

BOBRICK

BUILDING VALUE SINCE 1906

A Planning Guide for Accessible Restrooms

Version 2.2



REFERENCING:

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

ICC A117.1-2009 – ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES



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1. Identify how accessibility standards accommodate a diverse set of users and the general prescriptive requirements for accessible restroom design mandated by ADA.
2. Describe requirements for accessible lavatories and restroom accessories.
3. Describe requirements for accessible toilet compartments of varying sizes and the accessories needed to complete their specification.
4. Discuss requirements for accessible bathing facilities.

Learning Objectives



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The Americans with Disabilities Act (ADA) set the minimum requirements for newly designed and constructed or altered state and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

Many projects must also follow the provisions of the 2009 revision of ANSI Standard *ICC A117.1, Accessible and Usable Buildings and Facilities*.

This course will identify the benefits of accessibility standards and the prescriptive requirements for accessible restrooms set by the ADA.

Course Description





Identify how accessibility standards accommodate a diverse set of users and the general prescriptive requirements for accessible restroom design mandated by ADA.

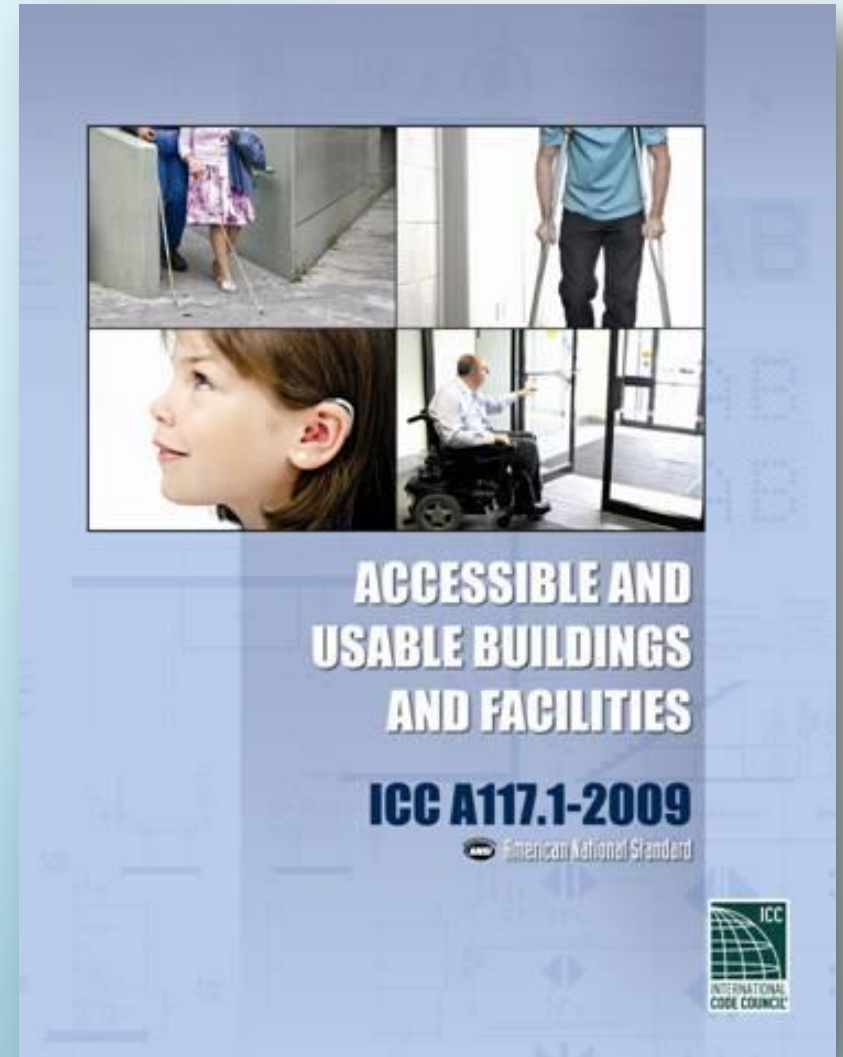


Learning Objective One



**2010 ADA Standards
for Accessible Design**

Department of Justice
September 15, 2010



**ACCESSIBLE AND
USABLE BUILDINGS
AND FACILITIES**

ICC A117.1-2009

American National Standard



2010 ADA Standards

2009 ICC/ANSI Standards

- Responsive to a wide range of abilities and disabilities.
- Wheelchairs primary basis of design.
- Benefit a wide range of users.
 - People with health problems.
 - Older people.
 - People with children.
 - Caregivers



