

BATH PLANNING GUIDELINES

The NKBA Kitchen & Bathroom Planning Guidelines with Access Standards is a collection of illustrations and planning suggestions to aid professionals in the safe and effective planning of kitchens and bathrooms.

These guidelines are also included in NKBA Professional Resource Library Kitchen Planning and Bath Planning volumes. Designers and those interested in becoming kitchen and bath design professionals benefit by studying the complete body of knowledge found in the NKBA Professional Resource Library.

These flexible and easy-to-understand guidelines were developed under the guidance of the NKBA by a committee of professionals. The guidelines published in this booklet reflect a composite of the historical review, current industry environment, future trends, consumer lifestyles, new research, new building codes, and current industry practices.

The purpose of the guidelines is to serve as the basis for:

- Ensuring building code compliance
- Recognizing the importance of consumer health, safety, and welfare in kitchen and bath design
- Supporting sound kitchen and bath design practices
- Testing core kitchen and bath competencies
- Training designers in academic and educational programs

Brought to you by

1st KCMA Environmental Stewardship
Program Participant

CANYON CREEK
Cabinet Company

www.canyoncreek.com

EPA Evergreen Award Recipient
ISO 9001 Certified

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.

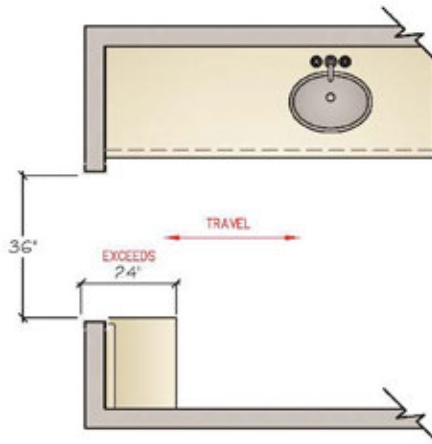
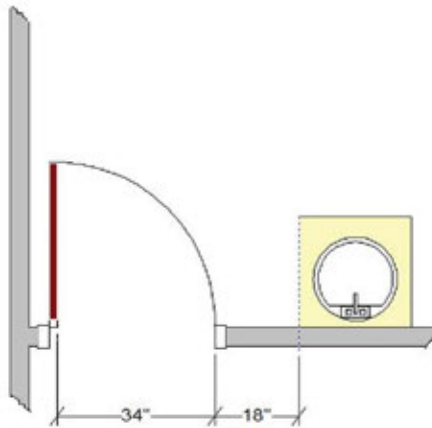
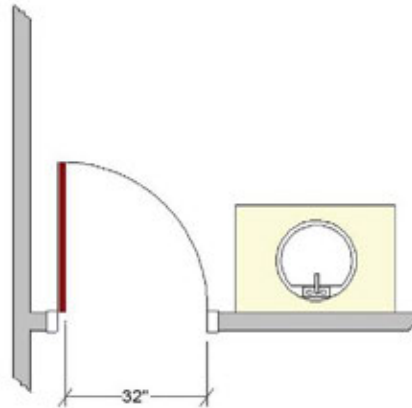
Access Standard

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 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)



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)

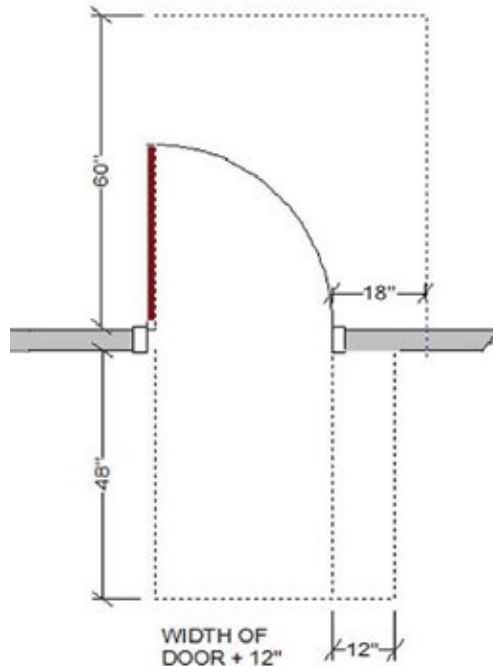


Access Standard

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" by 60" (457 mm x 1524 mm). (404.2.3)
- The minimum clearance on the push side of the door should be the width of the door plus 12" x 48" (305 mm x 1219 mm). (404.2.3)



FRONT APPROACH TO SWING DOORS

Ceiling Height

Recommended:

See Code Requirement.

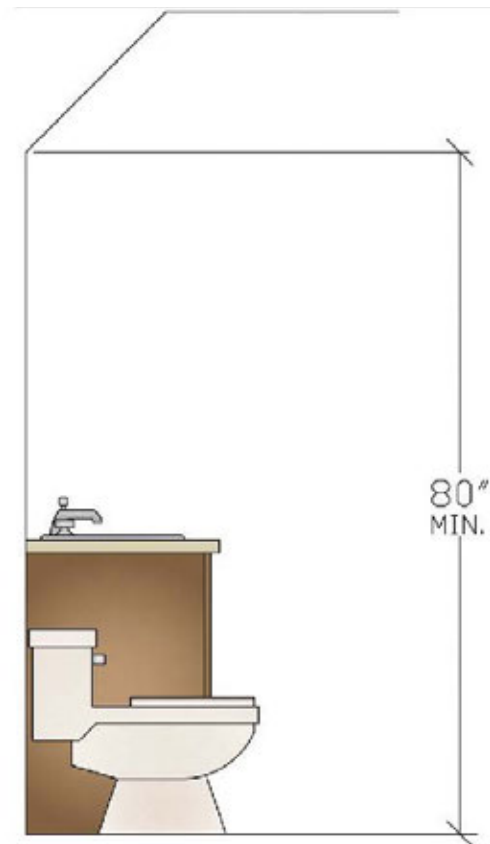
Code Requirement:

- Bathrooms shall have a minimum floor to ceiling height of 80" (2032 mm) over the fixture and at the front clearance area for fixtures. (IRC 305.1)
- A shower or tub equipped with a shower head shall have a minimum floor to ceiling height of 80" (2032 mm) above a minimum area 30" × 30" (762 mm × 762 mm) at the shower head. (IRC 305.1)

Access Standard

Recommended:

Bathroom Guideline code requirement meets Access Standard.



