



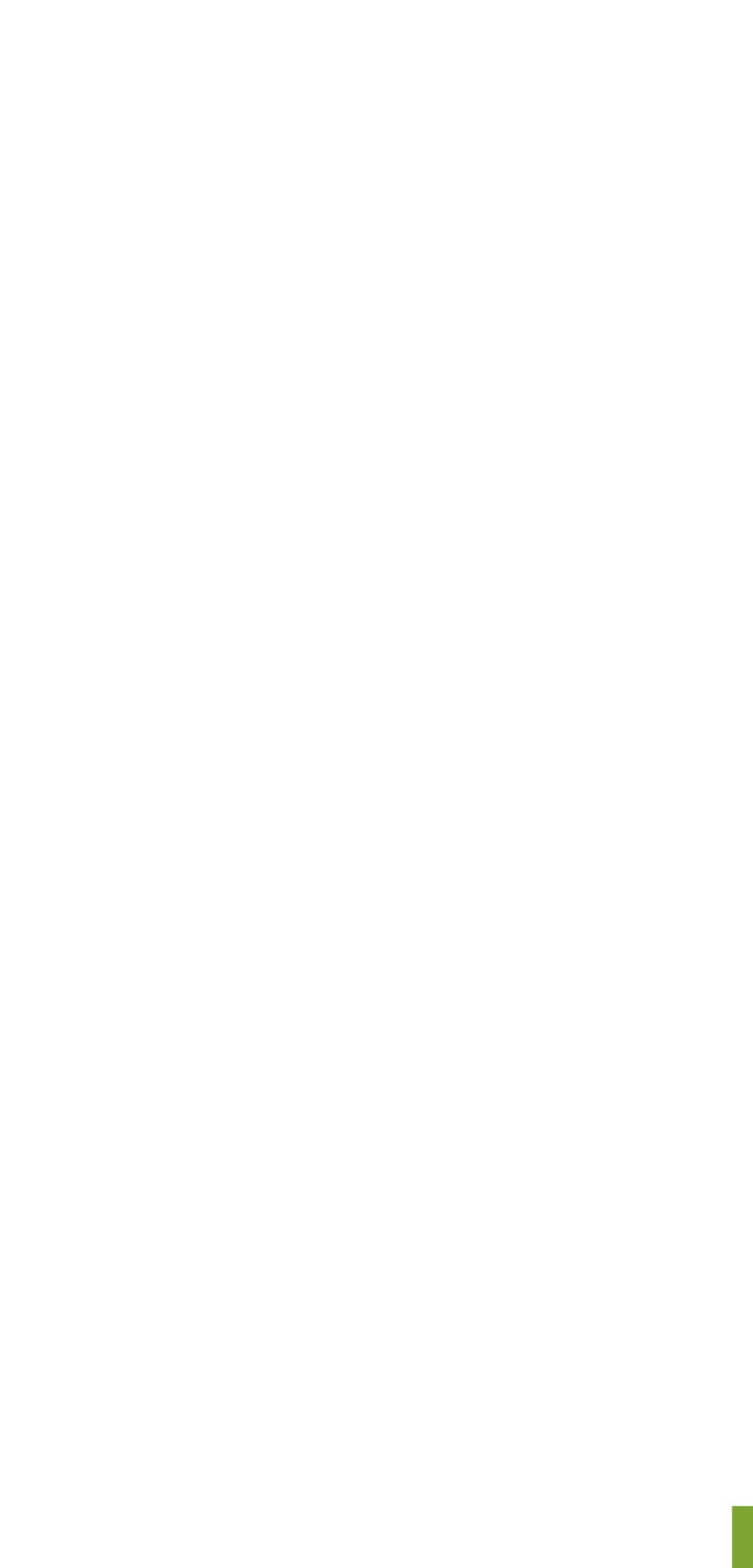
# NKBA<sup>®</sup>

National Kitchen & Bath Association

## Kitchen & Bathroom Planning Guidelines with Access Standards

Excerpt from the NKBA Professional Resource Library  
*Kitchen Planning and Bath Planning* volumes







National Kitchen & Bath Association

**Kitchen & Bathroom  
Planning Guidelines  
with Access Standards**

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#### **Disclaimer**

The NKBA Kitchen & Bathroom Planning Guidelines with Access Standards has been prepared to assist kitchen and bath designers and installers in the space planning of kitchens and baths. Anyone designing kitchen or bath plans or installing kitchen and bath products has an independent obligation to ascertain that their plans, actions, and practices represent sound business practices for their design and installation and meet all relevant laws, codes, and standards.

Designers and installers should vary their approach with respect to particular installations, products, or locations based on specific factual circumstances, the practicality and effectiveness of the particular design or installation, or its technical feasibility. These guidelines are not designed or intended to define or create legal rights or obligations. Any recommendation, express or implied, is for illustrative purposes, and is not intended to be an endorsement of any particular product or manufacturer.

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## The NKBA

The National Kitchen & Bath Association (NKBA) is a leading non-profit trade association dedicated to the advancement of the kitchen & bath industry. The NKBA has maintained its leadership status of excellence and professionalism for 45 years by providing education, certification, and the tools needed for success. NKBA Education and Certification are the gold standard in the kitchen & bath industry. The NKBA offers professional development courses and levels of certification for all stages of an individual's career.

### NKBA Education:

NKBA Professional Development provides kitchen and bath professionals convenient and premier educational courses that will enhance their careers. The NKBA provides focused, in-person professional development training and unique networking opportunities at more than 45 locations across North America, as well as educational opportunities through seminars, webinars, e-learning, online courses, web series, and conferences. Professional development courses are aligned to specific industry segments such as dealers, cabinet shops, fabricators, and installers. Industry professionals can quickly determine which courses are appropriate for their segments by accessing the course descriptions on the NKBA website at [www.nkba.org](http://www.nkba.org), as well as in the NKBA Education Brochure. Finally, the NKBA has more than 50 Supported and Accredited Programs in colleges and universities across North America that specialize in kitchen and bath design.

### NKBA Certification:

NKBA Certification is based on in-depth testing and extensive industry experience, allowing consumers to know that their designers' professional skills have been independently evaluated and tested. NKBA-certified professionals are committed to improving those skills through meeting continuing education and professional development requirements.

There are three levels of NKBA Certification for designers: Associate Kitchen & Bath Designer (AKBD<sup>®</sup>), Certified Kitchen Designer (CKD<sup>®</sup>) or Certified Bath Designer (CBD<sup>®</sup>), and Certified Master Kitchen & Bath Designer (CMKBD<sup>®</sup>). In addition, the NKBA offers education and testing to enable an experienced installer to become a Certified Kitchen & Bath Installer (CKBI<sup>®</sup>).

# Kitchen Planning Guidelines

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## Methodology/Overview:

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 excerpted from the National Kitchen & Bath Association 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 committee completed in-depth historical reviews of planning guidelines dating back to 1920. 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, as well as a *Kitchen Storage Research Project* conducted by Virginia Polytechnic Institute.

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

- Testing core kitchen and bath design competencies
- Critiquing designer work
- Training designers in academic and educational programs
- Recognizing the importance of consumer health, safety, and welfare in kitchen and bath design





# Kitchen Planning Guidelines with Access Standards

The National Kitchen & Bath Association developed the Kitchen 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 Kitchen Planning Guidelines are based on the analysis of the 2006 International Residential Code (IRC) and the International Plumbing Code.

The code references for the Access Standards are based on ICC/ANSI 117.1 – 2003 Accessible and Useable Buildings and Facilities.

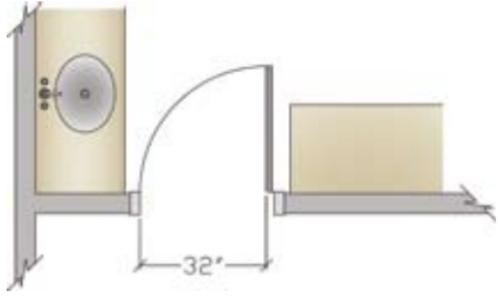
Be sure to check local, state, and national laws that apply to your design and follow those legal requirements.

# Kitchen Planning Guideline 1

## Door/Entry

### Recommended:

The clear opening of a doorway should be at least 32" wide. This would require a minimum 2' 10" door.



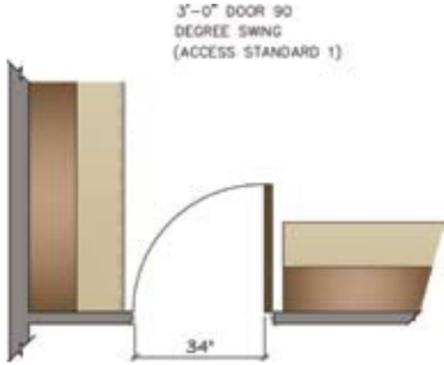
### Code Requirement:

State or local codes may apply.

## Access Standard

### Recommended:

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

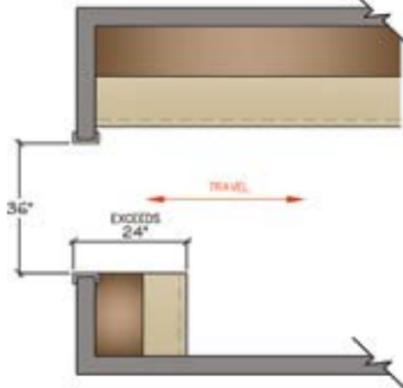


3'-0" DOOR 90 DEGREE SWING (ACCESS STANDARD 1)

### Code Reference:

- Clear openings of doorways with swinging doors shall be measured between the face of door and stop, with the door open 90 degrees. (ANSI 404.2.3)
- When the depth of a passage exceeds 24", the minimum clear opening increases to 36". (ANSI A117.1 404)

24" DEPTH CLEARANCE (ACCESS STANDARD 1-ANSI)

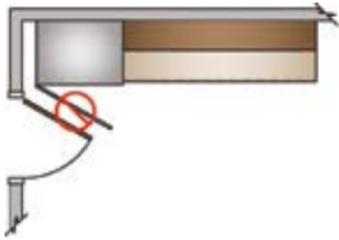


# Kitchen Planning Guideline 2

## Door Interference

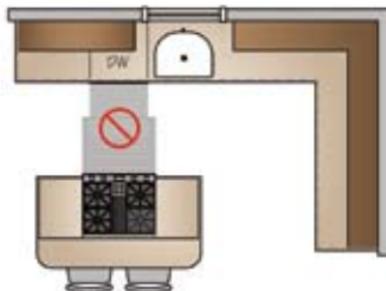
### Recommended:

No entry door should interfere with the safe operation of appliances, nor should appliance doors interfere with one another.



### Code Requirement:

State or local codes may apply.



## Kitchen Planning Guideline 2 (Continued)

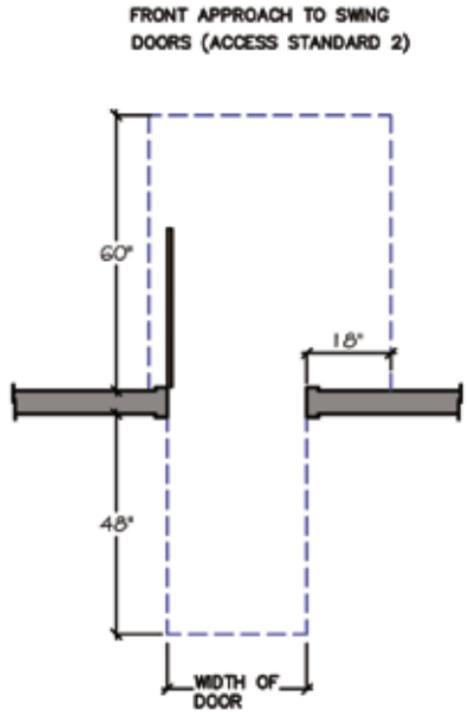
### Access Standard

#### Recommended:

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

#### Code Reference:

- For a standard hinged or swinging door, the clearance on the pull side of the door should be the door width plus 18" x 60". (ANSI A 117.1 404.2.3.1)
- The clearance on the push side of the door should be the door width x 48". (ANSI A 117.1 404.2.3.1)



## Kitchen Planning Guideline 3

### Distance Between Work Centers

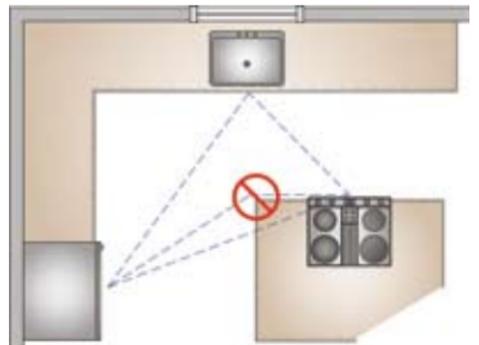
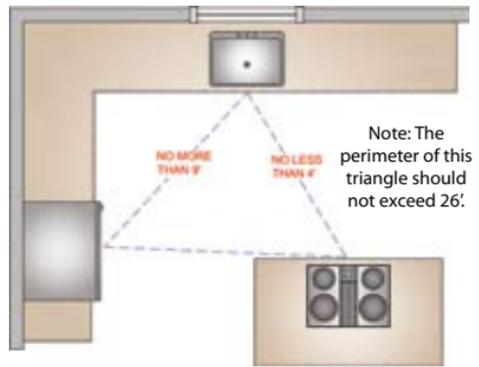
#### Recommended:

In a kitchen with three work centers\*, the sum of the three traveled distances should total no more than 26' with no single leg of the triangle measuring less than 4' nor more than 9'.

When the kitchen plan includes more than three primary appliance/work centers, each additional travel distance to another appliance/work center should measure no less than 4' nor more than 9'.

Each leg is measured from the center-front of the appliance/sink.

No work triangle leg intersects an island/peninsula or other obstacle by more than 12".



## Kitchen Planning Guideline 3 (Continued)

*\*A major appliance and its surrounding landing/work area form a work center. The distances between the three primary work centers (cooking surface, cleanup/prep sink, and refrigeration storage) form a work triangle.*

### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Kitchen Guideline recommendation meets Access Standard.

## Kitchen Planning Guideline 4

### Separating Work Centers

#### Recommended:

A full-height, full-depth, tall obstacle\* should not separate two primary work centers.

A properly recessed tall corner unit will not interrupt the workflow and is acceptable.

*\*Examples of full-height obstacles are a tall oven cabinet, tall pantry cabinet, and refrigerator.*

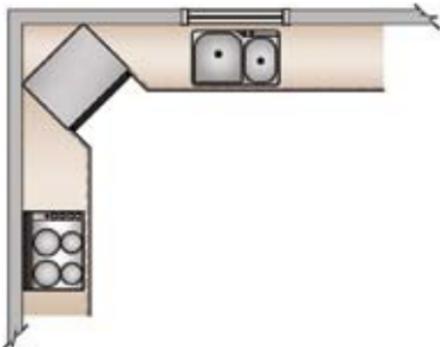
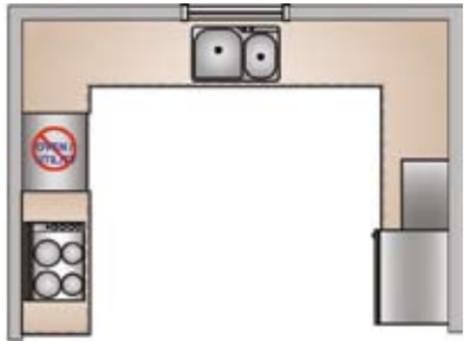
#### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Kitchen Guideline recommendation meets Access Standard.



## Kitchen Planning Guideline 5

### Work Triangle Traffic

**Recommended:**

No major traffic patterns should cross through the basic work triangle.

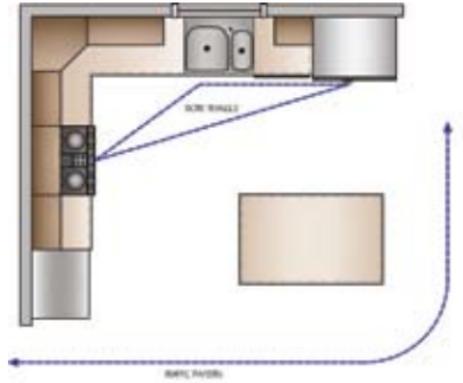
**Code Requirement:**

State or local codes may apply.