Accommodating Diverse Users

- Consider sensory abilities:
 - Visual
 - Auditory
 - Avoid protruding objects
 - Provide strobe lights on fire alarm

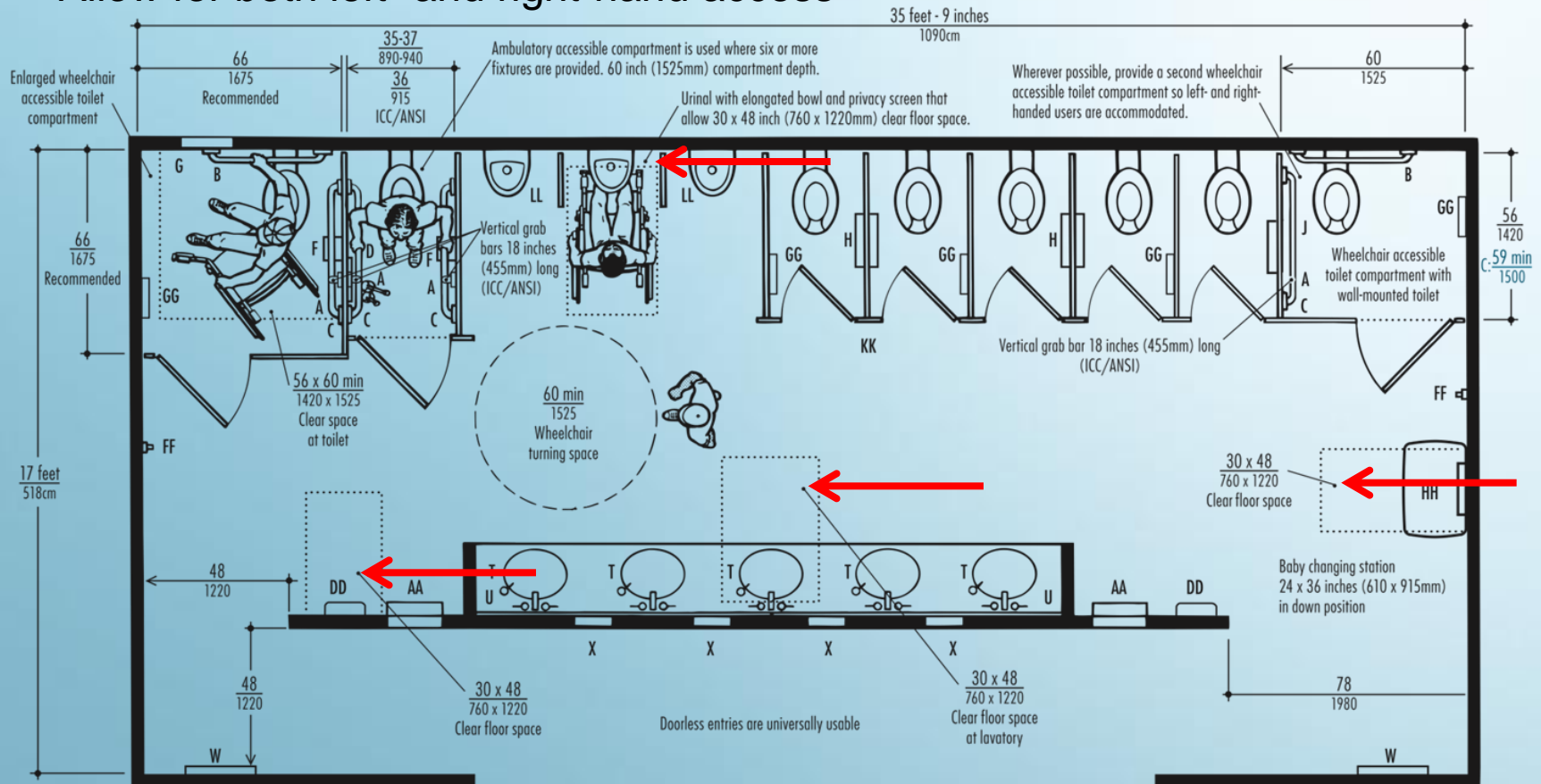


- Family restrooms accommodate:
 - Diaper changing
 - Children
 - Older individuals
 - Caregivers