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:

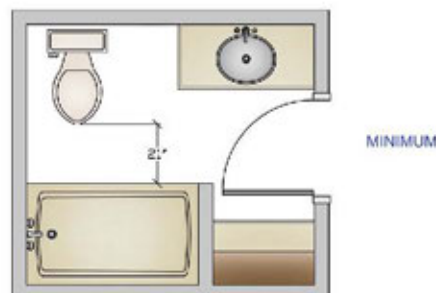
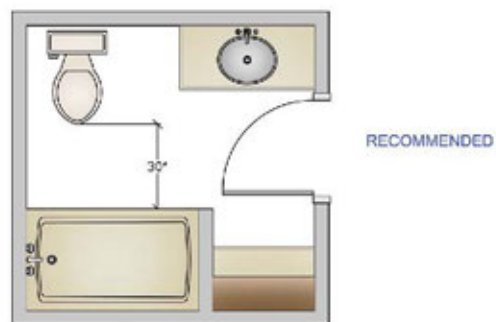
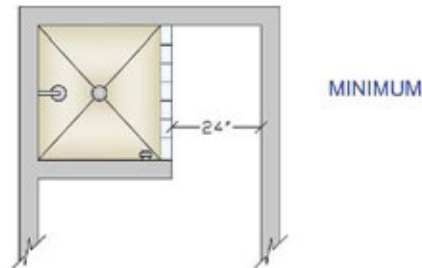
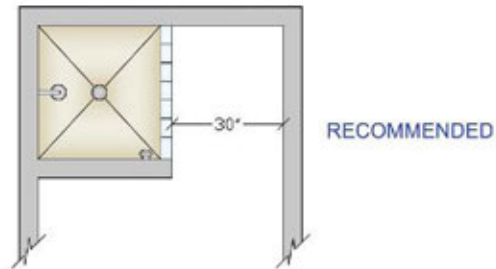
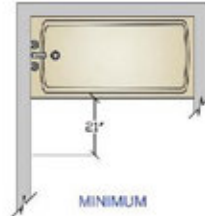
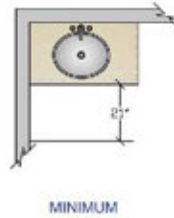
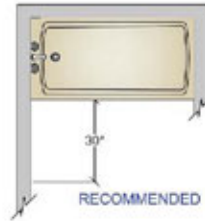
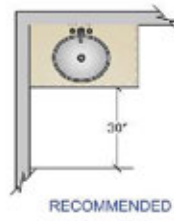
Plan a minimum clear floor space of 30" x 48" (762 mm x 1219 mm) centered at each fixture, plus space for maneuvering including approach and turning for a person using a wheelchair.

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 x 27" high x 8" deep (914 mm x 686 mm x 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" x 48" (762 mm x 1219 mm) must be provided at each fixture. Clear spaces can overlap. (305.3)
- Include a wheelchair turning space with a diameter of at

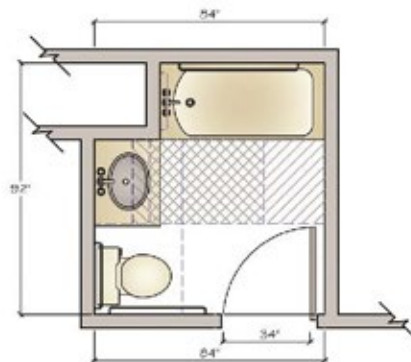
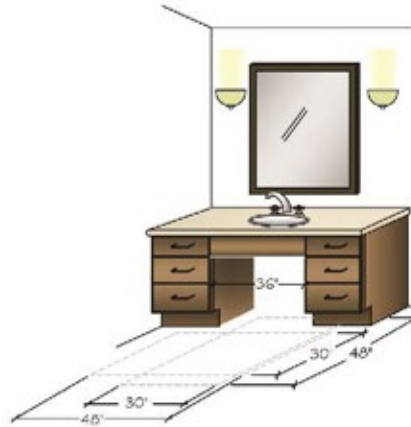


least 60" (1524 mm), which can include knee* and toe** clearances. (304.3.0)

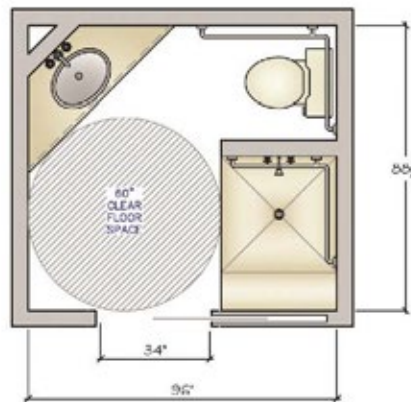
- A wheelchair turning space could utilize a T-shaped space, which is a 60" (1524 mm) square with two 12" wide x 24" deep (305 mm x 610 mm) areas removed from two corners of the square. This leaves a minimum 36" (914 mm) wide base and two 36" (914 mm) wide arms. T-shaped wheelchair turning spaces can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

*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)



FIXTURE CLEAR FLOOR SPACE



WHEELCHAIR TURNING SPACE

Grooming

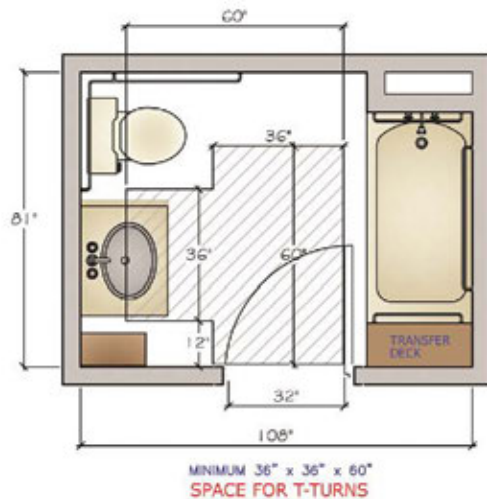
- The clear 30" × 48" (762 mm × 1219 mm) floor space should be centered on the lavatory. (606.2, 1004.11.3)