### Access Standard

**Recommended:**

Kitchen Guideline recommendation meets Access Standard.



## Kitchen Planning Guideline 6

### Work Aisle

**Recommended:**

The width of a work aisle should be at least 42" for one cook and at least 48" for multiple cooks. Measure between the counter frontage, tall cabinets, and/or appliances.

**Code Requirement:**

State or local codes may apply.

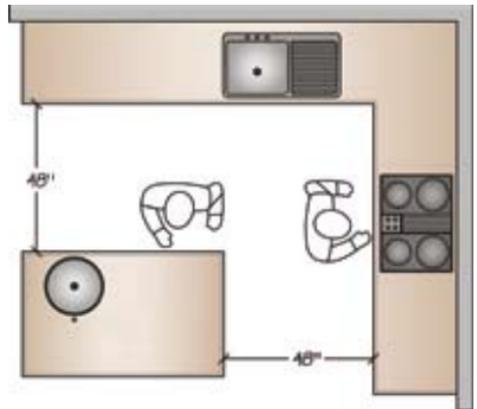
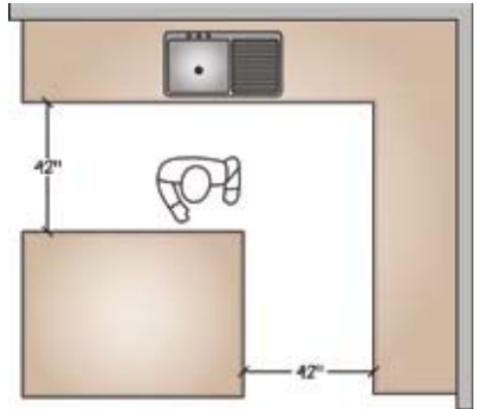
### Access Standard

**Recommended:**

Kitchen Guideline recommendation meets Access Standard recommendation. See Code References for specific applications.

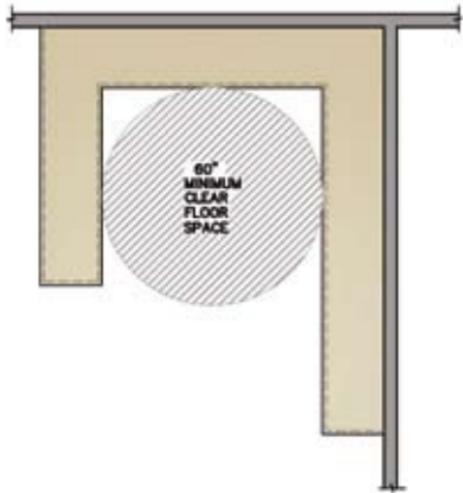
**Code Reference:**

- A clear floor space of at least 30" x 48" should be provided at each kitchen appliance. Clear floor spaces can overlap. (ANSI A 117.1 305.3, 804.6.1)



## Kitchen Planning Guideline 6 (Continued)

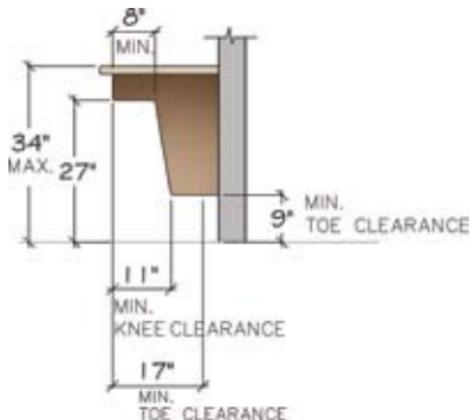
- In a U-shaped kitchen, plan a minimum clearance of 60" between opposing arms. (ANSI A117.1 804.2.2, 1003.12.1.2)
- Include a wheelchair turning space with a diameter of at least 60", which can include knee\* and toe\* clearances. (ANSI A117.1 304.3.1)
- A wheelchair turning space could utilize a T-shaped clear space, which is a 60" square with two 12" wide x 24" deep areas removed from the corners of the square. This leaves a minimum 36" wide base and two 36" wide arms. T-shaped wheelchair turning spaces can include knee and toe clearances. (ANSI A117.1 304.3.2)



*\*Knee clearance must be a minimum 30" wide (36" to use as part of the T-turn) and maintain a 27" clear space under the cabinet, counter, or sink for a depth of 8". The next 3" of depth may slope down to a height of 9", with a clear space of at least 17" extending beneath the element. (ANSI 306.3)*



*\*Toe clearance space under a cabinet or appliance is between the floor and 9" above the floor. Where toe clearance is required as part of a clear floor space, the toe clearance should extend 17" minimum beneath the element. (ANSI A117.1 306.2)*



### Code Reference:

State or local codes may apply.

## Kitchen Planning Guideline 7

### Walkway

**Recommended:**

The width of a walkway should be at least 36".

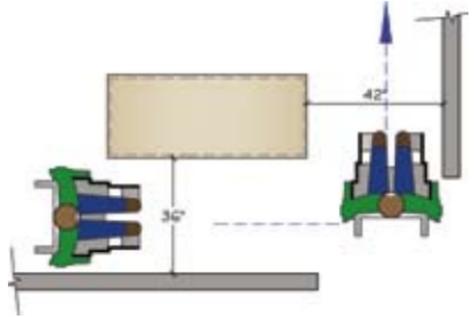
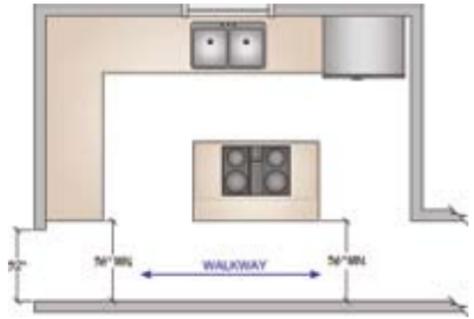
**Code Requirement:**

State or local codes may apply.

### Access Standard

**Recommended:**

If two walkways are perpendicular to each other, one walkway should be at least 42" wide.



## Kitchen Planning Guideline 8

### Traffic Clearance at Seating

**Recommended:**

In a seating area where no traffic passes behind a seated diner, allow 32" of clearance from the counter/table edge to any wall or other obstruction behind the seating area.

- a. If traffic passes behind the seated diner, allow at least 36" to edge past.
- b. If traffic passes behind the seated diner, allow at least 44" to walk past.

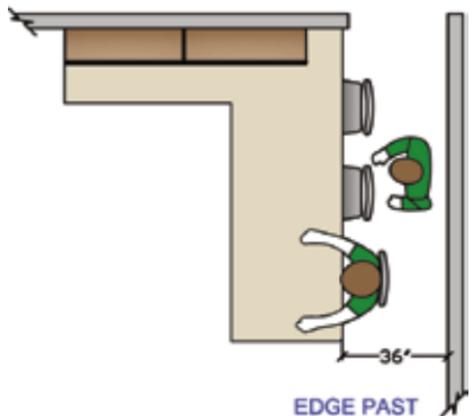
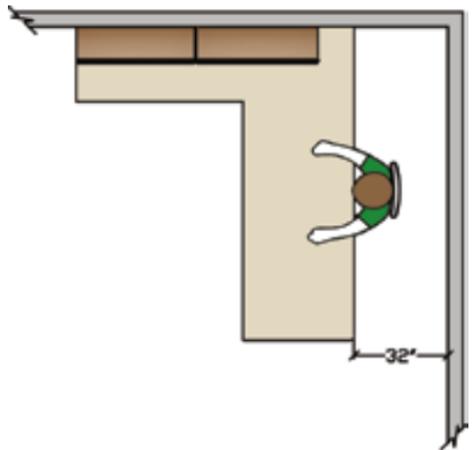
**Code Requirement:**

State or local codes may apply.

### Access Standard

**Recommended:**

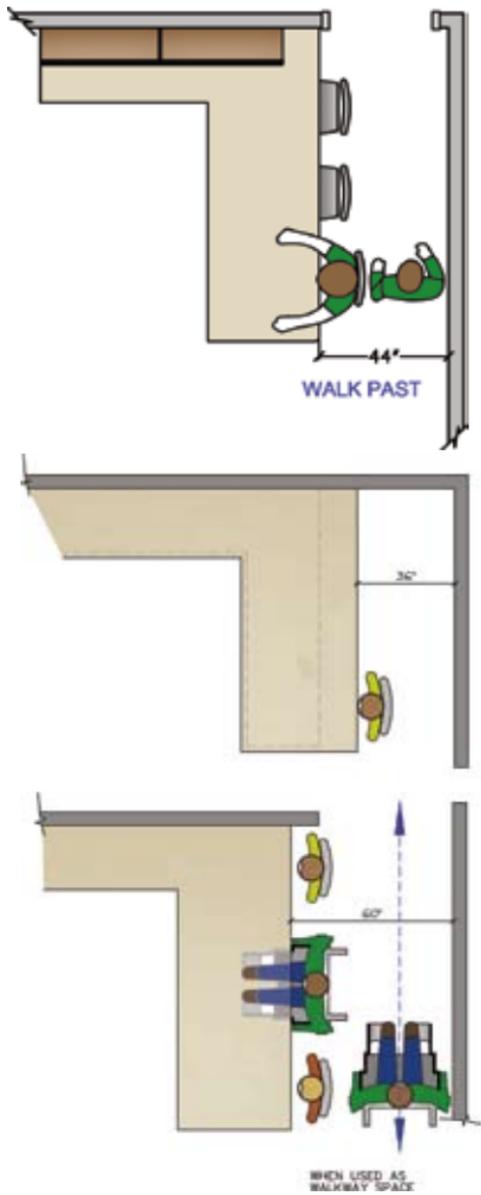
In a seating area where no traffic passes behind a seated diner, allow 36" of clearance from the counter/table edge to any wall or other



## Kitchen Planning Guideline 8 (Continued)

obstruction behind the seating area.

If traffic passes behind the seated diner, plan a minimum of 60" to allow passage for a person in a wheelchair.



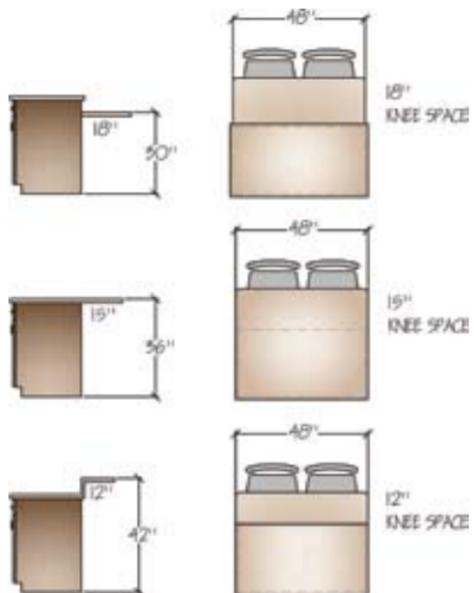
## Kitchen Planning Guideline 9

### Seating Clearance

#### Recommended:

Kitchen seating areas should incorporate at least the following clearances:

- 30" high tables/counters:  
Allow a 24" wide x 18" deep knee space for each seated diner and at least 18" of clear knee space
- 36" high counters:  
Allow a 24" wide x 15" deep knee space for each seated diner and at least 15" of clear knee space
- 42" high counters:  
Allow a 24" wide x 12" deep knee space for each seated diner and at least 12" of clear knee space



## Kitchen Planning Guideline 9 (Continued)

- c. 42" high counters:  
Allow a 24" wide x 12" deep knee space for each seated diner and 12" of clear knee space.

### Code Requirement:

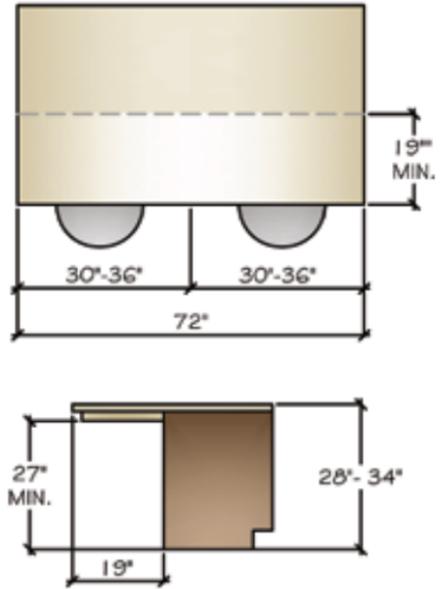
State or local codes may apply.

### Access Standard

#### Recommended:

Kitchen seating areas should be 28" – 34" high x 30" – 36" wide x 19" deep to better accommodate people of various sizes or those using a mobility aid.

Recommended minimum size for a knee space at a table or counter is 36" wide x 27" high x 19" deep.



## Kitchen Planning Guideline 10

### Cleanup/Prep Sink Placement

#### Recommended:

If a kitchen has only one sink, locate it adjacent to or across from the cooking surface and refrigerator.

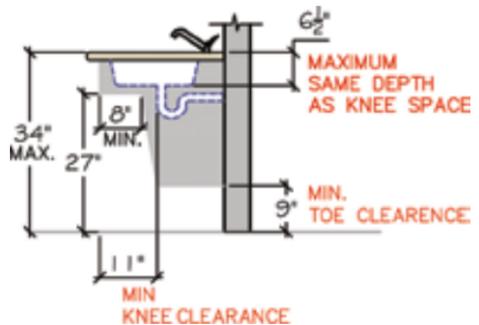
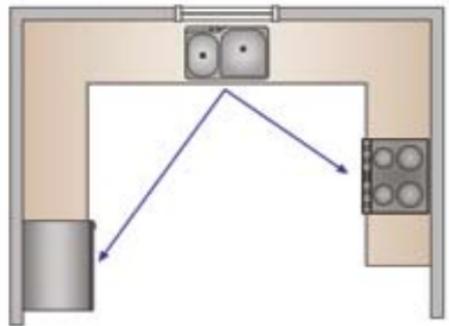
### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Plan knee spaces at the sink to allow for a seated user. Recommended minimum size for a knee space is 36" wide x 27" high x 8" deep, increasing to 17" deep in the toe space, which extends 9" from the floor. Insulation for exposed pipes should be provided.



## Kitchen Planning Guideline 10 (Continued)

### Code Reference:

- The sink should be no more than 34" high or adjustable between 29" and 36". (ANSI 117.1.1002.4.2)
- The sink bowl should be no more than 6 1/2" deep. (ANSI 117.1 1002.12.4.3)
- Exposed water supply and drainpipes under sinks should be insulated or otherwise configured to protect against contact. There should be no sharp or abrasive surfaces under sinks. (ANSI A117.1 606.6)

## Kitchen Planning Guideline 11

### Cleanup/Prep Sink Landing Area

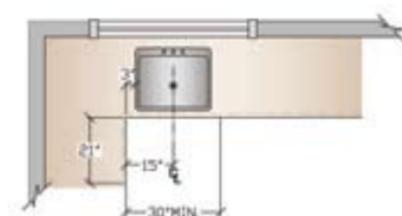
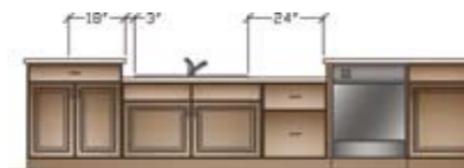
#### Recommended:

Include at least a 24" wide landing area\* to one side of the sink and at least an 18" wide landing area on the other side.

If all of the countertop at the sink is not the same height, then plan a 24" landing area on one side of the sink and 3" of countertop frontage on the other side, both at the same height as the sink.

The 24" of recommended landing area can be met by 3" of countertop frontage from the edge of the sink to the inside corner of the countertop if more than 21" of countertop frontage is available on the return.

*\*Landing area is measured as countertop frontage adjacent to a sink and/or an appliance. The countertop must be at least 16" deep and must be 28"–45" above the finished floor to qualify.*



## Kitchen Planning Guideline 11 (Continued)

### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

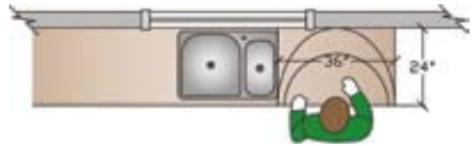
Kitchen Guideline recommendation meets Access Standard.

