Compartment

### Recommended:

The size for a separate toilet compartment should be at least 36" x 66" (914 mm x 1676 mm) with a swing-out or pocket door.

### Code Requirement:

- The minimum size for a separate toilet compartment is 30" x 60" (762 mm x 1524 mm). **Toilet shall not be set closer than 15" (381 mm) from its center to any side wall. There shall be at least a 21" (533 mm) clearance in front of the toilet to any wall, fixture, or door.** (IPC 405.3.1)



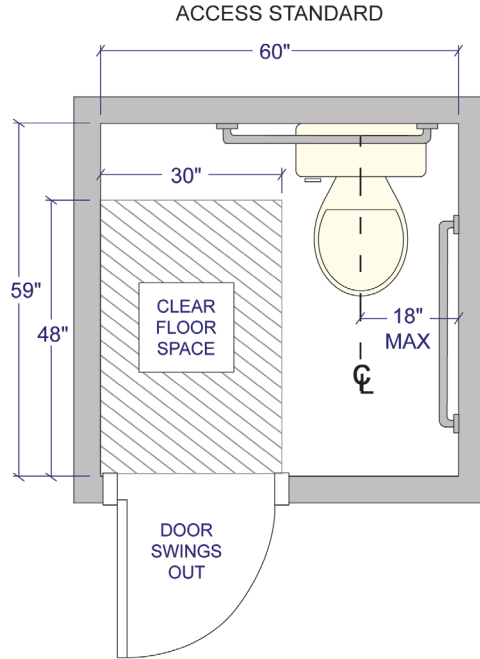
## Access Standard

### Recommended:

To maximize access, provide privacy in the toileting area without using a separate compartment.

### ICC A117.1–2009 Reference:

- Wheelchair-accessible compartments should be at least 60" (1524 mm) wide, measured perpendicular to the sidewall, and 56" (1422 mm) deep for a wall-hung toilet and 59" (1499 mm) deep for a floor-mounted toilet measured perpendicular to the rear wall. (604.7)



## BATHROOM PLANNING GUIDELINE 22

## Storage

### Recommended:

Provide adequate, accessible storage for toiletries, bath linens, grooming, and general bathroom supplies at point of use.

### Code Requirement:

State or local codes may apply.

## Access Standard

### Recommended:

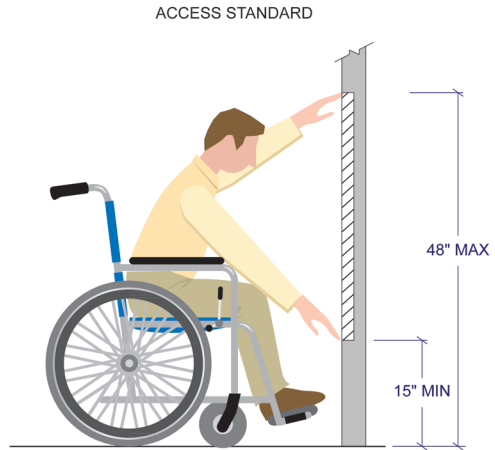
Plan storage of frequently used items between 15" and 48" (381 mm and 1219 mm) above the finished floor.



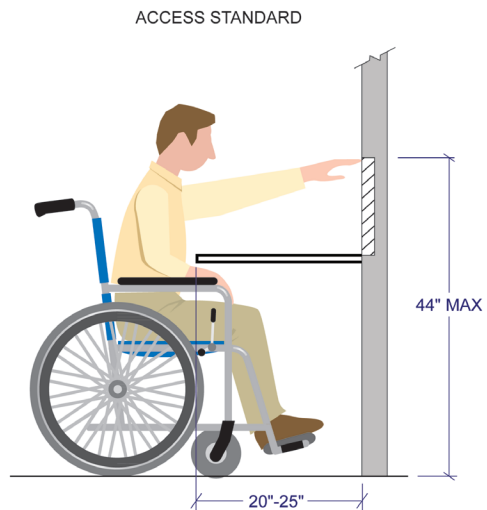


**ICC A117.1–2009 Reference:**

- Where a forward or side reach is unobstructed, the high reach should be 48" (1219 mm) maximum, and the low reach should be 15" (381 mm) minimum above the floor. (308.2.1, 308.3.1)
- Where a forward or side reach is obstructed by a 20" to 25" (508 mm to 635 mm) deep counter, the high reach should be 44" (1118 mm) maximum. (308.2.2, 308.3.2)
- Door/drawer pulls should be operable with one hand, require only a minimal amount of strength for operation, and should not require tight grasping. (309.4)



UNOBSTRUCTED FORWARD REACH



OBSTRUCTED HIGH FORWARD REACH

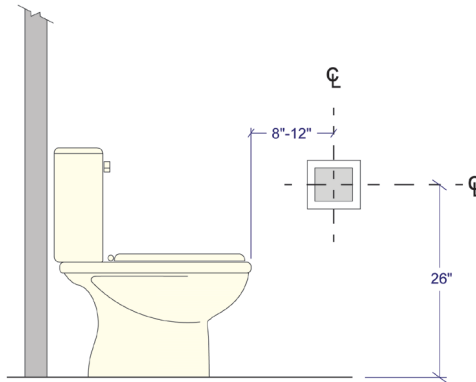
## Accessories

### Recommended:

- Place a mirror above or near the lavatory at a height that takes the user's eye height into consideration.
- The toilet paper holder should be located 8" to 12" (203 mm to 305 mm) in front of the edge of the toilet bowl, centered at 26" (660 mm) above the floor.
- Additional accessories, such as towel holders and soap dishes, should be conveniently located near all bath fixtures.