Bathing and Showering

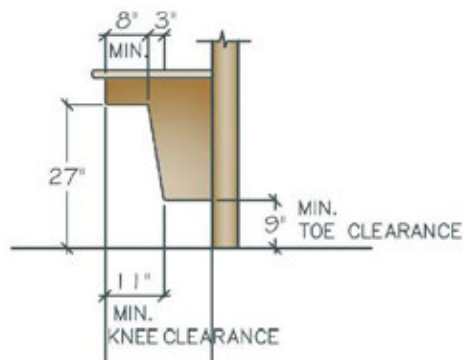
- Clearance in front of bathtubs should extend the length of the bathtub and be at least 30" (762 mm) wide. (607.2)
- When a permanent seat is provided at the head of the bathtub, the clearance should extend a minimum of 12" (305 mm) beyond the wall at the head end of the bathtub. (607.2)
- The clearance in front of the transfer-type shower* compartment should be at least 48" (1219 mm) long measured from the control wall and 36" (914 mm) wide. (608.2)
- The clearance in front of a roll-in-type 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" × 36" (914 mm × 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



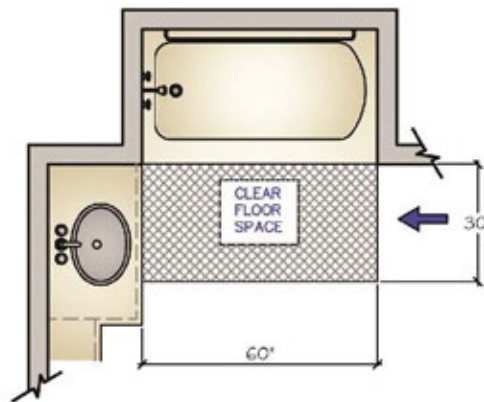
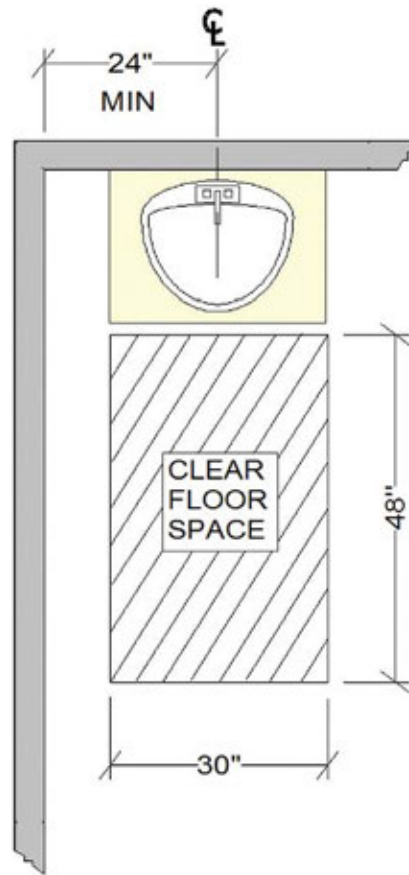
KNEE STANDARD (ACCESS STANDARD 4-ANSI)



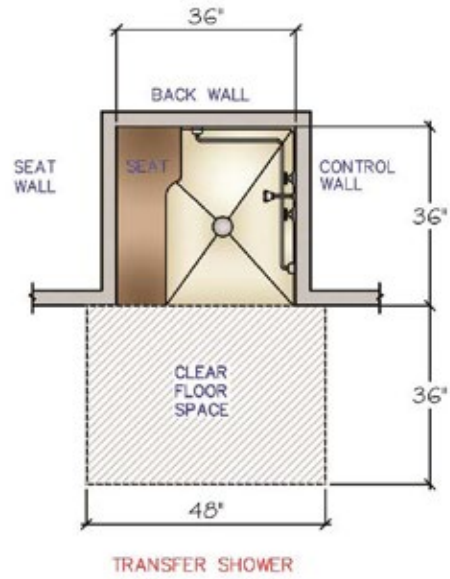
for a roll-in shower is 36"–42" X 60" (914 mm to 1067 mm X 1524 mm).

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 sidewall. No other fixture or obstruction should be within the clearance area. (604.3, 1002.11.2.4)



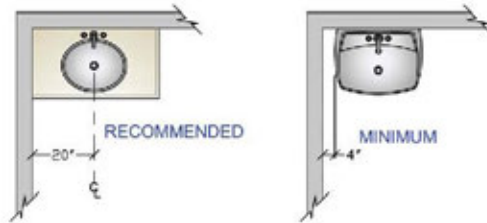
PARALLEL APPROACH



Single-Lavatory Placement

Recommended:

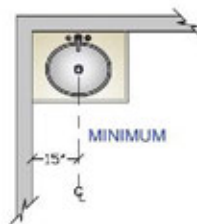
The distance from the centerline of the lavatory to the sidewall/tall obstacle should be at least 20" (508 mm).



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

Code Requirement:

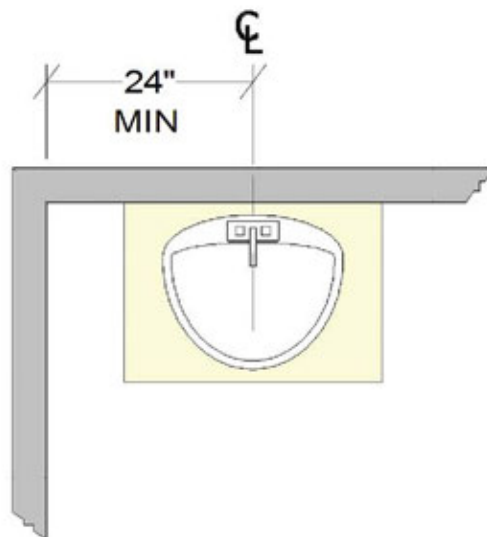
- The minimum distance from the centerline of the lavatory to a wall is 15" (381 mm). (IRC P2705)