## Kitchen Planning Guideline 12

### Preparation/Work Area

#### Recommended:

Include a section of continuous countertop at least 36" wide x 24" deep immediately next to a sink for a primary preparation/work area.



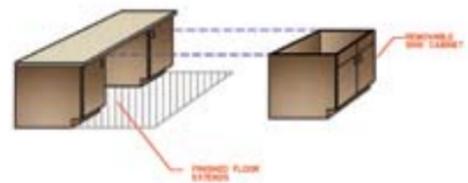
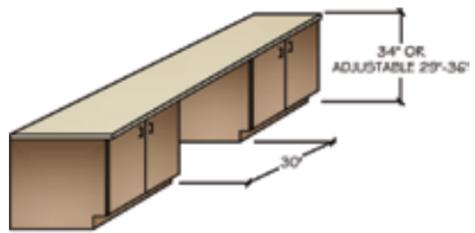
#### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

A section of continuous countertop at least 30" wide with a permanent or adaptable knee space should be included somewhere in the kitchen. See Access Guideline 6 for knee space specifications.



#### Code Reference:

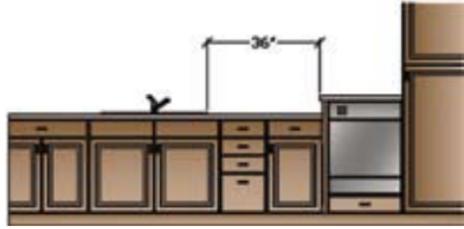
- In a kitchen, there should be at least one 30" wide section of counter, 34" high maximum or adjustable from 29" to 36". Cabinetry can be added under the work surface, provided it can be removed or altered without removal or replacement of the work surface, and provided the finished floor extends under the cabinet. (ANSI A 117.1 8.04.6.3, 1003.12.6.3)

# Kitchen Planning Guideline 13

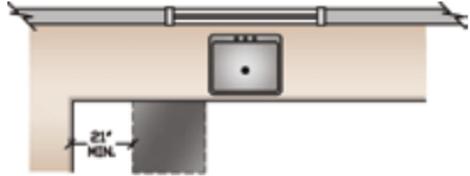
## Dishwasher Placement

### Recommended:

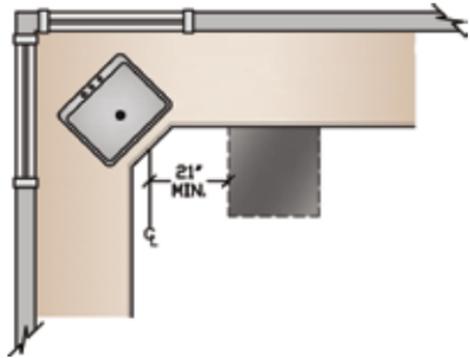
Locate nearest edge of the primary dishwasher within 36" of the nearest edge of a cleanup/prep sink.



Provide at least 21"\* of standing space between the edge of the dishwasher and countertop frontage, appliances, and/or cabinets, which are placed at a right angle to the dishwasher.



*\*In a diagonal installation, the 21" space is measured from the center of the sink to the edge of the dishwasher door in an open position.*



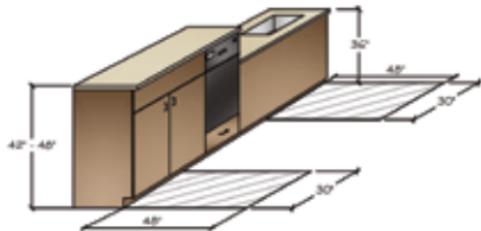
### Code Requirement:

State or local codes may apply.

### Access Standard

### Recommended:

Raise dishwasher 6" – 12" when it can be planned with appropriate landing areas at the same height as the sink.



### Code Reference:

- A clear floor space of at least 30" x 48" should be positioned adjacent to the dishwasher door. The dishwasher door in the open position should not obstruct the clear floor space for the dishwasher or the sink.  
(ANSI A 117.1 804.6.3, 1003.12.6.3)

## Kitchen Planning Guideline 14

### Waste Receptacles

#### Recommended:

Include at least two waste receptacles. Locate one near each of the cleanup/prep sink(s) and a second for recycling either in the kitchen or nearby.

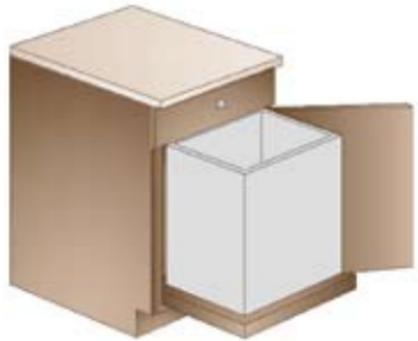
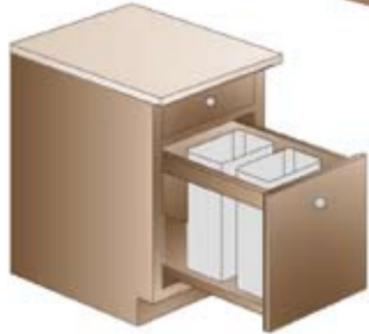
#### Code Requirement:

State or local codes may apply.

#### Access Standard

#### Recommended:

Kitchen Guideline recommendation meets Access Standard.



## Kitchen Planning Guideline 15

### Auxiliary Sink

#### Recommended:

At least 3" of countertop frontage should be provided on one side of the auxiliary sink, and 18" of countertop frontage on the other side, both at the same height as the sink.

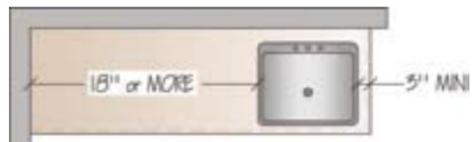
#### Code Requirement:

State or local codes may apply.

#### Access Standard

#### Recommended:

Plan a knee space at, or adjacent to, the auxiliary sink. See Access Standard 6 for knee space specifications.



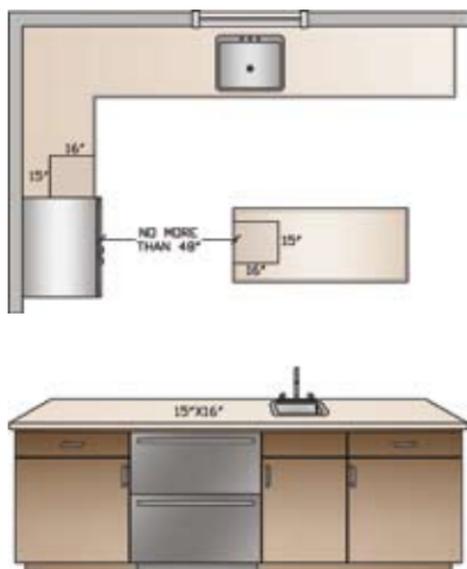
## Kitchen Planning Guideline 16

### Refrigerator Landing Area

#### Recommended:

Include at least:

- 15" of landing area on the handle side of the refrigerator or
- 15" of landing area on either side of a side-by-side refrigerator or
- 15" of landing area which is no more than 48" across from the front of the refrigerator or
- 15" of landing area above or adjacent to any undercounter style refrigeration appliance.



#### Code Requirement:

State or local codes may apply.

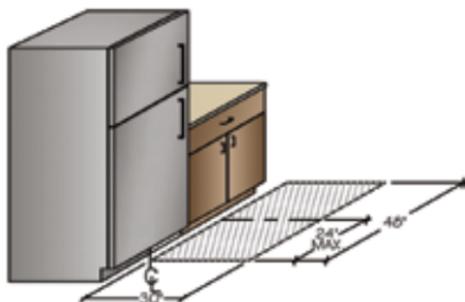
#### Access Standard

#### Recommended:

See Code Reference.

#### Code Reference:

- A clear floor space of 30" x 48" should be positioned for a parallel approach to the refrigerator/freezer with the centerline of the clear floor space offset 24" maximum from the centerline of the appliance.  
(ANSI A 117.1 804.6.6, 1003.12.6.6)



## Kitchen Planning Guideline 17

### Cooking Surface Landing Area

#### Recommended:

Include a minimum of 12" of landing area on one side of a cooking surface and 15" on the other side.

## Kitchen Planning Guideline 17 (Continued)

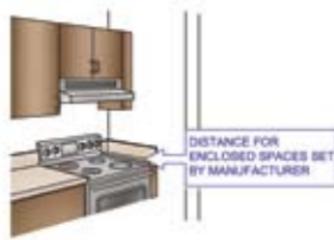
If the cooking surface is at a different countertop height than the rest of the kitchen, then the 12" and 15" landing areas must be at the same height as the cooking surface.



For safety reasons, in an island or peninsula situation, the countertop should also extend a minimum of 9" behind the cooking surface if the counter height is the same as the surface-cooking appliance.



For an enclosed configuration, a reduction of clearances shall be in accordance with the appliance manufacturer's instructions or per local codes. (This may not provide adequate landing area.)



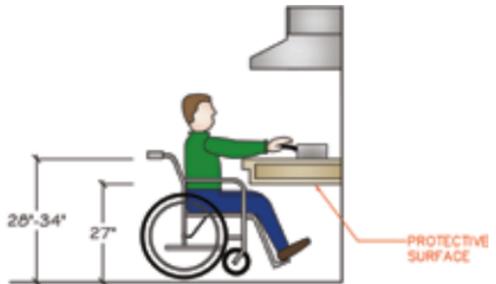
### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Lower the cooktop to 34" maximum height and create a knee space beneath the appliance. See Access Standard 6 for knee space specifications.



#### Code Reference:

- When a forward-approach clear floor space is provided at the cooktop, it should provide knee and toe clearance, and the underside of the cooktop should be insulated or otherwise configured to prevent burns, abrasions, or electric shock. (ANSI 1002.12.6.4)
- The location of cooktop controls should not require reaching across burners. (ANSI 1003.12.6.4)

# Kitchen Planning Guideline 18

## Cooking Surface Clearance

### Recommended:

Allow 24" of clearance between the cooking surface and a protected, noncombustible surface above it.

### Code Requirement:

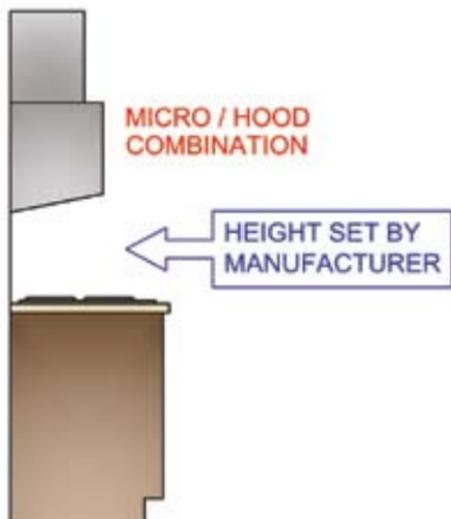
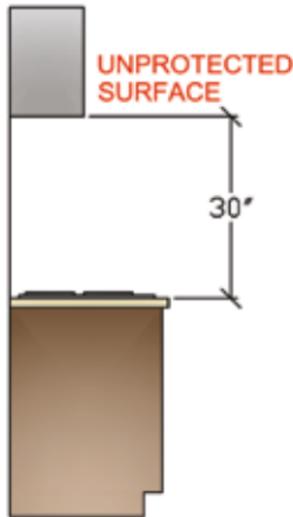
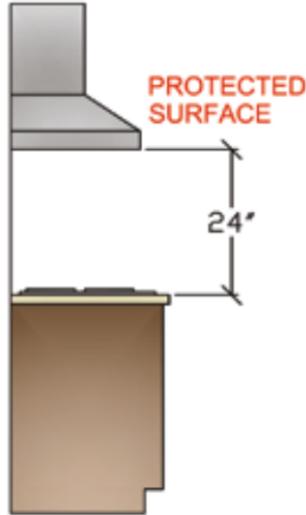
- At least 30" of clearance is required between the cooking surface and an unprotected/combustible surface above it. (IRC M 1901.1)
- If a microwave/hood combination is used above the cooking surface, then the manufacturer's specifications should be followed. (IRC M 1504.1)

Refer to manufacturer's specifications or local building codes for other considerations.

## Access Standard

### Recommended:

Kitchen Guideline recommendation meets Access Standard.



# Kitchen Planning Guideline 19

## Cooking Surface Ventilation

### Recommended:

Provide a correctly sized, ducted ventilation system for all cooking surface appliances. The recommended minimum is 150 cfm.

### Code Requirement:

- Manufacturer's specifications must be followed. (IRC G 2407.1, IRC G 2447.1)
- The minimum required exhaust rate for a ducted hood is 100 cfm and must be ducted to the outside. (IRC M 1507.3)
- Make-up air may need to be provided. Refer to local codes. (IRC G 2407.4)

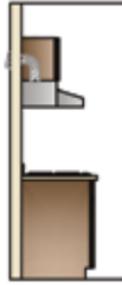
## Access Standard

### Recommended:

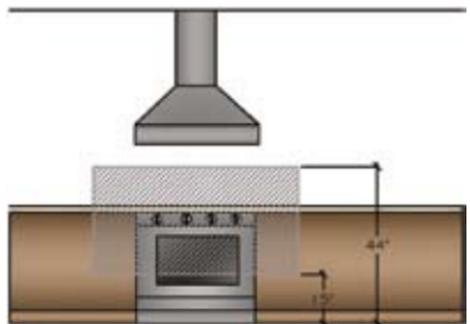
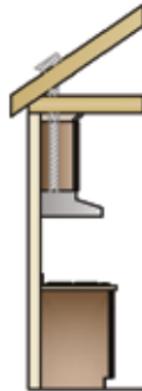
Ventilation controls should be placed 15" – 44" above the floor, operable with minimal effort, easy to read, and with minimal noise pollution.

### Code 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 maximum. (ANSI A117.1 309.4)
- Where a forward or side reach is unobstructed, the high reach should be 48" maximum and the low reach should be 15" minimum above the floor. (ANSI A117.1 308.2.1, 308.3.1)



MINIMUM 150 CFM



VENTILATION CONTROLS WITHIN 15"–44" REACH CONTROL

## Kitchen Planning Guideline 19 (Continued)

- Where a forward or side reach is obstructed by a 20" – 25" deep counter, the high reach should be 44" maximum.  
(ANSI A117.1 308.2.2)

## Kitchen Planning Guideline 20

### Cooking Surface Safety

#### Recommended:

- Do not locate the cooking surface under an operable window.
- Window treatments above the cooking surface should not use flammable materials.
- A fire extinguisher should be located near the exit of the kitchen away from cooking equipment.



UNACCEPTABLE

#### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Place fire extinguisher between 15" and 48" off the finished floor.



ACCEPTABLE

## Kitchen Planning Guideline 21

### Microwave Oven Placement

#### Recommended:

Locate the microwave oven after considering the user's height and abilities. The ideal location for the bottom of the



## Kitchen Planning Guideline 21 (Continued)

microwave is 3" below the principle user's shoulder but no more than 54" above the floor.

If the microwave oven is placed below the countertop, the oven bottom must be at least 15" off the finished floor.

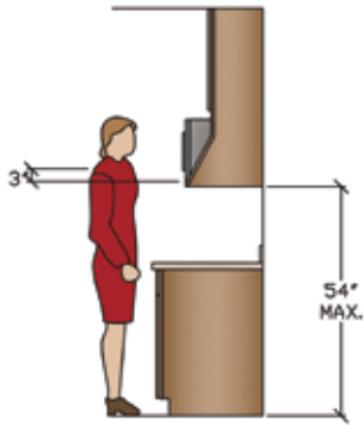
### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Locate the microwave controls below 48"



## Kitchen Planning Guideline 22

### Microwave Landing Area

#### Recommended:

Provide at least a 15" landing area above, below, or adjacent to the handle side of a microwave oven.