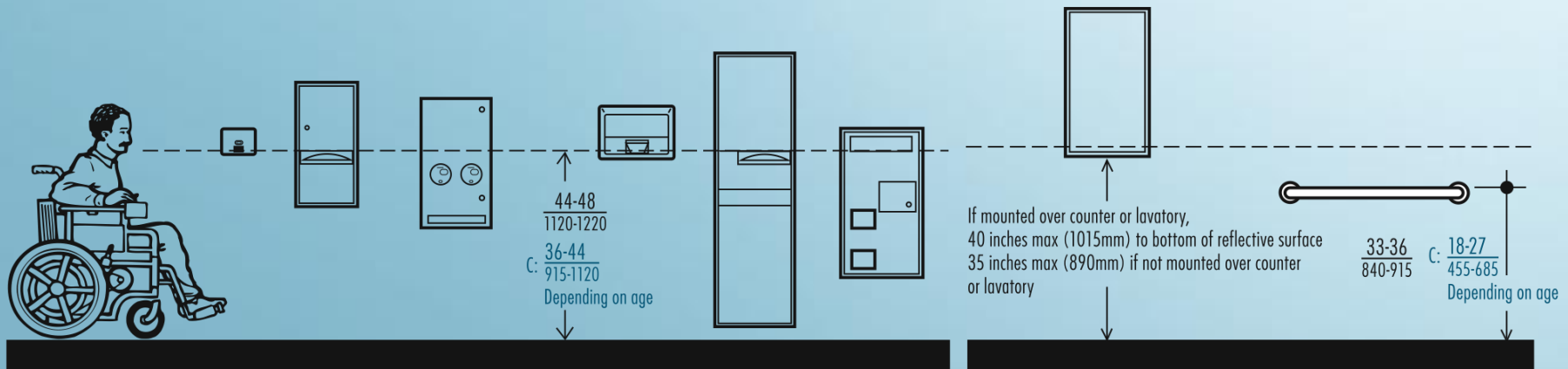
Accommodating Diverse Users

- Accommodate a single wheelchair of at least 30" x 48"
- Position clear floor space at lavatories, urinals and baby changing stations for forward approach
- Allow for both left- and right-hand access