Access Standard

ICC A117.1-2009 Reference:

- To assure a clear floor space (30" x 48") (762 mm x 1219 mm), the lavatory must be a minimum 24" (610 mm) from the wall. (A117.1, 1004.11.3)



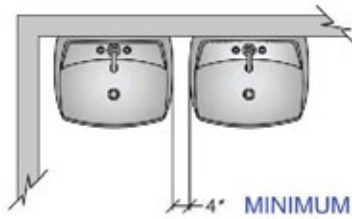
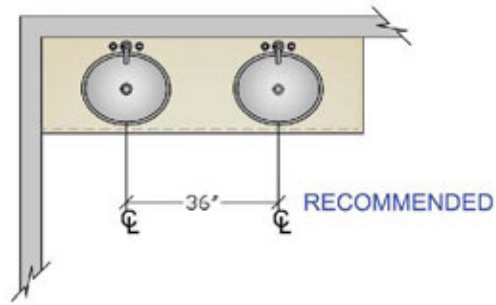
Double-Lavatory Placement

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)



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.

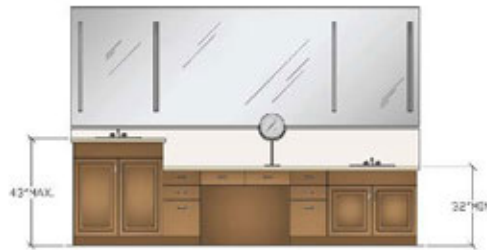
Access Standard

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.

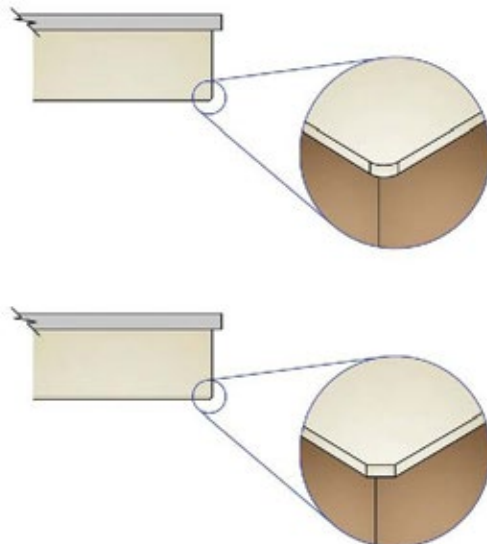
Code Requirements:

State or local codes may apply.

Access Standard

Recommended:

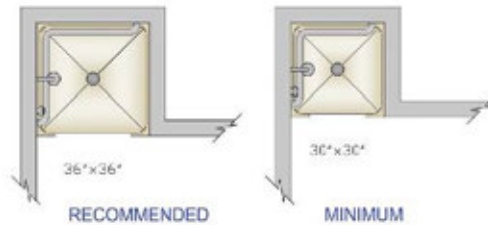
Bathroom guideline recommendation meets Access Standard.



Shower Size

Recommended:

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



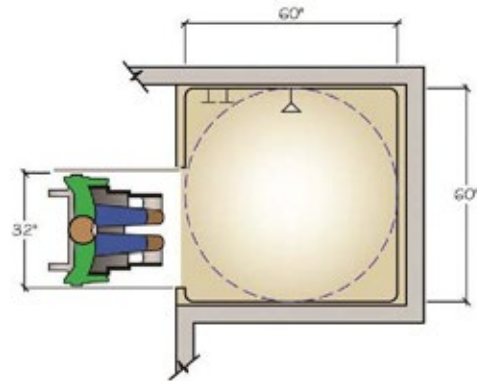
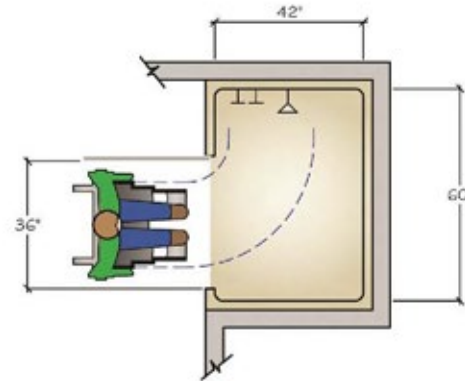
Code Requirement:

- The minimum interior shower size is 30" × 30" (762 mm × 762 mm) or 900 square inches (5806 cm²), in which a disc of 30" (762 mm) in diameter must fit. (IRC P 2708.1)

Access Standard

Recommended:

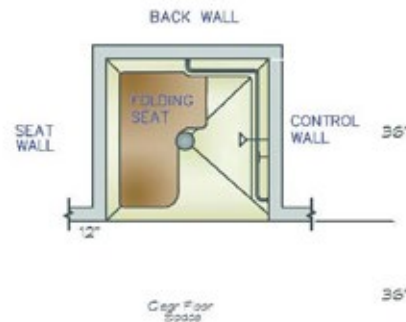
- Plan either a transfer or a roll-in shower.
- Roll-in shower entries: For a 60" (1524 mm) deep shower, a 32" (813 mm) wide entry is adequate. For a 42" (1067 mm) deep shower, the entry must be at least 36" (914 mm) wide to allow for turning space.



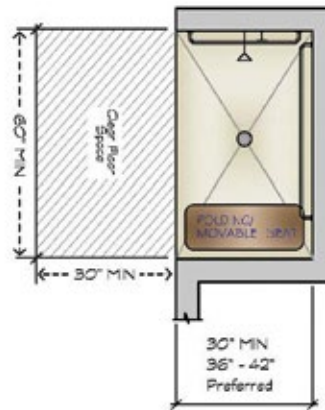
TRANSFER TYPE SHOWER (ACCESS STANDARD 9-ANSI)

ICC A117.1-2009 Reference:

- Transfer-type 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)
- Roll-in-type 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)



ROLL-IN SHOWER (ACCESS STANDARD 9 – ANSI)

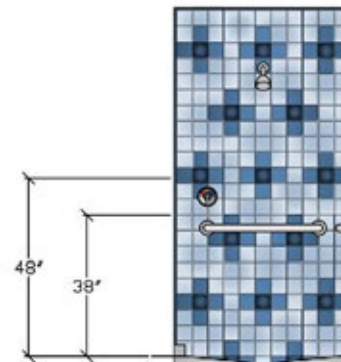


BATHROOM PLANNING GUIDELINE 10

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.