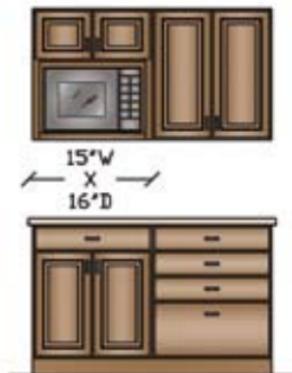
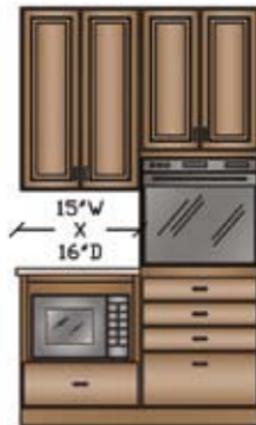
### Code Requirement:

State or local codes may apply.

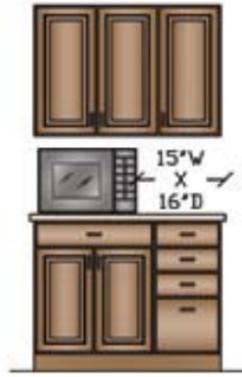
### Access Standard

#### Recommended:

Provide landing area in front of or immediately adjacent to the handle side of the microwave.



## Kitchen Planning Guideline 22 (Continued)



## Kitchen Planning Guideline 23

### Oven Landing Area

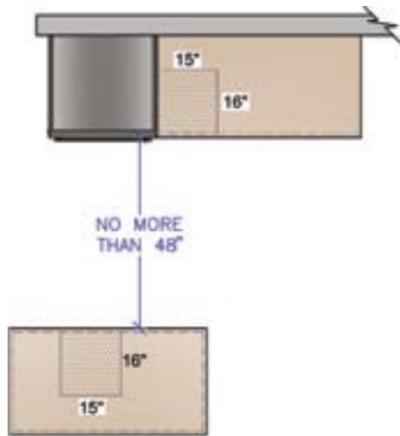
#### Recommended:

Include at least a 15" landing area next to or above the oven.

At least a 15" landing area that is not more than 48" across from the oven is acceptable if the appliance does not open into a walkway.

#### Code Requirement:

State or local codes may apply.



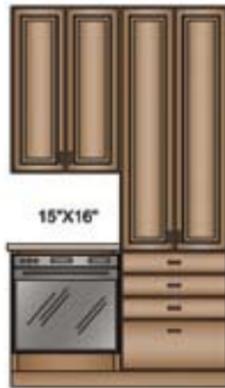
### Access Standard

#### Recommended:

See Code Reference.

#### Code Reference:

- For side-opening ovens, the door latch side should be next to a countertop. (ANSI A 117.1 804.6.5.1)



## Kitchen Planning Guideline 24

### Combining Landing Areas

#### Recommended:

If two landing areas are adjacent to one another, determine a new minimum for the two adjoining spaces by taking the longer of the two landing area requirements and adding 12."

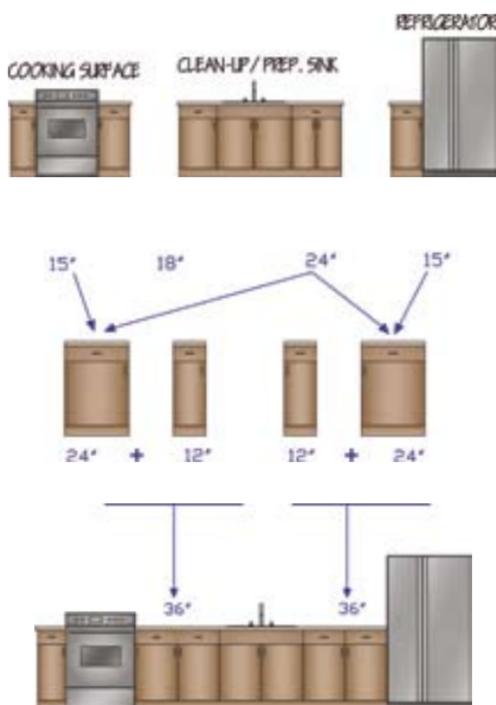
#### Code Requirement:

State or local codes may apply.

#### Access Standard

#### Recommended:

Kitchen Guideline recommendation meets Access Standard.



## Kitchen Planning Guideline 25

### Countertop Space

#### Recommended:

A total of 158" of countertop frontage, 24" deep, with at least 15" of clearance above, is needed to accommodate all uses, including landing area, preparation/work area, and storage.

Built-in appliance garages extending to the countertop can be counted toward the total countertop frontage recommendation, but they may interfere with the landing areas.

#### Code Requirement:

State or local codes may apply.



## Kitchen Planning Guideline 25 (Continued)

### Access Standard

#### Recommended:

At least two work-counter heights should be offered in the kitchen, with one 28"–36" above the finished floor and the other 36"–45" above the finished floor.



## Kitchen Planning Guideline 26

### Countertop Edges

#### Recommended:

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

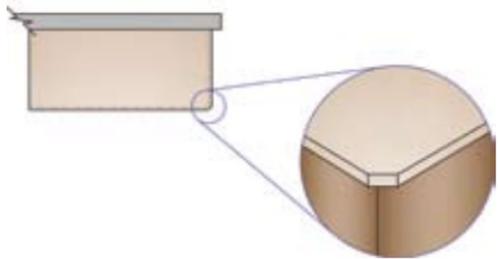
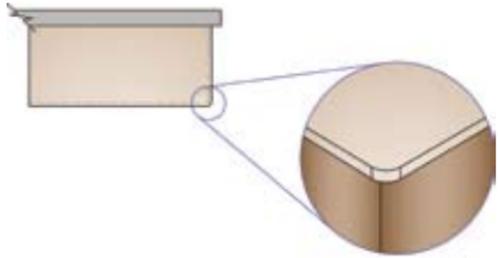
#### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Kitchen Guideline recommendation meets Access Standard.



## Kitchen Planning Guideline 27

### Storage

#### Recommended:

The total shelf/drawer frontage\* is:

- 1400" for a small kitchen (less than 150 square feet);
- 1700" for a medium kitchen (151 to 350 square feet); and
- 2000" for a large kitchen (greater than 350 square feet).

#### Shelf/Drawer Frontage in Inches

	Small	Medium	Large
Wall	300"	360"	360"
Base	520"	615"	660"
Drawer	360"	400"	525"
Pantry	180"	230"	310"
Misc.	40"	95"	145"



## Kitchen Planning Guideline 27 (Continued)

The totals for wall, base, drawer, and pantry shelf/ drawer frontage can be adjusted upward or downward as long as the recommended total stays the same.

Do not apply more than the recommended amount of storage in the miscellaneous category to meet the total frontage recommendation.

Storage areas that are more than 84" above the floor must be counted in the miscellaneous category.

*\*Shelf and drawer frontage is determined by multiplying the cabinet size by the number and depth of the shelves or drawers in the cabinet, using the following formula:*

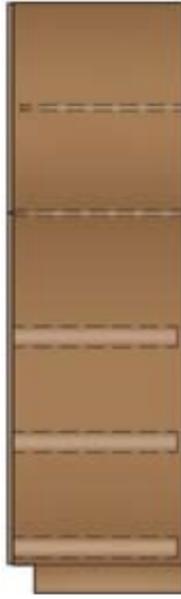
*Cabinet width in inches x number of shelves and drawers x cabinet depth in feet (or fraction thereof) = Shelf and Drawer Frontage*

*Storage/organizing items can enhance the functional capacity of wall, base, drawer, and pantry storage, and should be selected to meet user needs.*

### Code Requirement:

State or local codes may apply.

← 24" →



2 shelves 24" x 2' = 96" pantry storage  
+3 drawers 24" x 2' = 144" drawer storage  

---

Total: 144" drawer storage and 96" pantry storage

← 24" →



Tray dividers 30" x 2' = 60" pantry storage  
+3 drawers 30" x 2' = 180" drawer storage  

---

Total: 180" drawer storage and 60" pantry storage

← 24" →



1 drawer 24" x 2' = 48" drawer storage  
+1 shelf 24" x 1' = 24" base storage  
+1 shelf (bottom) 24" x 2' = 48" base storage  

---

Total: 48" drawer storage and 72" base storage

← 24" →

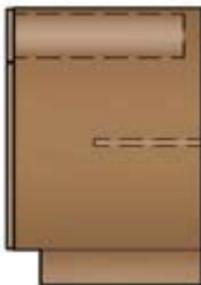


1 drawer 24" x 2' = 48" drawer storage  
+2 roll-outs 24" x 2' = 96" drawer storage  

---

Total: 144" drawer storage

← 21" →



1 drawer 18" x 1<sup>3</sup>/<sub>4</sub>' = 31<sup>1</sup>/<sub>2</sub>" drawer storage  
+1 shelf 18" x 1' = 18" base storage  
+1 shelf (bottom) 18" x 1<sup>3</sup>/<sub>4</sub>' = 31<sup>1</sup>/<sub>2</sub>" base storage  

---

Total: 31<sup>1</sup>/<sub>2</sub>" drawer storage and 49<sup>1</sup>/<sub>2</sub>" base storage

← 21" →



1 drawer 18" x 1<sup>3</sup>/<sub>4</sub>' = 31<sup>1</sup>/<sub>2</sub>" drawer storage  
+2 roll-outs 18" x 1<sup>3</sup>/<sub>4</sub>' = 63" drawer storage  

---

Total: 94<sup>1</sup>/<sub>2</sub>" drawer storage

← 18" →

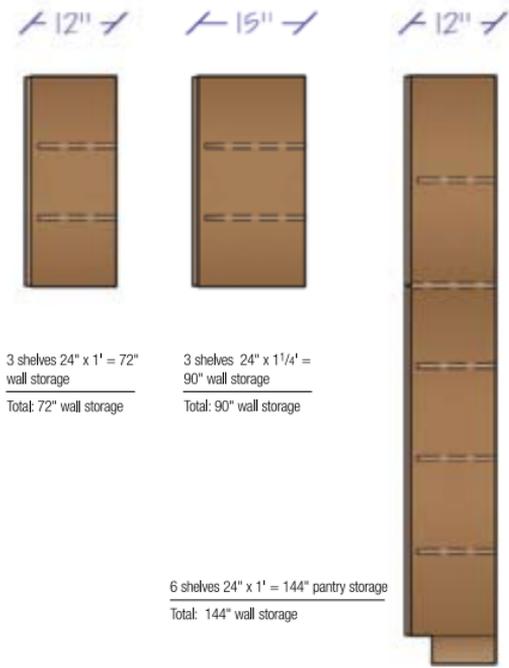


3 drawers 18" x 1<sup>1</sup>/<sub>2</sub>' = 81" drawer storage  

---

Total: 81" drawer storage

## Kitchen Planning Guideline 27 (Continued)



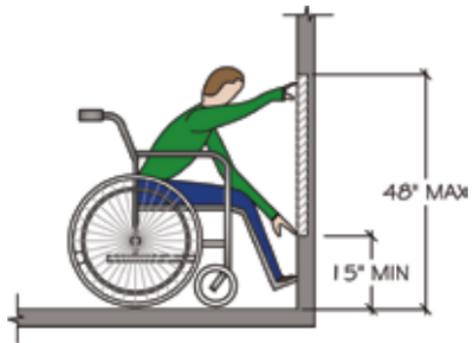
## Access Standard

### Recommended:

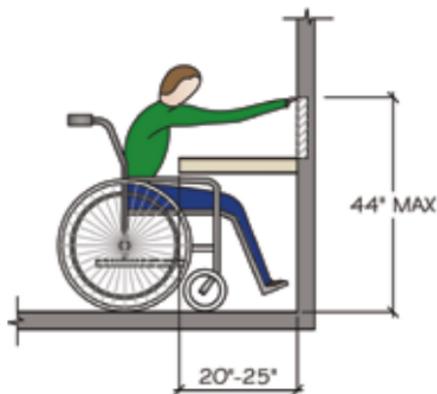
Plan storage of frequently used items 15"–48" above the floor.

### Code Reference:

- Where a forward or side reach is unobstructed, the high reach should be 48" maximum and the low reach should be 15" minimum above the floor. (ANSI A117.1 308.2.1, 308.3.1)
- Where a 20"–25" deep counter obstructs a forward or side reach, the high reach should be 44" maximum. (ANSI A117.1 308.2.2)



UNOBSTRUCTED FORWARD REACH



OBSTRUCTED HIGH FORWARD REACH

## Kitchen Planning Guideline 28

### Storage at Cleanup/Prep Sink

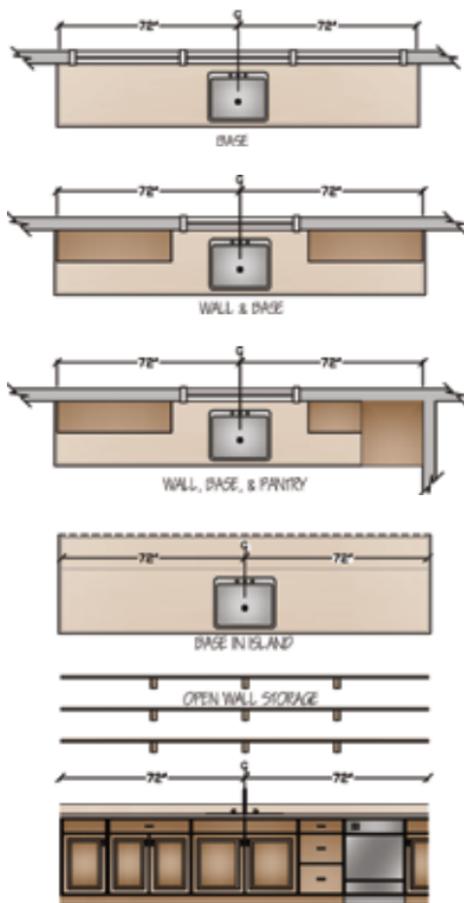
#### Recommended:

Of the total recommended wall, base, drawer, and pantry shelf/drawer frontage, the following should be located within 72" of the centerline of the main cleanup/prep sink:

- at least 400" for a small kitchen;
- at least 480" for a medium kitchen;
- at least 560" for a large kitchen.

#### Code Requirement:

State or local codes may apply.



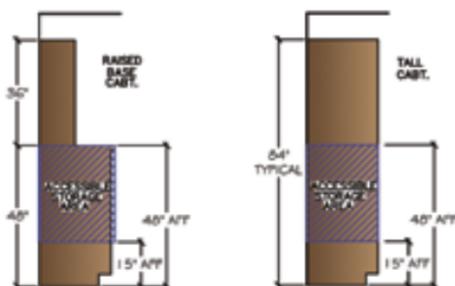
### Access Standard

#### Recommended:

Plan storage of frequently used items 15" – 48" above the floor.

#### Code Reference:

- See Access Guideline 27 for reach specifications.



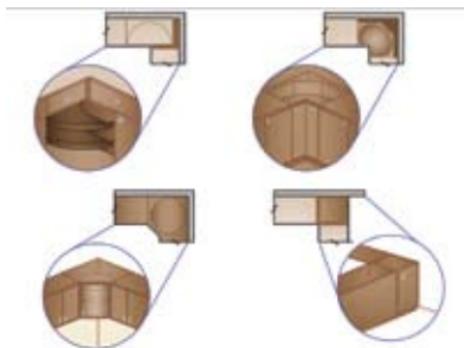
## Kitchen Planning Guideline 29

### Corner Cabinet Storage

#### Recommended:

At least one corner cabinet should include a functional storage device.

This guideline does not apply if there are no corner cabinets.



## Kitchen Planning Guideline 29 (Continued)

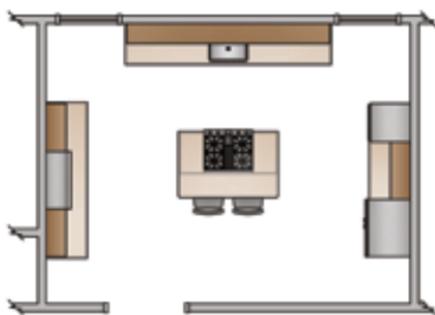
### Code Requirement:

State or local codes may apply.

### Access Standard

#### Recommended:

Kitchen Guideline recommendation meets Access Standard.