### Code Requirement:

State or local codes may apply.



ACCESS STANDARD

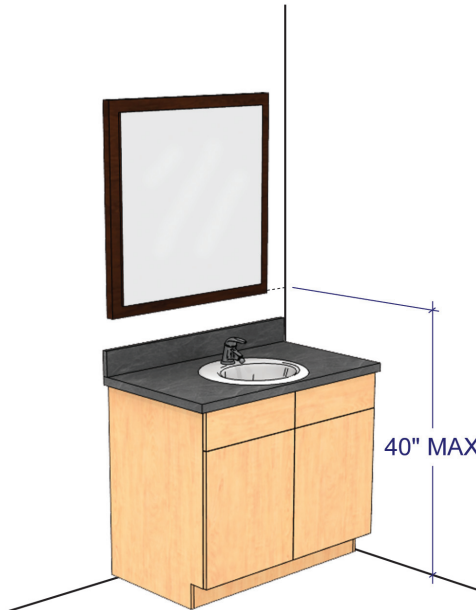
## Access Standard

### Recommended:

- Plan a full-height mirror to provide reflection at eye level, regardless of the user's height or stature.
- See Code Reference on toilet paper placement.
- Accessories should be placed between 15" and 48" (381 mm and 1219 mm) above the floor, and operable with a closed fist and with minimal effort.

### ICC A117.1–2009 Reference:

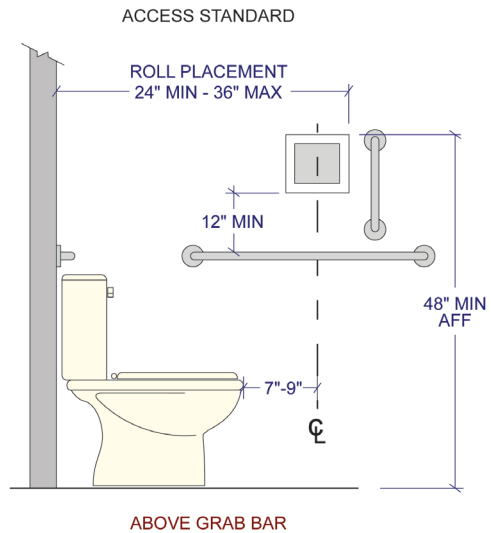
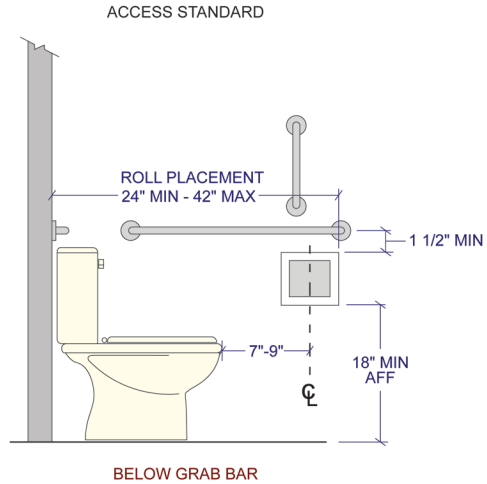
- Mirrors above lavatories should have the bottom edge of the reflecting surface no more than 40" (1016 mm) above the floor. (603.3)



Bathroom Planning Guideline 23 (continued)

- The toilet paper holder should be 24" to 42" (610 mm to 1067 mm) off the rear wall and between 18" and 48" (457 mm and 1219 mm) above the floor with a clearance of at least 1½" (38 mm) below or 12" (305 mm) above the grab bar. (604.7)

See Guideline 22 Access Standard for reach specifications.



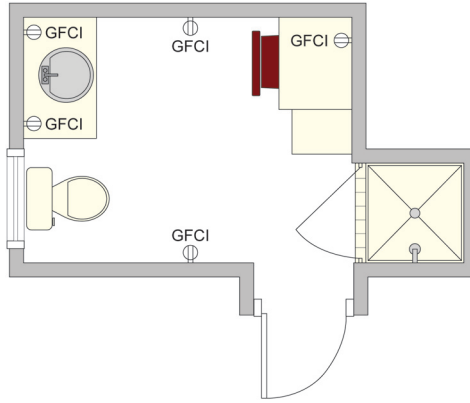
## Electrical Receptacles

### Recommended:

All GFCI receptacles should be located at electrical appliance points of use.