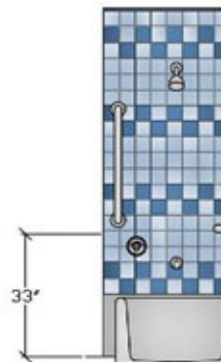
Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

Controls should be offset toward the room and easy to



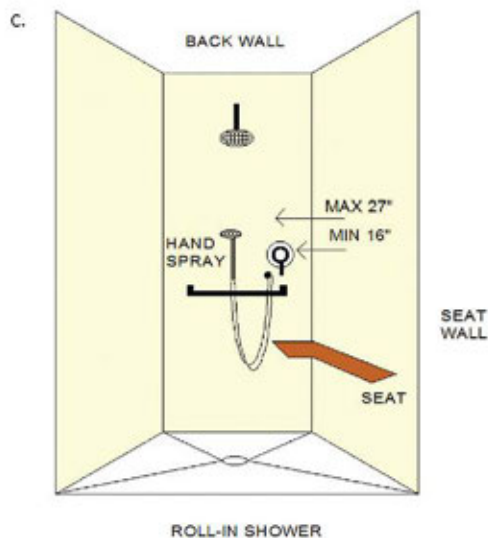
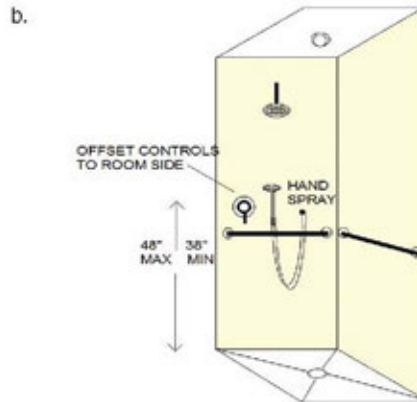
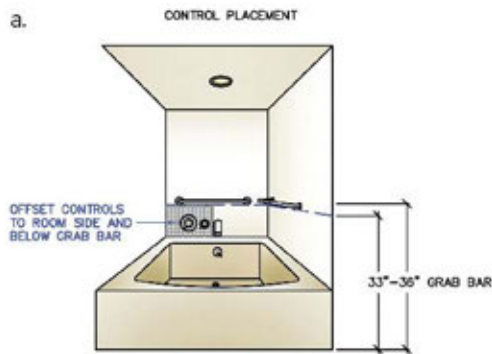
grasp, as with lever or loop handles (a and b).

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

Provide a handheld spray at a height accessible to the user (b).

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) (a)
- In transfer-type shower compartments, controls and the handheld shower head should be on the sidewall adjacent to 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. (b)
- In transfer-type shower compartments, controls and the handheld shower head should be on the sidewall adjacent to 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. (b)
- 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) (c)
- 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)



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 2708.3) (IRC M 1507.4)

The valve must have a high limit stop to prevent water temperatures above 120°F (49°C). (IRC P 2708.3)

Hot water delivered to bathtubs and whirlpool bathtubs shall be

(Remainder not shown on website)



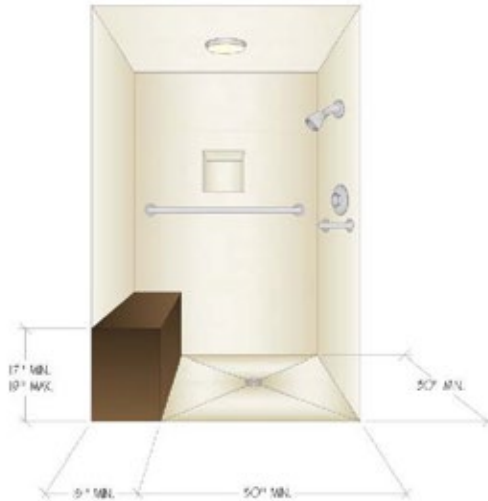
Shower/Tub Seat

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 cm²). (IRC P 2708.1)



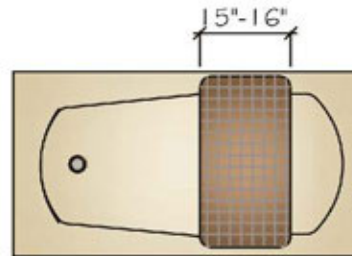
Access Standard

Recommended:

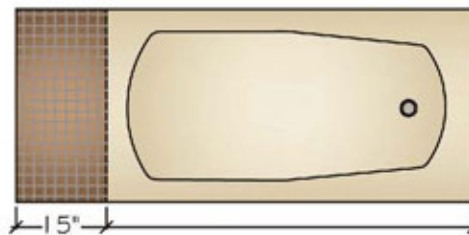
Plan a seat in the shower and/or bathtub to fit the parameters of the space and the needs of the user.

ICC A117.1-2009 Reference:

- A removable in-tub seat should be at least 15" to 16" (381 mm 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 (113 kg) pounds of pressure. (610.4)



(a) REMOVEABLE IN-TUB SEAT



PERMANENT SEAT

BATHROOM PLANNING GUIDELINE 13

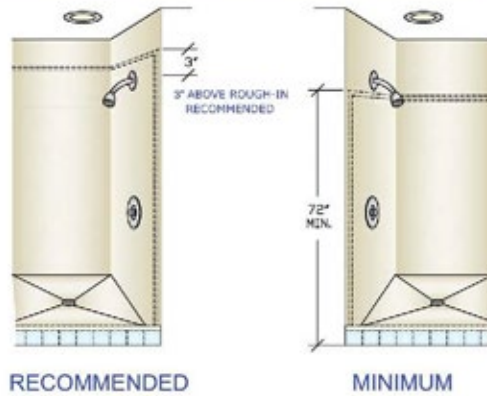
Tub/Shower Surround

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.