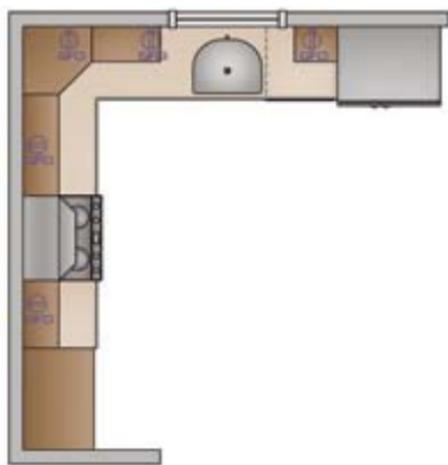
## Kitchen Planning Guideline 30

### Electrical Receptacles

#### Code Requirement:

- GFCI (Ground-fault circuit-interrupter) protection is required on all receptacles servicing countertop surfaces within the kitchen. (IRC E 3802.6)

Refer to IRC E 3801.4.1 through E 3801.4.5 for receptacle placement and locations.



### Access Standard

#### Recommended:

See Code Reference.

#### Code Reference:

- See Access Standard 19 for reach and control specifications.

# Kitchen Planning Guideline 31

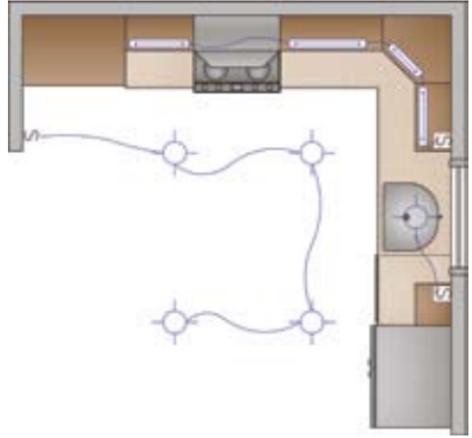
## Lighting

### Recommended:

In addition to general lighting required by code, every work surface should be well illuminated by appropriate task lighting.

### Code Requirement:

- At least one wall-switch controlled light must be provided. Switch must be placed at the entrance. (IRC E 3803.2)
- Window/skylight area, equal to at least 8% of the total square footage of the kitchen, or a total living space which includes a kitchen, is required. (IRC R 303.1, IRC R 303.2)



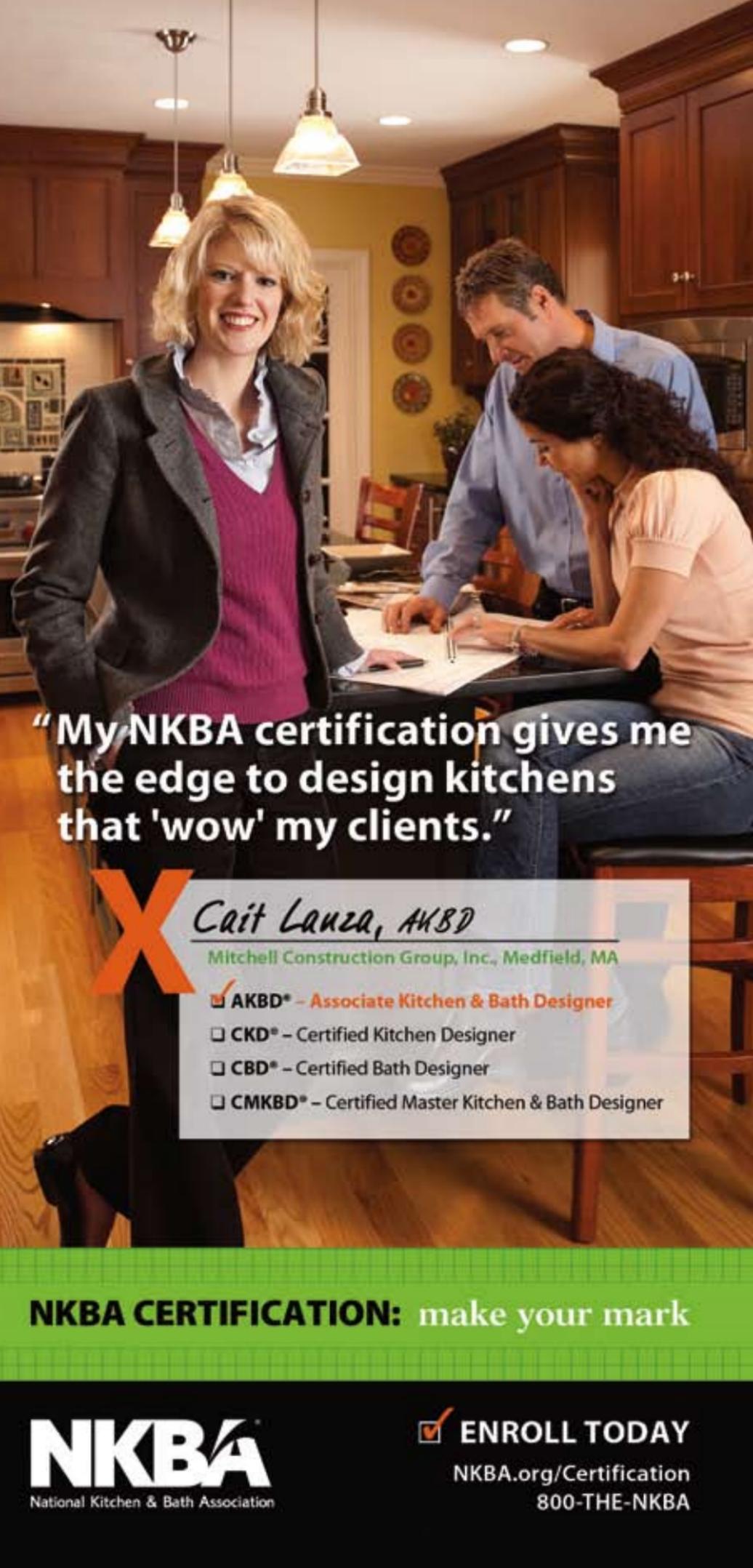
## Access Standard

### Recommended:

Lighting should be from multiple sources and adjustable.

### Code Reference:

- See Access Standard 19 for reach and control specifications.



**"My NKBA certification gives me the edge to design kitchens that 'wow' my clients."**

**X** *Cait Lauza, AKBD*

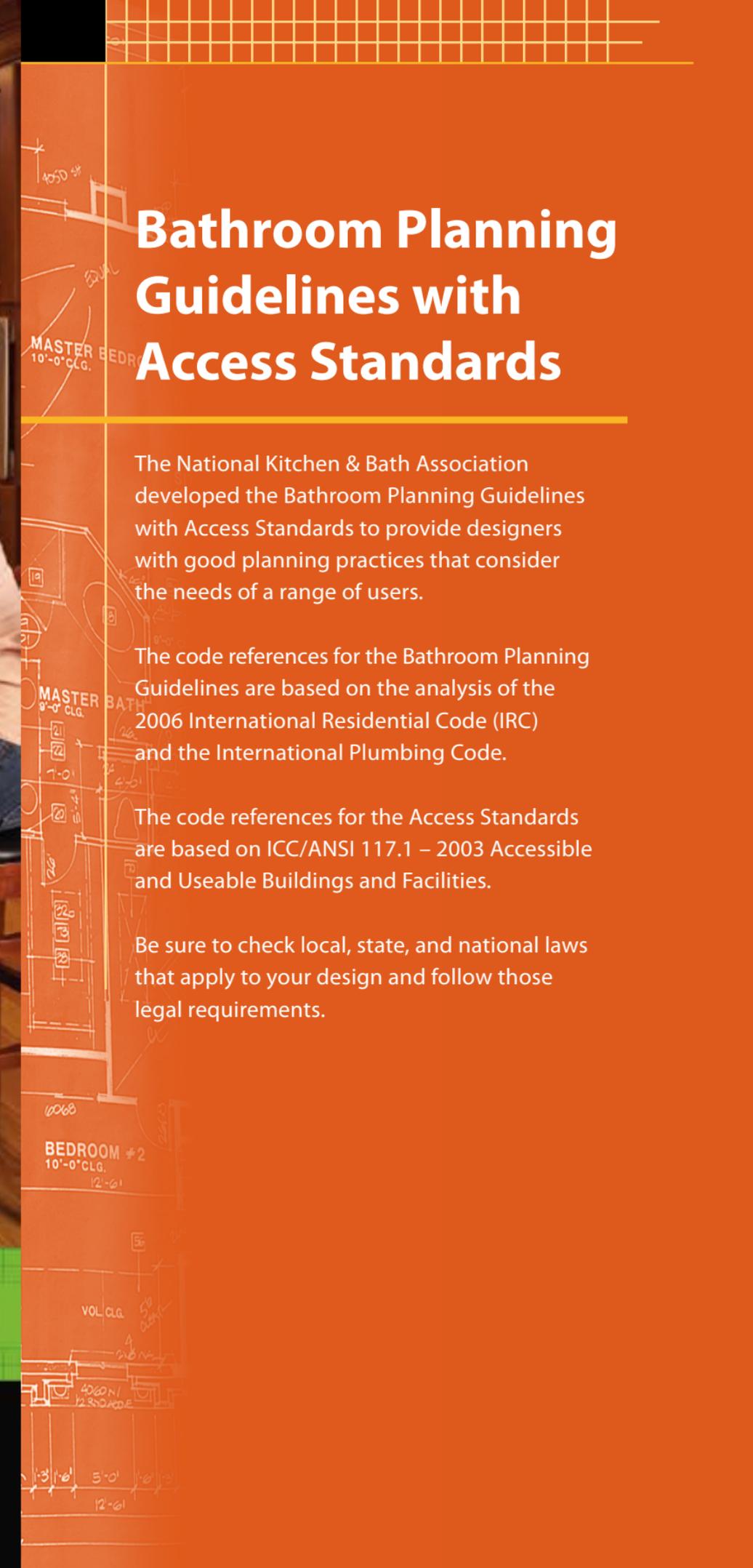
Mitchell Construction Group, Inc., Medfield, MA

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- CKD®** – Certified Kitchen Designer
- CBD®** – Certified Bath Designer
- CMKBD®** – Certified Master Kitchen & Bath Designer

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# Bathroom Planning Guidelines with Access Standards

The National Kitchen & Bath Association developed the 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 2006 International Residential Code (IRC) and the International Plumbing Code.

The code references for the Access Standards are based on ICC/ANSI 117.1 – 2003 Accessible and Useable Buildings and Facilities.

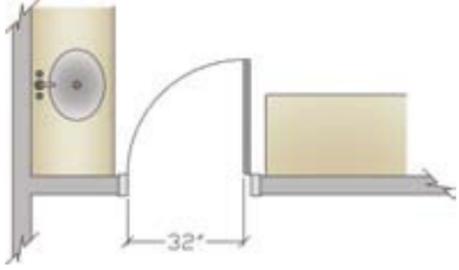
Be sure to check local, state, and national laws that apply to your design and follow those legal requirements.

# Bathroom Planning Guideline 1

## Door/Entry

### Recommended:

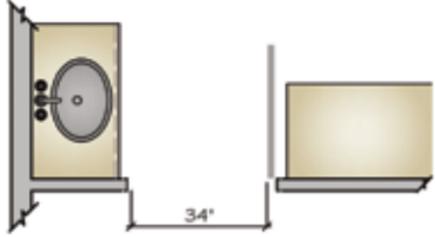
The clear opening of a doorway should be at least 32". This would require a minimum 2' 10" door.



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

### Code Requirement:

State or local codes may apply.



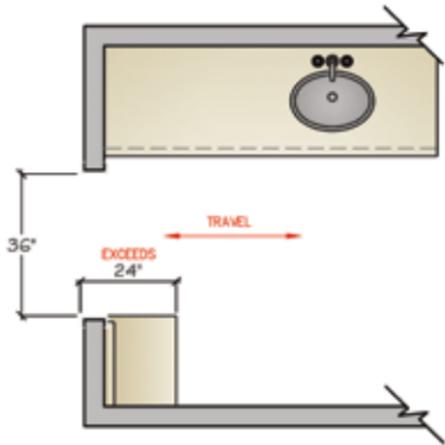
## Access Standard

### Recommended:

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

### Code Reference:

- Clear openings of doorways with swinging doors shall be measured between the face of door and stop, with the door open 90 degrees. (ANSI 404.2.3)
- When the depth of a passage exceeds 24", the minimum clear opening increases to 36". (ANSI A 117.1 404)



# Bathroom Planning Guideline 2

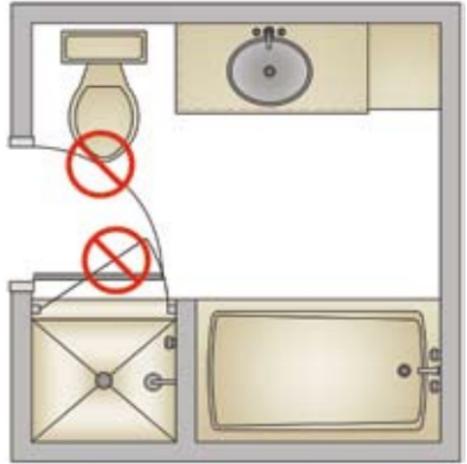
## Door Interference

### 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)



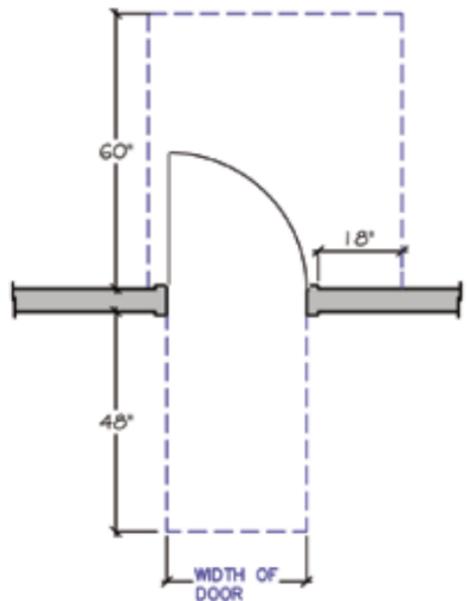
## Access standard

### Recommended:

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

### Code Reference:

- For a standard hinged door or a swinging door, the minimum clearance on the pull side of the door should be the width of the door plus 18" x 60". (ANSI A 117.1 404.2.3.1)
- The minimum clearance on the push side of the door should be the width of the door x 48". (ANSI A 117.1 404.2.3.1)



# Bathroom Planning Guideline 3

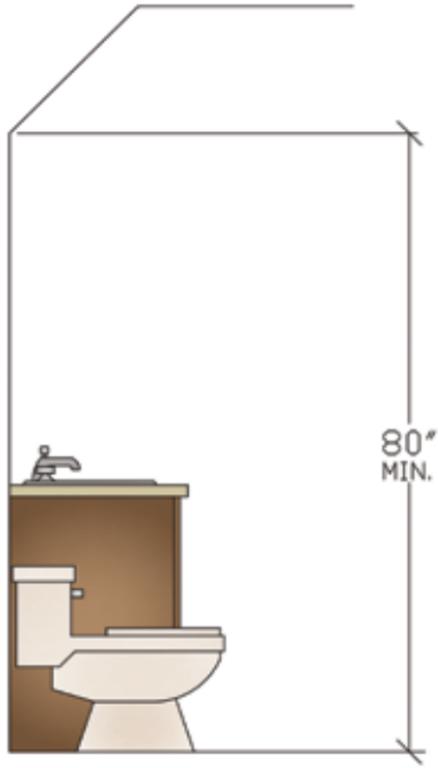
## Ceiling Height

### Recommended:

See Code Requirement.

### Code Requirement:

- Bathrooms shall have a minimum floor to ceiling height of 80" over the fixture and at the front clearance area for fixtures.
- A shower or tub equipped with a showerhead shall have a minimum floor to ceiling height of 80" above a minimum area 30" x 30" at the showerhead.



## Access Standard

### Recommended:

Bathroom Guideline code requirement meets Access Standard.