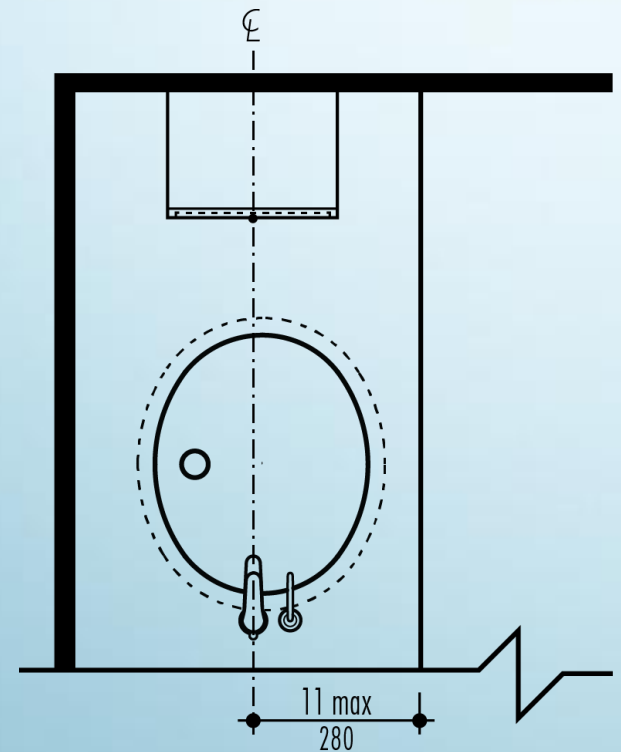
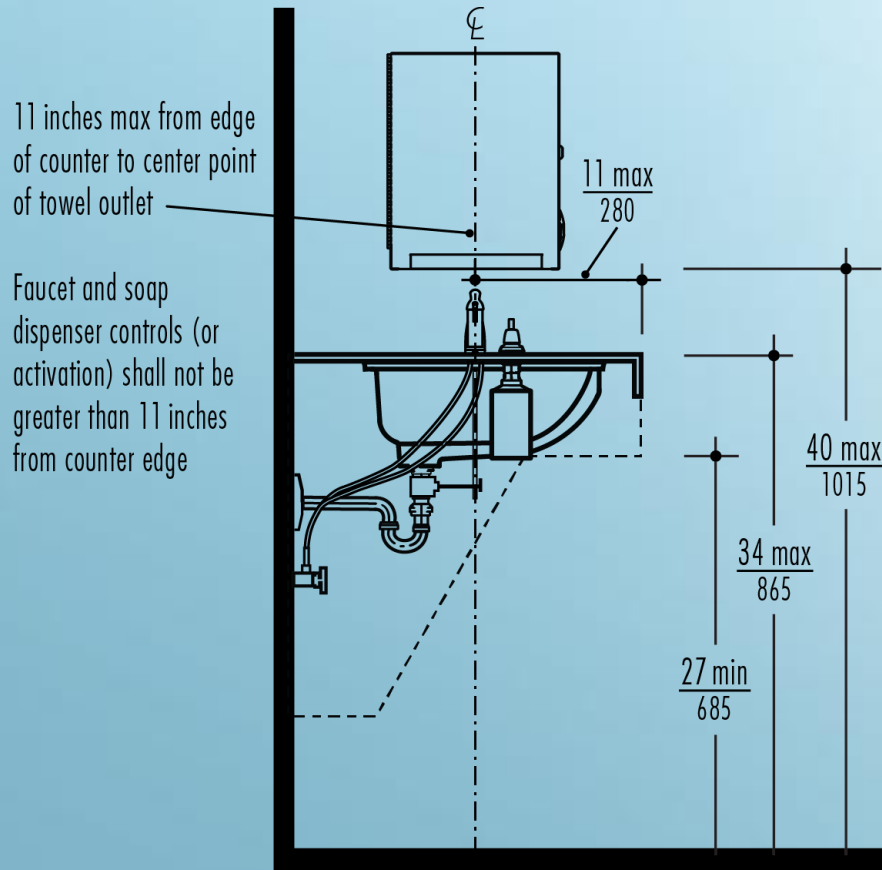
Clear Floor Space Requirements

- “Operable parts” of accessories other than toilet tissue dispensers no more than 48” above the floor.
- Operable portions of toilet tissue dispensers to no lower than 15”.
- Where accessories are mounted above an obstruction they must be located between 44” and 48”.
- Account for side and forward approach.



Mounting Heights

- 2009 ICC/ANSI Standards require paper towel dispenser be installed with a reach depth of 11" maximum.
- Soap dispenser control and faucet also have an 11" maximum reach depth.

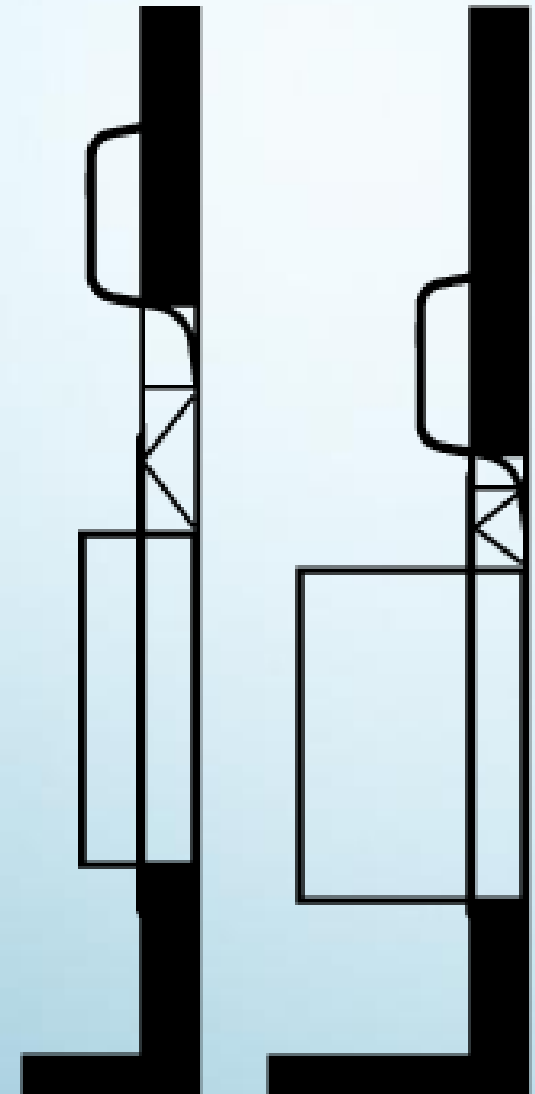


Reach Depth

- 2009 ICC/ANSI Standards altered installation heights and locations for paper towel dispensers and hand dryers.
- Where reach is obstructed, operable portions may need to be installed as low as 34 inches.