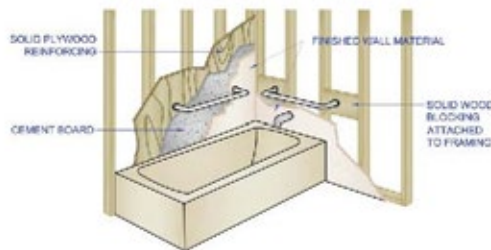
BATHROOM PLANNING GUIDELINE 14

Grab Bars

Recommended:

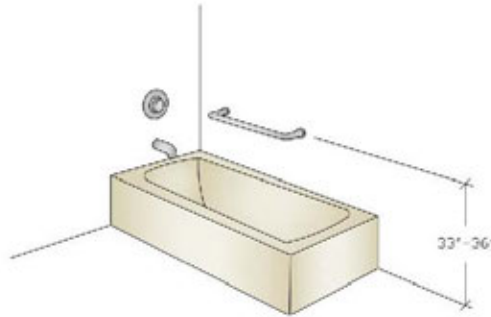
Plan grab bars to facilitate access to and maneuvering within the tub and shower areas.

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:

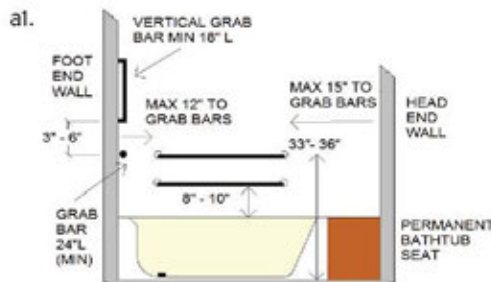
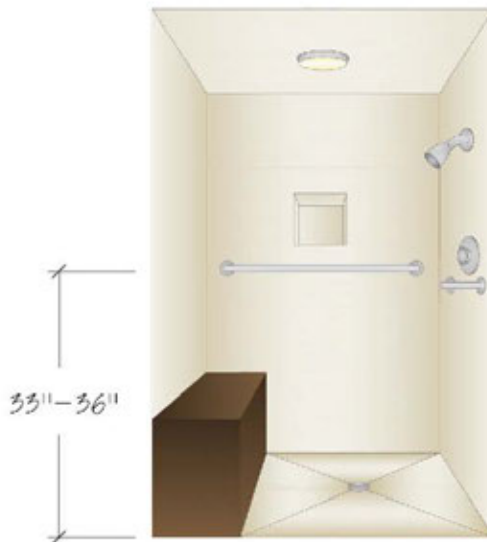
Walls throughout the bathroom should be prepared (reinforced) at time of construction to allow for installation of grab bars to support a minimum of 250 lbs. (113 kg) of force in any direction.

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:

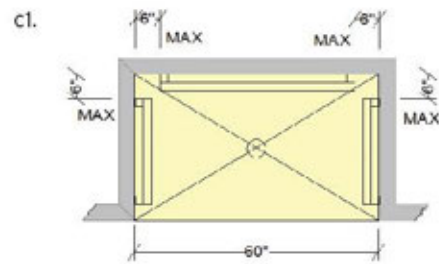
- Bathtubs with permanent seats: Two horizontal grab bars (a1) should be provided on the back wall, one 33" to 36" (838 mm to 914 mm) above the floor and the other 8" to 10" (203 mm to 254 mm) above the rim of the bathtub (a2). Each grab bar should be no more than 15" (381 mm) from the head end wall or 12" (305 mm) from the control end wall. A



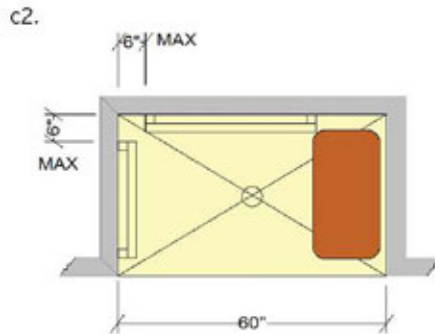
horizontal position, between 33" and 36" (838 mm and 914 mm) above the shower floor, across the control wall and on the back wall to a point 18" (457 mm) from the seat wall. A vertical grab bar minimum 18" (457 mm) shall be placed 3" to 6" (76 mm to 152 mm) above the horizontal bar and 4" (102 mm) maximum from the front edge of the shower. (608.3) (b)

- Roll-in type 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) (c1, c2, and c3)

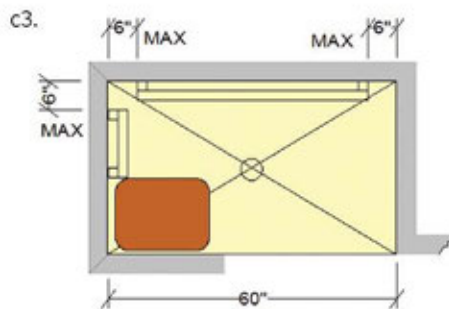
- Toilet: Grab bars should be provided on the rear wall and on the sidewall closest to the toilet 33" to 36" (838 mm to 914 mm) high. Sidewall grab bar should be at least 42" (1067 mm) long, located between 12" (305 mm) and 54" (1372 mm) from the rear wall. In addition, a vertical grab bar, 18" (457 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