# Bathroom Planning Guideline 4

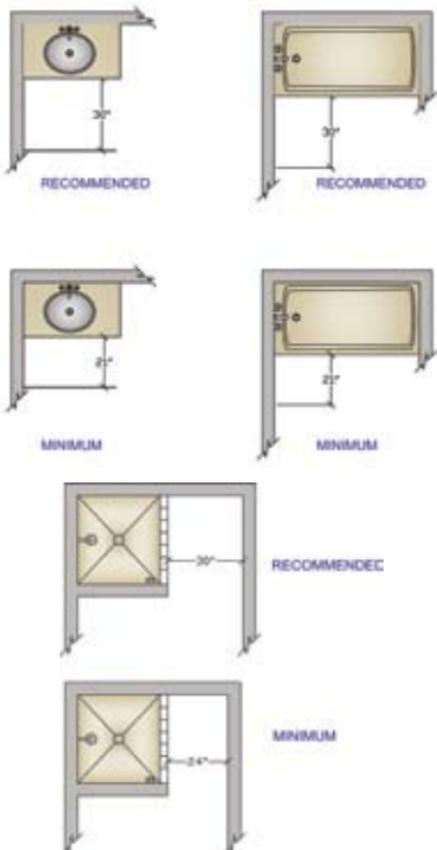
## Clear Space

### Recommended:

Plan a clear floor space of at least 30" 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" must be planned in front of lavatory, toilet, bidet, and tub. (IRC P 2705.1.5)
- A minimum space of at least 24" must be planned in front of a shower entry. (IRC R 307.1)



## Bathroom Planning Guideline 4 (Continued)

### Access Standard

#### Recommended:

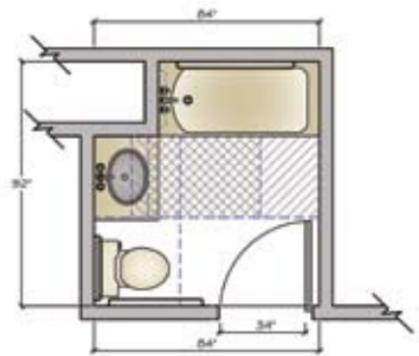
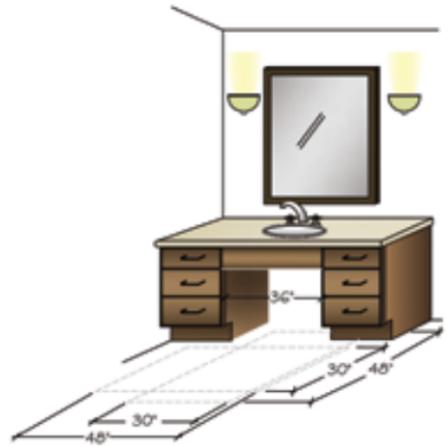
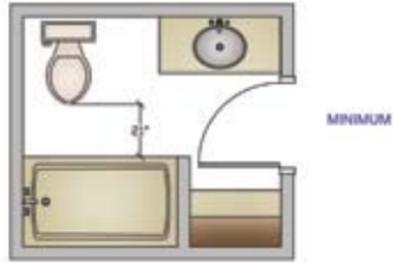
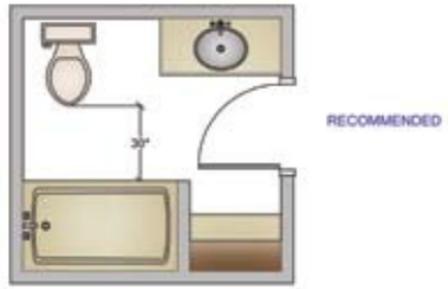
Plan a minimum clear floor space of 30" x 48" at each fixture, plus space for maneuvering, including approach and turning for a person using a wheelchair.

Plan a knee space at the lavatory or workspace to allow for a seated user. Recommended minimum size of a knee space is 36" wide x 27" high x 8" deep, increasing to 17" deep in the toe space, which extends 9" from the floor. Insulation for exposed pipes should be provided.

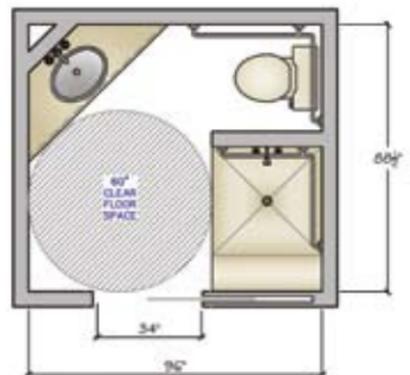
Consider the user's method of transfer to the toilet to plan a clear space to fit the user's needs.

#### Code Reference:

- A clear floor space of at least 30" x 48" should be provided at each fixture. (ANSI 305.3)  
Clear spaces can overlap. (ANSI 1002.11.2)
- Include a wheelchair turning space with a diameter of at least 60", which can include knee\* and toe\* clearances. (ANSI 304.3.1)
- A wheelchair turning space could use a T-shaped space, which is a 60" square with two 12" wide x 24" deep areas removed from two corners of the square. This leaves a minimum 36" wide base and two 36" wide arms. T-shaped wheelchair turning spaces can include knee\* and toe\* clearances. (ANSI 304.3.2)



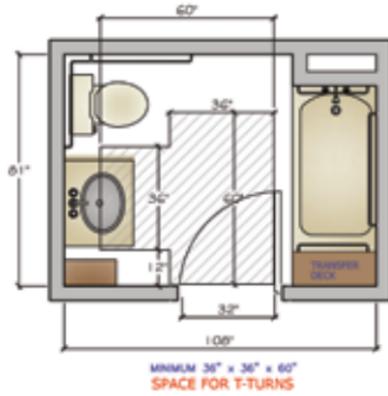
FIXTURE CLEAR FLOOR SPACE



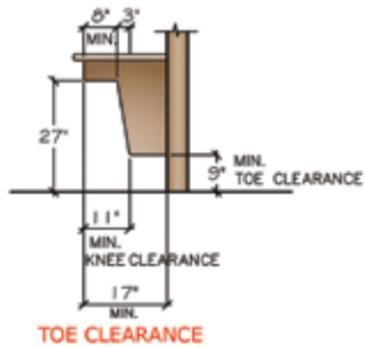
WHEELCHAIR TURNING SPACE

## Bathroom Planning Guideline 4 (Continued)

\*Knee clearance must be a minimum 30" wide (36" to use as part of the T-turn) and maintain a 27" clear space under the cabinet, counter, or sink for a depth of 8". The next 3" of depth may slope down to a height of 9", with a clear space of at least 17" extending beneath the element.  
(ANSI 306.3)



\*Toe clearance space under a cabinet or fixture is between the floor and 9" above the floor. Where toe clearance is required as part of a clear floor space, the toe clearance should extend 17" minimum beneath the element.  
(ANSI 306.2)

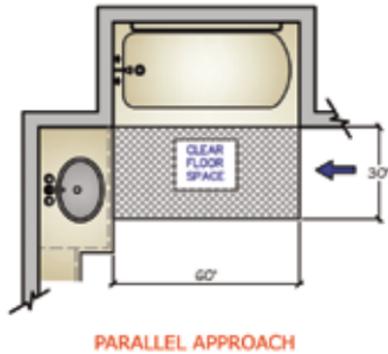


### Grooming

- The clear floor space should be centered on the lavatory.  
(ANSI 1002.10.1)

### Bathing and Showering

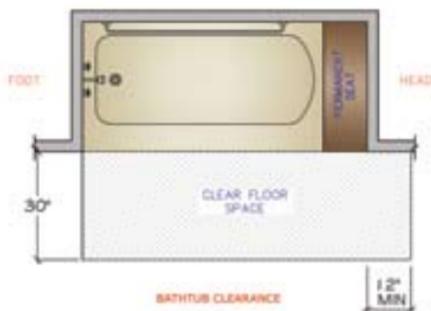
- Clearance in front of bathtubs should extend the length of the bathtub and be at least 30" wide.  
(ANSI 607.2)



### Code Reference:

### Bathing and Showering

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



## Bathroom Planning Guideline 4 (Continued)

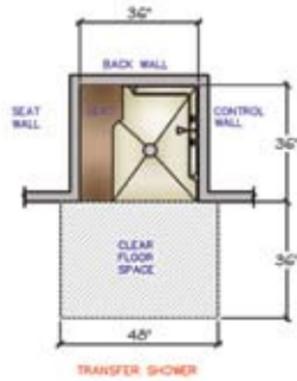
open face of the shower compartment and 30" wide. (ANSI 608.2)

### Toileting

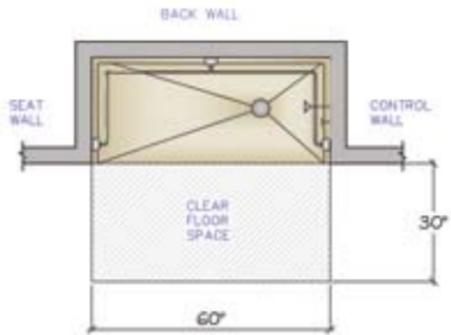
- When both a parallel and a forward approach to the toilet are provided, the clearance should be at least 56" measured perpendicular from the rear wall, and 60" measured perpendicular from the sidewall. No other fixture or obstruction should be within the clearance area. (ANSI 604.3.1, 1002.11.5.2.3)

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

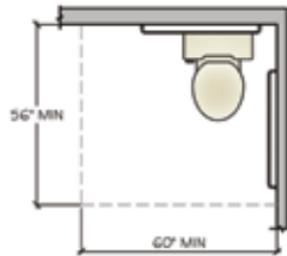
\*\*A roll-in shower is a waterproof area large enough for a person in a wheelchair to remain in the chair to shower. A preferred minimum size for roll-in shower is 36" – 42" x 60".



TRANSFER SHOWER



ROLL-IN SHOWER



TOILET APPROACH

## Bathroom Planning Guideline 5

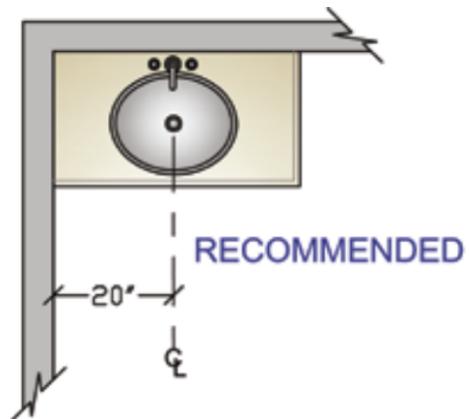
### Single Lavatory Placement

#### Recommended:

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

#### Code Requirement:

- The minimum distance from the centerline of the lavatory to a wall is 15". (IPC 405.3.1)
- The minimum distance between a wall and the edge of a freestanding or wall-hung lavatory is 4". (IRC R 307.1)

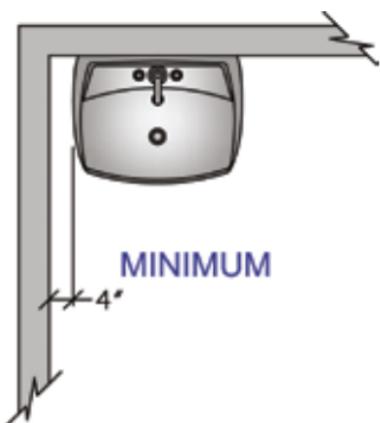
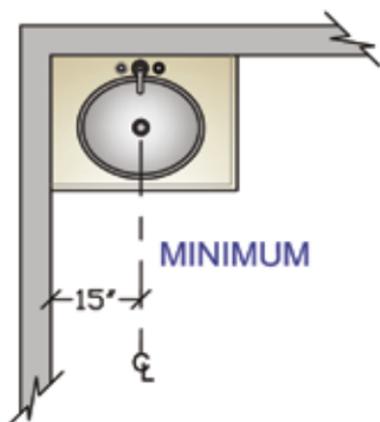


## Bathroom Planning Guideline 5 (Continued)

### Access Standard

#### Recommended:

Bathroom Guideline recommendation meets Access Standard.



## Bathroom Planning Guideline 6

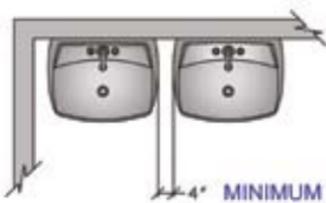
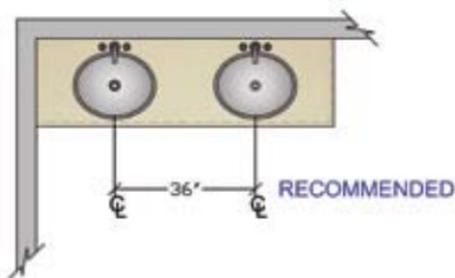
### Double Lavatory Placement

#### Recommended:

The distance between the centerlines of two lavatories should be at least 36".

#### Code Requirement:

- The minimum distance between the centerlines of two lavatories should be at least 30". (IPC 405.3.1)
- The minimum distance between the edges of two freestanding or wall-hung lavatories is 4". (IRC R 307.1)



### 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" – 43" 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.

**Code Reference:**

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

## Bathroom Planning Guideline 8

### Counter

**Recommended:**

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

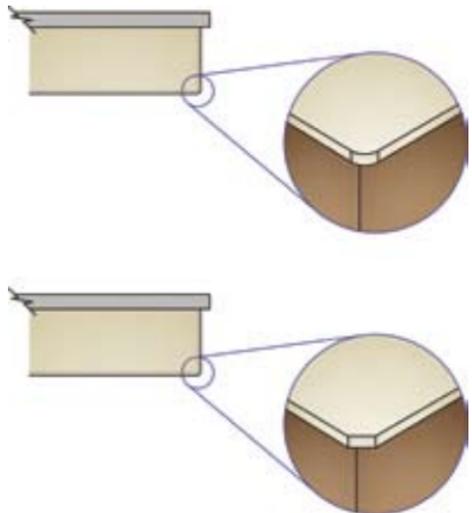
**Code Requirements:**

State or local codes may apply.

### Access Standard

**Recommended:**

Bathroom Guideline recommendation meets Access Standard.



# Bathroom Planning Guideline 9

## Shower Size

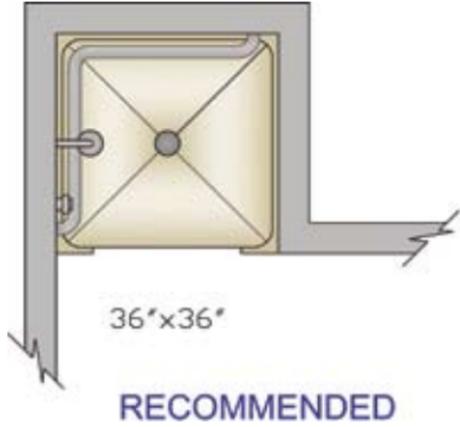
### Recommended:

The interior shower size is at least 36" x 36".

### Code Requirement:

- The minimum interior shower size is 30" x 30" or 900 square inches, in which a disc of 30" in diameter must fit.