### Code Requirement:

- At least one GFCI-protected receptacle must be installed within 36" (914 mm) of the outside edge of the lavatory. **If wall placement is not possible, the receptacle may be located on the side or face of the basin cabinet. The receptacle shall be located not more than 12" (305 mm) below the top of the basin.** (IRC E 3901.6)
- All receptacles must be protected by ground-fault circuit interrupters. (IRC 3902.1)
- A receptacle shall not be installed within or directly over a bathtub or shower stall. (IRC E 4002.11)
- **All receptacles that are located within 6' (1829 mm) of the outside edge of a bathtub or shower stall shall have ground-fault circuit-interrupter protection. (IRC E 3902.8)**
- Switches shall not be installed within wet locations in the tub or shower spaces or within reach while standing in the tub or shower, unless installed as part of the listed tub or shower assembly. (IRC E 4001.7)



## Access Standard

### Recommended:

See Code Reference.

### ICC A117.1–2009 Reference:

See Guideline 22 Access Standard for specifications for placement within reach range.

## BATHROOM PLANNING GUIDELINE 25

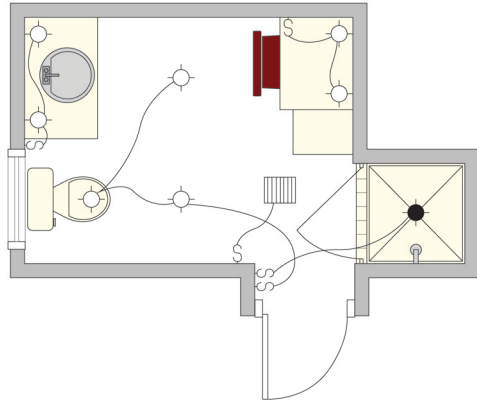
## Lighting

### Recommended:

In addition to general lighting, task lighting should be provided for each functional area in the bathroom (e.g., grooming, showering).

### Code Requirement:

- At least one wall switch–controlled light must be provided. Switch must be placed at the entrance of the bathroom. (IRC E 3903.2)
- All light fixtures installed within tub and shower spaces should be marked “suitable for damp/wet locations.” (IRC E 4003.9, 4003.10)
- Hanging fixtures cannot be located within a zone of 3’ (914 mm) horizontally and 8’ (2438 mm) vertically from the top of the bathtub rim or shower stall threshold. (IRC E 4003.11)



## Access Standard

### Recommended:

Task lighting at the vanity should be beside the mirror and at eye level, with the lamp not visible to the eye.

Lighting controls should be between 15" and 48" (381 mm and 1219 mm) above the floor and operable with a closed fist and with minimal effort.

### ICC A117.1–2009 Reference:

Operable parts should be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts should be 5 pounds (2 kg) maximum. (309.4)

See Guideline 22 Access Standard for specifications for reach range for controls.

## BATHROOM PLANNING GUIDELINE 26

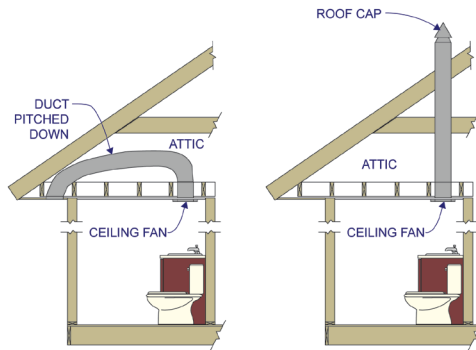
## Ventilation

### Recommended:

Plan a mechanical exhaust system, vented to the outside, for each enclosed area.

### Code Requirement:

- Minimum ventilation for the bathroom is to be a window of at least 3 square feet (0.27 m<sup>2</sup>) of which 50% is operable, or a mechanical ventilation system of at least 50 cubic feet



(15,240 cubic mm) per minute (cfm) exhausted to the outside. (IRC R 303.3, IRC M 1507.2, IRC M 1507.4)

- **The air removed by every mechanical exhaust system shall be discharged to the outdoors. Air shall not be exhausted into attic, soffit, ridge vent, or crawlspace. (IRC M 1501.2)**

## Access Standard

### Recommended:

Ventilation controls should be placed 15" to 48" (381 mm to 1219 mm) above the floor, operable with minimal effort, easy to read, and with minimal noise pollution.

### ICC A117.1–2009 Reference:

See Guideline 25 Access Standard for operable controls.

See Guideline 22 Access Standard for reach range for controls.

## BATHROOM PLANNING GUIDELINE 27

## Heat

### Recommended:

A supplemental heat source (e.g., heat lamp, toekick heater, or floor heat) should be considered.

### Code Requirement:

- All bathrooms should have an appropriate heat source to maintain a minimum room temperature of 68° Fahrenheit (20° Celsius). (IRC R 303.9)



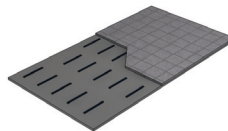
HEAT LAMP



HEAT / FAN / LIGHT



TOEKICK HEATER



RADIANT FLOOR SYSTEM



WALL HEATER

- **Electrically heated appliances and equipment shall be installed with the required clearances to combustible materials. (IRC E 4101.2)**

## **Access Standard**

### **Recommended:**

See Code Reference.

### **ICC A117.1–2009 Reference:**

See Guideline 25 Access Standard for operable controls.

See Guideline 22 Access Standard for reach range for controls.