(A) STANDARD ROLL-IN-TYPE SHOWER

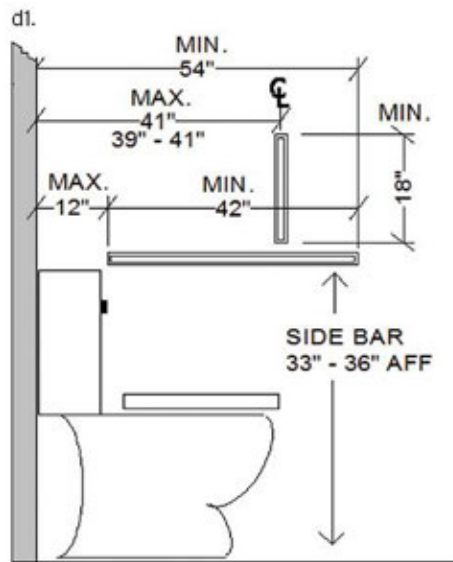


(B) ROLL-IN-SHOWER WITH SEAT

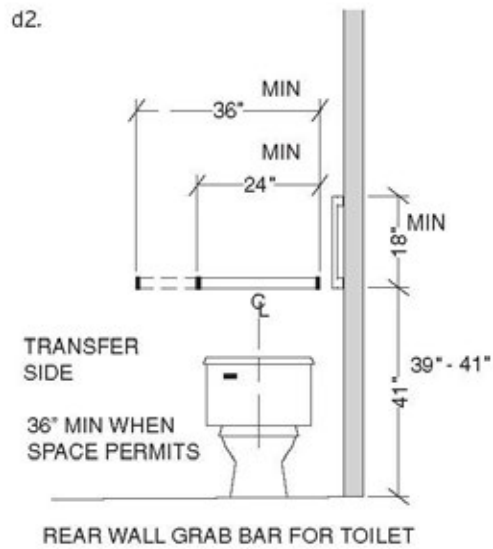


(C) ALTERNATE ROLL-IN-TYPE SHOWER

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) (d1 and d2)



SIDE WALL GRAB BARS FOR TOILET



REAR WALL GRAB BAR 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)



- 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)

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:

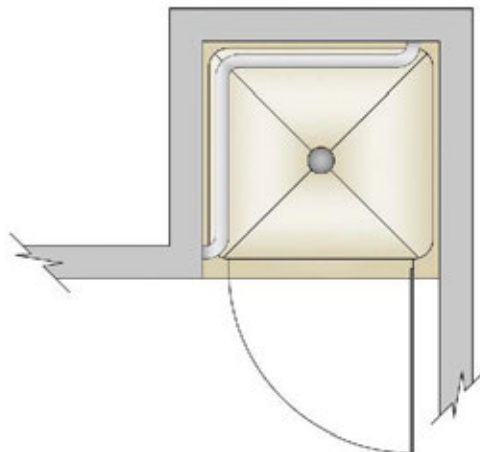
Minimize thresholds at the shower entry to no more than $\frac{1}{2}$ " (13 mm).

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



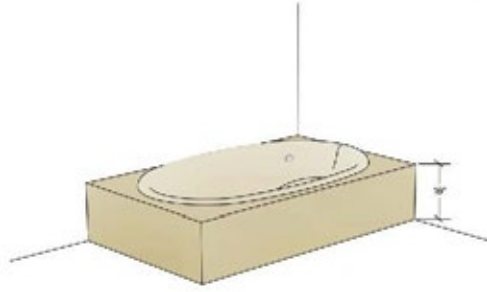
BATHROOM PLANNING GUIDELINE 17

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

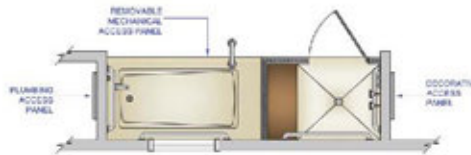
Equipment Access

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

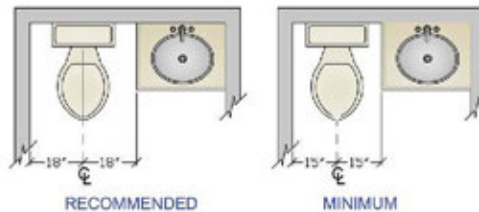
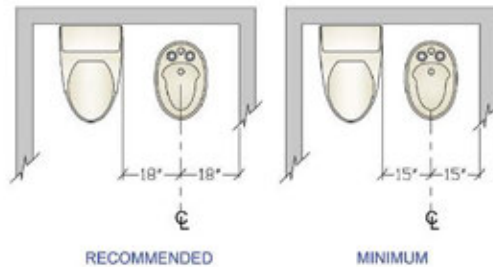
Toilet/Bidet Placement

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)



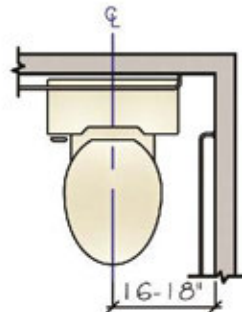
Access Standard

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)



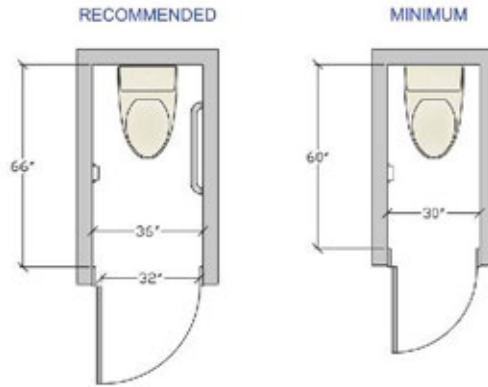
Toilet Compartment

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). (IPC 405.3.1)



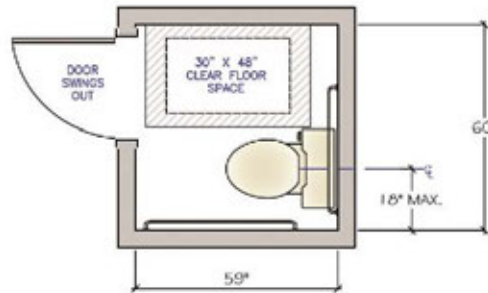
Access Standard

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)



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.

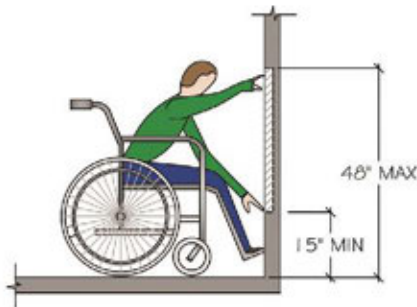
Access Standard

Recommended:

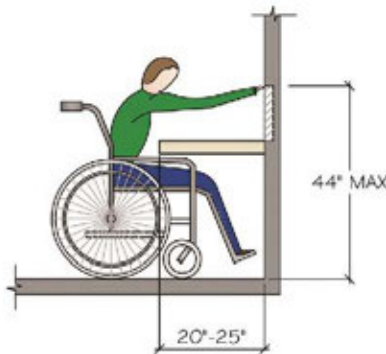
Plan storage of frequently used items between 15" and 48" (381 mm and 1219 mm) above the finished floor.