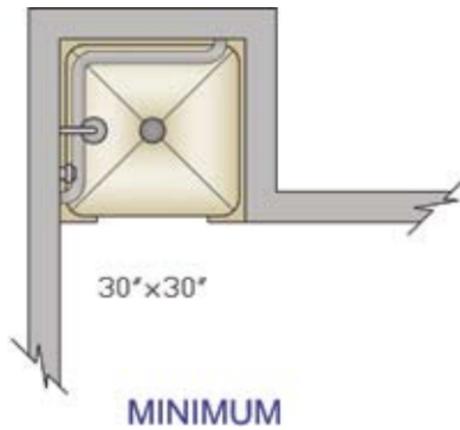
(IRC P 2708.1, IPC 417.4)



### Access Standard

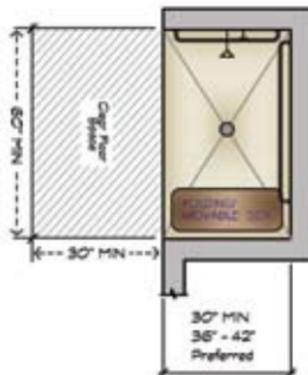
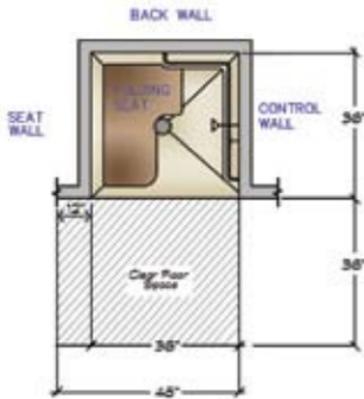
### Recommended:

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

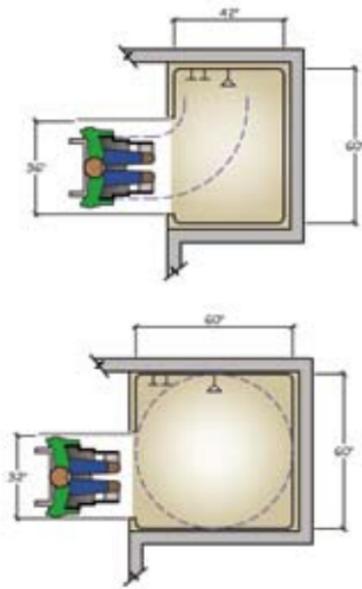


### Code Reference:

- Transfer-type shower compartments should have an inside finished dimension of 36" x 36", and have a minimum of 36" wide entry on the face of the shower compartment. A seat must be provided within the 36" x 36" area. (ANSI 608)
- Roll-in-type shower compartments should have a minimum inside finished dimension of at least 30" wide x 60" deep, and have a minimum of a 60" wide entry on the face of the shower compartment. (ANSI 608.2.2)



## Bathroom Planning Guideline 9 (Continued)

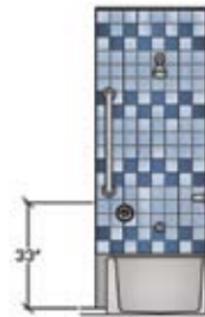
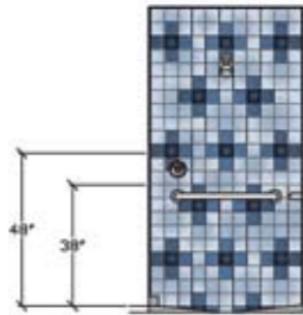


## Bathroom Planning Guideline 10

### Tub/Shower Controls

#### Recommended:

- The shower controls should be accessible from both inside and outside the shower spray and be located between 38" – 48" above the floor, depending on user's height.
- The tub controls should be accessible from both inside and outside the tub and be located between the rim of the bathtub and 33" above the floor.



#### Code Requirement:

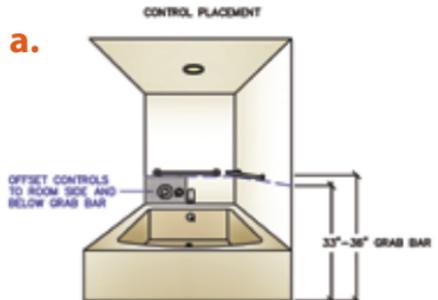
State or local codes may apply.

### 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.

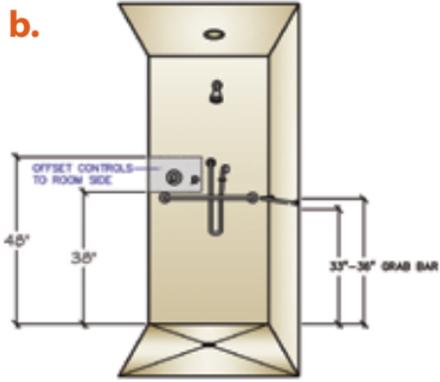


## Bathroom Planning Guideline 10 (Continued)

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

### Code Reference:

- Tub/shower controls should be operable with one hand and not require tight grasping. (ANSI 309.4)
- Controls should be on an end wall of the tub, between the rim and grab bar, and between the open side of the tub and the mid-point of the width of the tub. (ANSI 607.5) (a)
- Controls in roll-in showers should be above the grab bar, but no higher than 48" above the shower floor. In transfer-type shower compartments, controls, faucets, and the shower unit should be on the sidewall opposite the seat, between 38" and 48" above the shower floor. (ANSI 608.5) (b)
- A handheld spray unit should be provided with a hose at least 59" long that can be used as a fixed showerhead and as a handheld shower. In transfer-type showers, the controls and shower unit should be on the control wall within 15" of the centerline of the seat (c). In roll-in-type showers, shower spray units mounted on the back wall should be no more than 27" from the sidewall. If an adjustable height showerhead mounted on a vertical bar is used, the bar should not obstruct the use of the grab bars. (ANSI 608.6)



## Bathroom Planning Guideline 11

### Shower/Tub Control Valves

**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 P2708.3)



### Access Standard

**Recommended:**

Bathroom Guideline code requirement meets Access Standard.

## Bathroom Planning Guideline 12

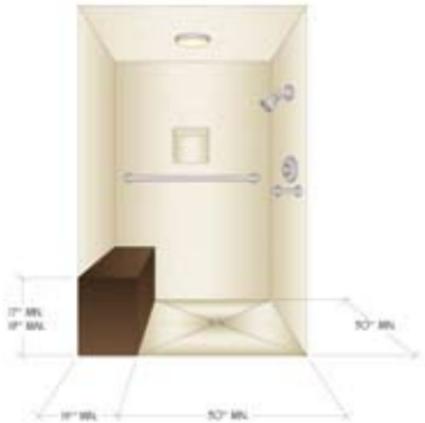
### Shower/Tub Seat

**Recommended:**

Plan a seat within the shower that is 17" – 19" above the shower floor and 15" deep.

**Code Requirement:**

- Shower seat must not infringe on the minimum interior size of the shower (900 square inches). (IRC P 2708.1)



### Access Standard

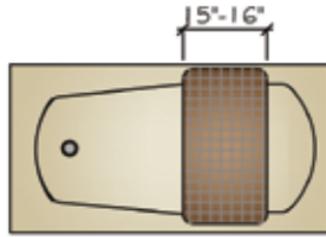
**Recommended:**

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

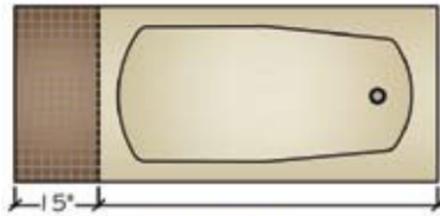
## Bathroom Planning Guideline 12 (Continued)

### Code Reference:

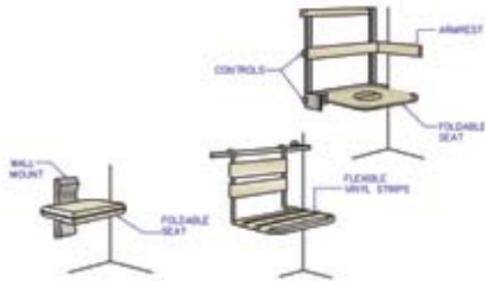
- A removable in-tub seat should be at least 15" – 16" deep and capable of secure placement. (ANSI 610.2)
- A permanent tub seat should be at least 15" deep and positioned at the head end of the bathtub. The top of the seat should be between 17" and 19" above the bathroom floor. (ANSI 610.2)
- Where a seat is provided in a roll-in shower, it should be a folding type and located on the wall adjacent to the controls. The top of the seat should be between 17" and 19" above the bathroom floor. (ANSI 610.3)
- In a transfer-type shower, the seat should be a folding type and extend from the back wall to a point within 3" of the shower entry. (ANSI 610.3)
- The materials and installation of the shower and/or bathtub seat must support a minimum of 250 pounds of pressure. (ANSI 610.4)



(a) REMOVEABLE IN-TUB SEAT



PERMANENT SEAT



## Bathroom Planning Guideline 13

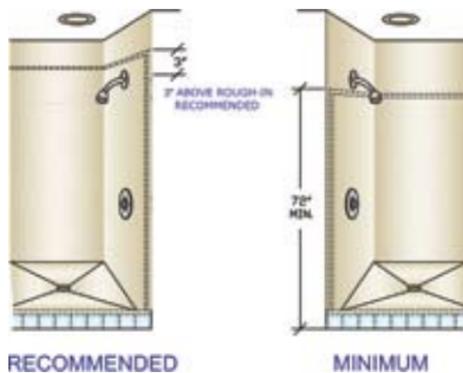
### Tub/Shower Surround

#### Recommended:

The wall area above a tub or shower pan should be covered in a waterproof material extending at least 3" 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" above the finished floor. (IPC 417.4.1, IRC R 307.2)



## Bathroom Planning Guideline 13 (Continued)

### Access Standard

#### Recommended:

Bathroom Guideline recommendation meets Access Standard.

## Bathroom Planning Guideline 14

### Grab Bars

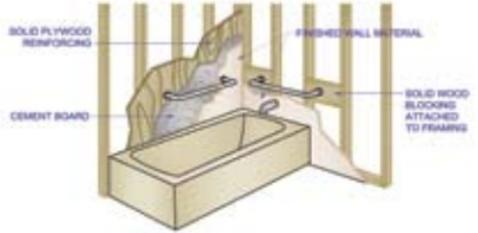
#### Recommended:

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.

Grab bars should be placed at least 33" – 36" above the floor.

Grab bars must be 1 1/4" to 2" in diameter and extend 1 1/2" from the wall.

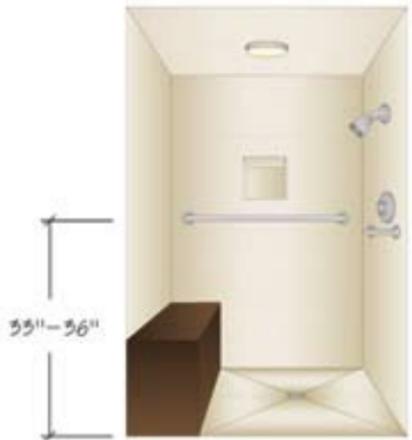


### Access Standard

#### 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. of pressure.

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



#### Code 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

## Bathroom Planning Guideline 14 (Continued)

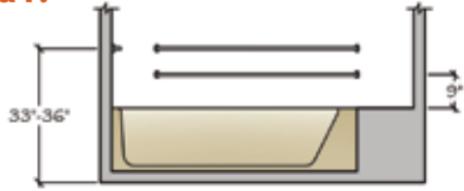
provided on the back wall, one between 33" and 36" above the floor and the other 9" above the rim of the bathtub (a2). Each grab bar should be no more than 15" from the head end wall or 12" from the foot end wall. A grab bar 24" long should be provided on the foot end wall at the front edge of the bathtub. (ANSI 607.4.1)

- Bathtubs without permanent seats: Two horizontal grab bars should be provided on the back wall, one between 33" and 36" above the floor and the other 9" above the rim of the bathtub (a3). Each grab bar should be at least 24" long and no more than 24" from the head end wall or 12" from the foot end wall. A grab bar 24" long should be provided on the foot end wall at the front edge of the bathtub. A grab bar 12" long should be provided on the head end wall at the front edge of the bathtub (a4). (ANSI 607.4.2)

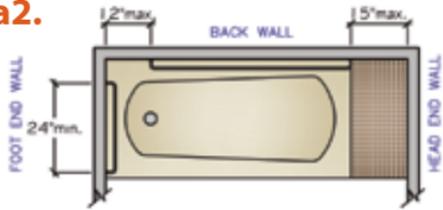
- Transfer-type showers: Grab bars should be mounted in a horizontal position, between 33" and 36" above the floor, across the control wall and across the back wall to a point 18" from the control wall. (ANSI 608.3.1) (b)

- Roll-in type shower: Grab bars should be mounted in a horizontal position, between 33" and 36" above the floor, on all three walls of the shower, but not behind a seat. Grab bars should be no more than 6" from each adjacent wall. (ANSI 608.3.2) (c1, c2, and c3)

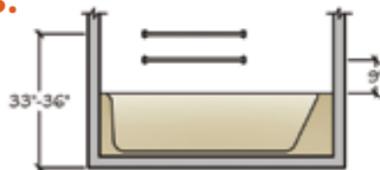
a1.



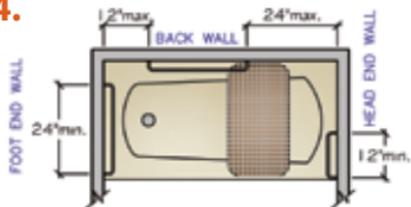
a2.



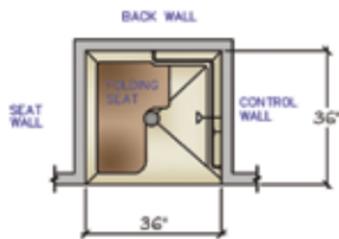
a3.



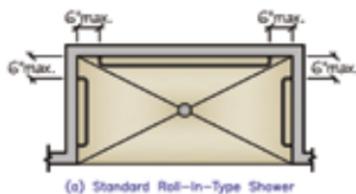
a4.



b.

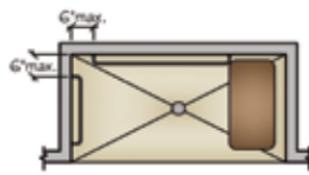


c1.



(a) Standard Roll-in-Type Shower

c2.

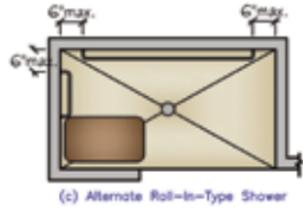


(b) Roll-in-Type Shower with Seat

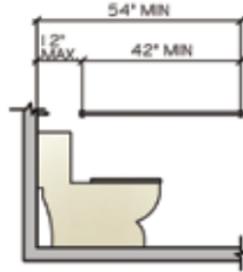
## Bathroom Planning Guideline 14 (Continued)

- Toilet: Grab bars should be provided on the rear wall and on the sidewall closest to the toilet. The sidewall grab bar should be at least 42" long and located between 12" and 54" from the rear wall. The rear grab bar should be at least 24" long, centered on the toilet. Where space permits, the bar should be at least 36" long, with the additional length provided on the transfer side of the toilet. (ANSI 604.5) (d1 and d2)

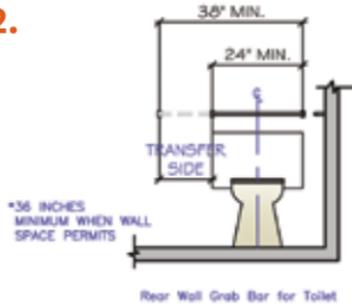
c3.



d1.



d2.



## Bathroom Planning Guideline 15

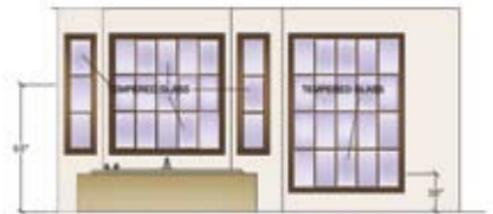
### Glazing

#### 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" above any standing or walking surface. (IRC R 308.4.5)



## Bathroom Planning Guideline 15 (Continued)

- Any glazing (e.g., windows or doors) whose bottom edge is less than 18" above the floor must be tempered glass or approved equal. (IRC R 308.4.7.2)

## Access Standard

### Recommended:

Bathroom Guideline code requirements meet Access Standard.

## Bathroom Planning Guideline 16

### Tub/Shower Door

### Recommended:

See Code Requirement.

### Code Requirement:

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

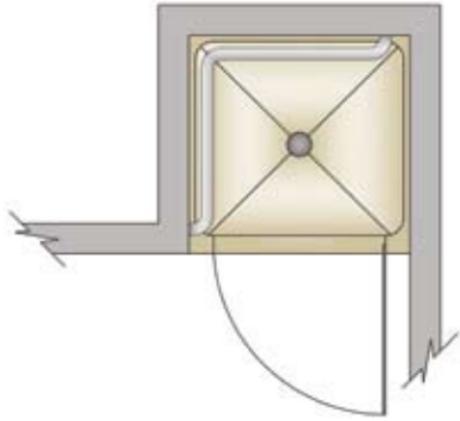
## Access Standard

### Recommended:

Minimize thresholds at the shower entry to no more than 1/2".