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

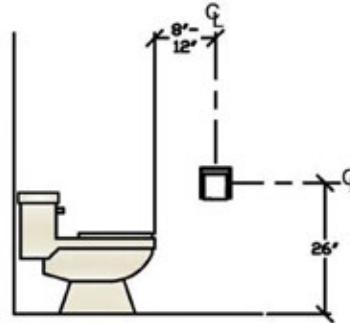
Accessories

Recommended:

- a. Place a mirror above or near the lavatory at a height that takes the user's eye height into consideration.
- b. 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.
- c. 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

Recommended:

- a. Plan a full-height mirror to provide reflection at eye level, regardless of the user's height or stature.
- b. See Code Reference on toilet paper placement.
- c. 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:

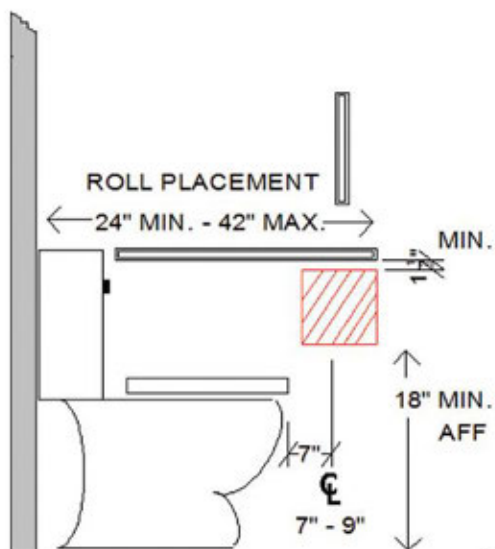
- Mirrors above lavatories should have the bottom edge of the reflecting surface no



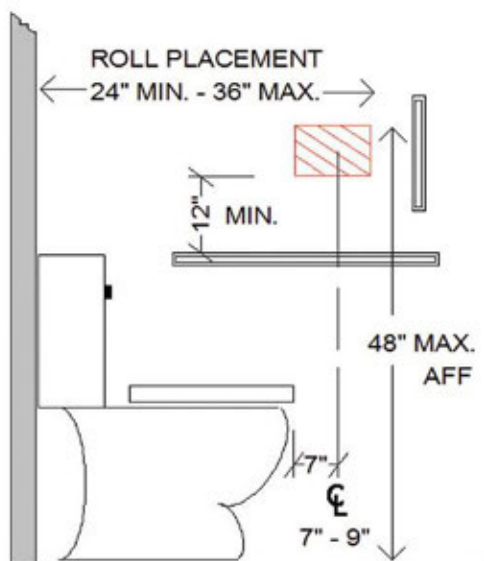
more than 40" (1016 mm) above the floor. (603.3)

- The toilet paper holder should be 24"–42" (610 mm–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) (a + b)

See Access Standard 22 for reach specifications.



(A) BELOW GRAB BAR



(B) ABOVE GRAB BAR

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. (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)
- 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 Access Standard 22 for specifications for placement within reach range.

(Complete info below not shown on website)

operable with minimal effort, easy to read, and with minimal noise pollution.

ICC A117.1-2009 Reference:

See Access Standard 25 for operable controls.

See Access Standard 22 for reach range for controls.

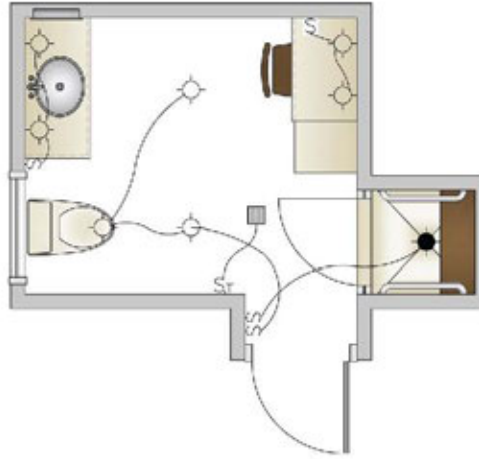
Lighting

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.

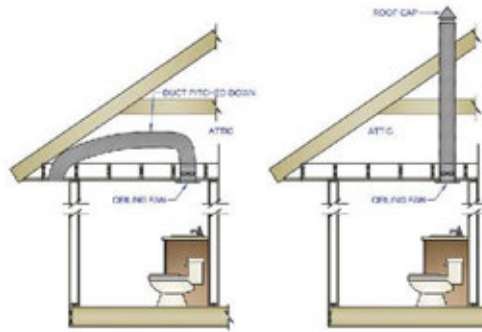
Ventilation

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 (914 square mm) of which 50% is operable, or a mechanical ventilation system of at least 50 cubic feet (15,240 cubic mm) per minute (cfm) ducted to the outside. (IRC R 303.3, IRC M 1507.2, IRC M 1507.3)



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 Access Standard 25 for operable controls.

See Access Standard 22 for reach range for controls.

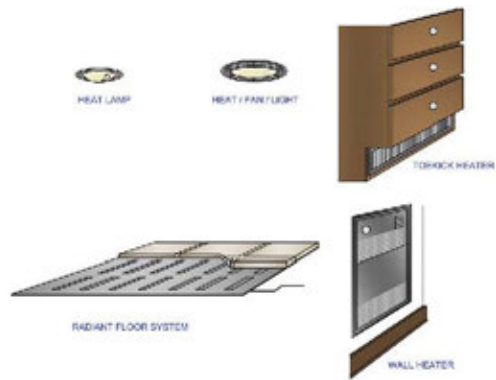
Heat

Recommended:

A supplemental heat source (e.g., heat lamp, toe kick 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 303.8)



Access Standard

Recommended:

See Code Reference.

ICC A117.1-2009 Reference:

See Access Standard 25 for operable controls.

See Access Standard 22 for reach range for controls.