### Code Reference:

- Shower compartment thresholds should be no more than 1/2" high. Changes in level of no more than 1/4" high are permitted, but changes in level between 1/4" high and 1/2" high should be beveled with a slope not steeper than 1:2. (ANSI 608.7.303)



## 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.

#### Code Reference:

- Plan a slope for the bathtub or shower drain with a maximum slope of 1:48 pitch 1/4" per foot. (ANSI 403.3)



## Bathroom Planning Guideline 19

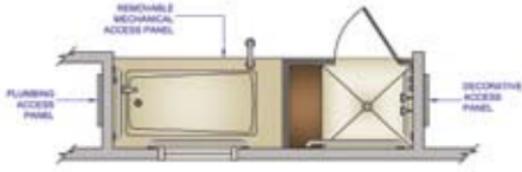
### Equipment Access

#### Recommended:

See below.

#### Code Requirement:

- All equipment, including access panels, must be installed as per manufacturers' specifications. (IRC M 2720.1)
- All manufacturers' instructions must be available for installers and inspectors and left for homeowners. (IRC P 1307.1)



### Access Standard

#### Recommended:

Bathroom Guideline code requirement meets Access Standard.

## 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".

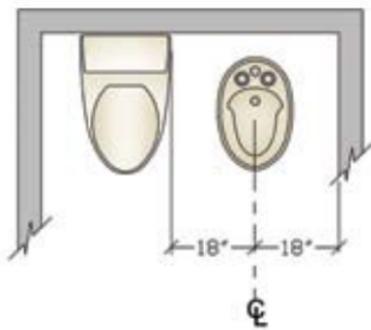
#### Code Requirement:

- A minimum distance of 15" is required from the centerline of toilet and/or bidet to any bath fixture, wall, or other obstacle. (IRC R 307.1, IRC P 2705.1.5, IPC 405.3.1)

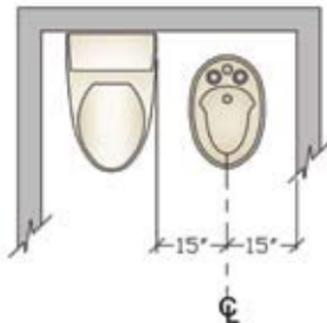
### Access Standard

#### Recommended:

The recommended toilet height is between 15" and 19" high.



RECOMMENDED

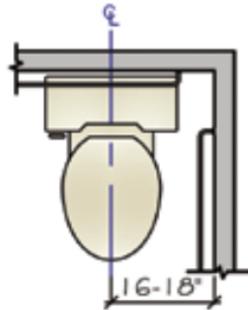
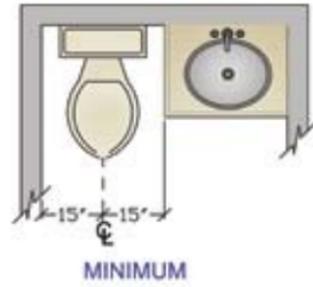
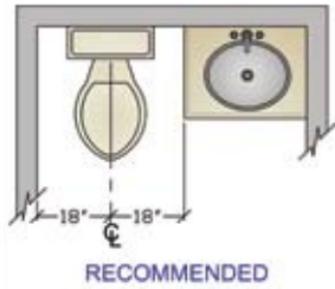


MINIMUM

## Bathroom Planning Guideline 20 (Continued)

### Code Reference:

- The toilet should be centered 16" to 18" from a side wall.  
(ANSI 1002.11.5)
- The toilet seat should be between 15" and 19" from the floor.  
(ANSI 1002.11.5.3)



## Bathroom Planning Guideline 21

### Toilet Compartment

#### Recommended:

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

#### Code Requirement:

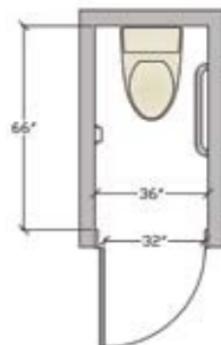
- The minimum size for a separate toilet compartment is 30" x 60".  
(IPC 405.3.1)

### Access Standard

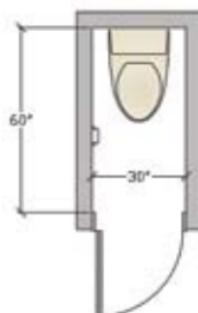
#### Recommended:

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

#### RECOMMENDED



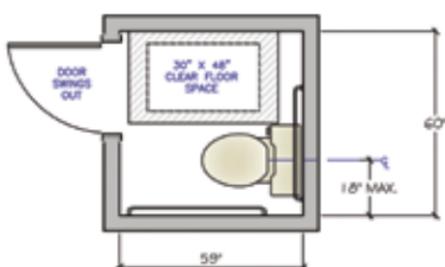
#### MINIMUM



## Bathroom Planning Guideline 21 (Continued)

### Code Reference:

- Wheelchair accessible compartments should be at least 60" wide measured perpendicular to the sidewall, 56" deep for a wall hung toilet, and 59" deep for a floor-mounted toilet measured perpendicular to the rear wall.  
(ANSI 604.8.1.1)



## 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 15" to 48" above the floor.

#### Code Reference:

- Where a forward or side reach is unobstructed, the high reach should be 48" maximum and the low reach should be 15" minimum above the floor.  
(ANSI 308.2.1, 308.3.1)
- Where a forward or side reach is obstructed by a 20" – 25" deep counter, the high reach should be 44" maximum.  
(ANSI 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.  
(ANSI 309.4)

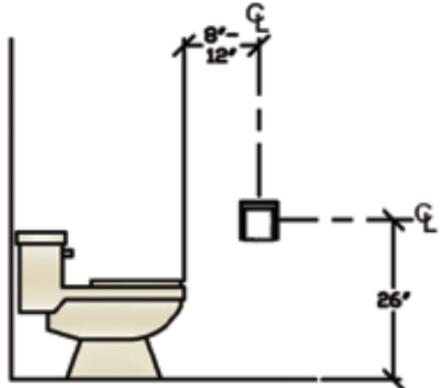


# Bathroom Planning Guideline 23

## 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" – 12" in front of the edge of the toilet bowl, centered at 26" above the floor.
- Additional accessories, such as towel holders and soap dishes, should be conveniently located near all bath fixtures.



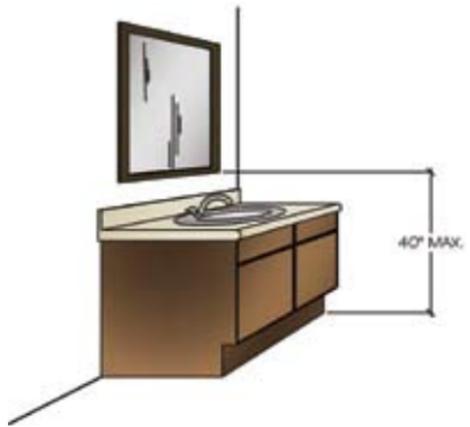
### Code Requirement:

State or local codes may apply.

## Access Standard

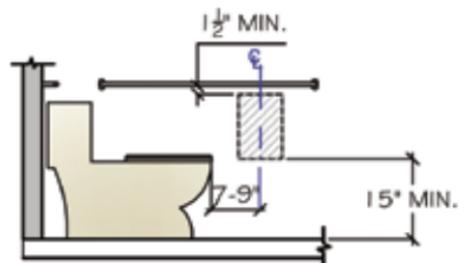
### Recommended:

- 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" above the floor, and operable with a closed fist and with minimal effort.



### Code Reference:

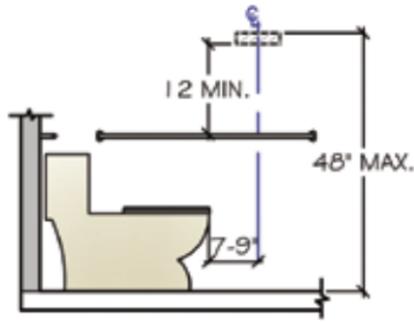
- Mirrors above lavatories should have the bottom edge of the reflecting surface no more than 40" above the floor. (ANSI 603.3) (a)
- The toilet paper holder should be 7" – 9" in front of the toilet bowl and between 15" and 48" above the floor, with a clearance of at least 1 1/2" below or 12" above the grab bar. (ANSI 604.7) (b)



(a) BELOW GRAB BAR

## Bathroom Planning Guideline 23 (Continued)

- See Access Standard 22 for reach specifications.



(b) ABOVE GRAB BAR

## Bathroom Planning Guideline 24

### 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" of the outside edge of the lavatory. (IRC E 3801.6)
- All receptacles must be protected by ground-fault circuit-interrupters. (IRC 3802.1)
- A receptacle shall not be installed within a shower or bathtub space. (IRC E 3902.11)
- Switches shall not be installed within wet locations in 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 3901.7)



## Bathroom Planning Guideline 24 (Continued)

### Access Standard

#### Recommended:

See Code Reference.

#### Code Reference:

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

## Bathroom Planning Guideline 25

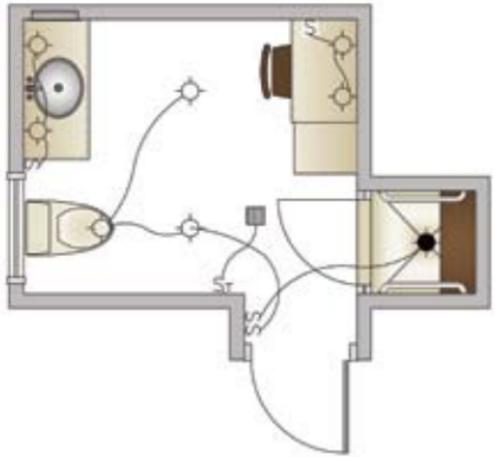
### Lighting

#### 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 3901.6, IRC E 3803.2)
- All light fixtures installed within tub and shower spaces should be marked "suitable for damp/wet locations."  
(IRC E 3903.8)
- Hanging fixtures cannot be located within a zone of 3' horizontally and 8' vertically from the top of the bathtub rim or shower stall threshold.  
(IRC E 3903.10)



### 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.

## Bathroom Planning Guideline 25 (Continued)

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

### Code 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 maximum. (ANSI A117.1 309.4)
- See Access Standard 22 for specifications for reach range for controls.

## Bathroom Planning Guideline 26

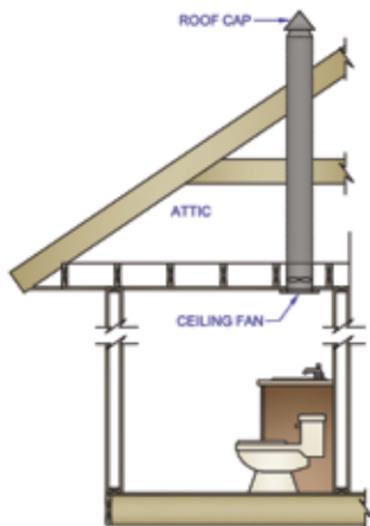
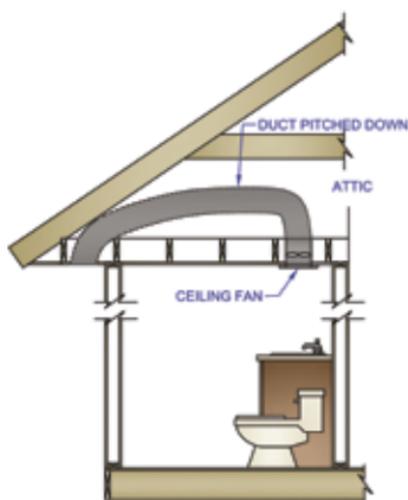
### Ventilation

#### 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, of which 50% is operable, or a mechanical ventilation system of at least 50 cubic feet per minute (cfm) ducted to the outside. (IRC R 303.3, IRC M 1506.3)



### Access Standard

#### Recommended:

Ventilation controls should be placed 15" – 48" above the floor, operable with minimal effort, easy to read, and with minimal noise pollution.

#### Code Reference:

- See Access Standard 25 for operable controls.
- See Access Standard 22 for reach range for controls.

# Bathroom Planning Guideline 27

## 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 degrees Fahrenheit. (IRC R 303.8)

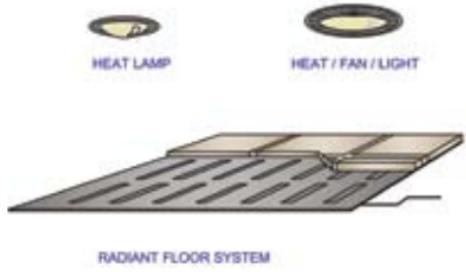
## Access Standard

### Recommended:

See Code Reference.

### Code Reference:

- See Access Standard 25 for operable controls.
- See Access Standard 22 for reach range for controls.



## Notes:



## Notes:

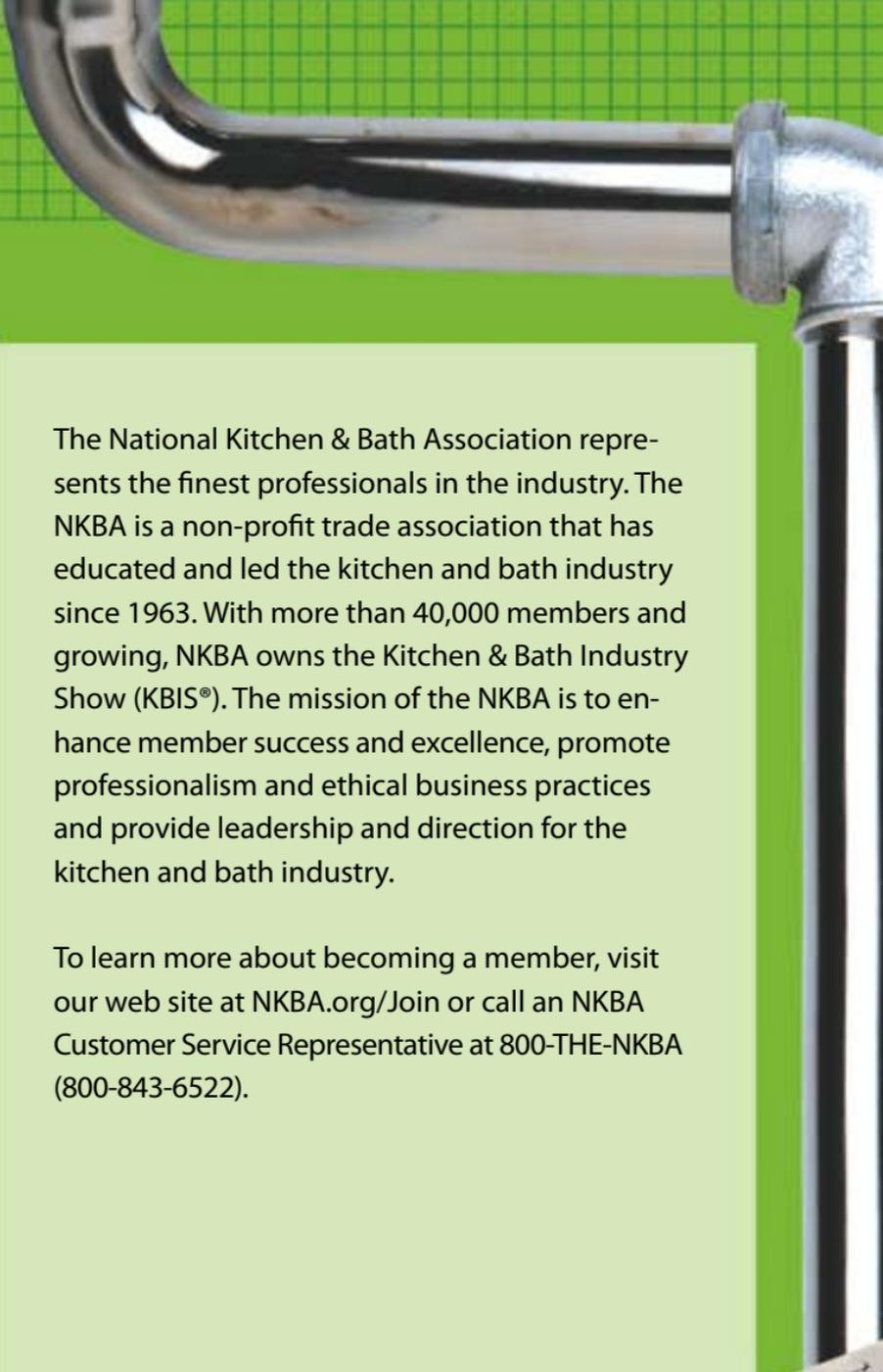
## Notes:

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