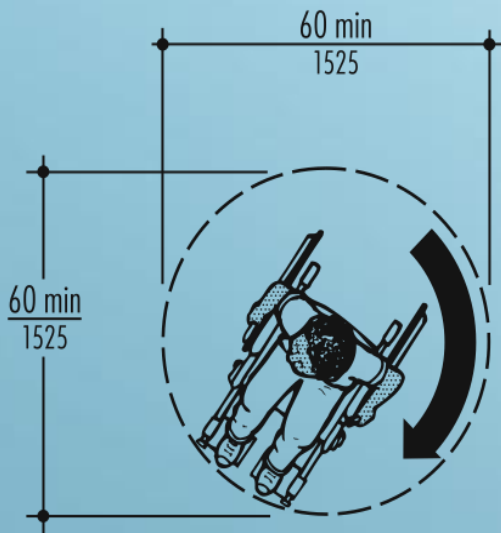
OBSTRUCTED REACH FOR PAPER TOWEL DISPENSERS AND HAND DRYERS

| | | | | | | |
|-----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|
| MAXIMUM REACH DEPTH | 0.5 inches (13mm) | 2 inches (51mm) | 5 inches (125mm) | 6 inches (150mm) | 9 inches (230mm) | 11 inches (280mm) |
| MAXIMUM REACH HEIGHT | 48 inches (1220mm) | 46 inches (1170mm) | 42 inches (1065mm) | 40 inches (1015mm) | 36 inches (915mm) | 34 inches (865mm) |

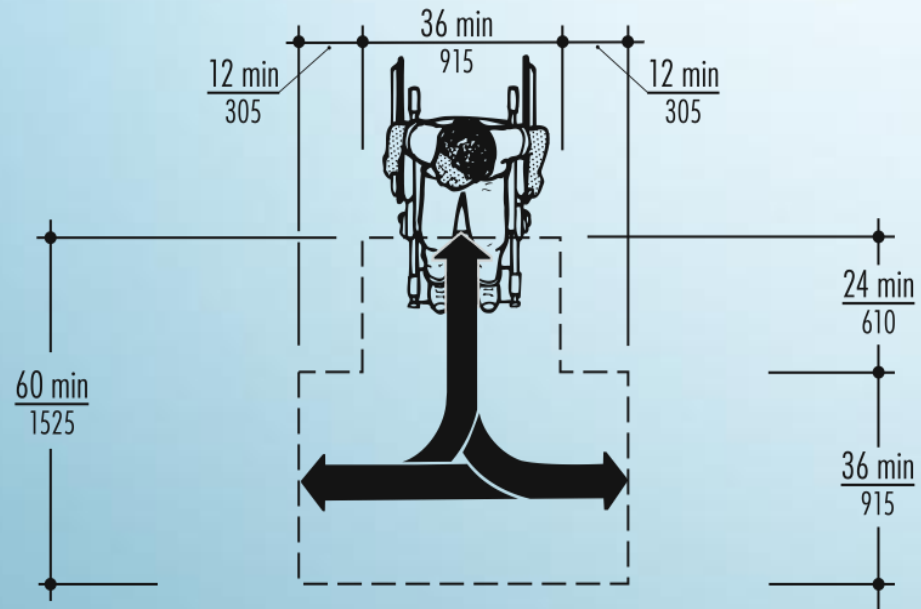


Obstructed Reach Ranges

- Circular turning space
 - Allows 180-degree or 360-degree turn
- T-shaped turning space
 - Allows 3-point turn
 - Can conserve space
- Portion of 60" space can be under fixtures, lavatories or accessories as long as knee and toe clearance is provided.



60" Diameter Turning Space



T-Shaped Turning Space

Turning Spaces

| FORWARD OR SIDE REACH | AGES 3 and 4 | AGES 5 through 8 | AGES 9 through 12 |
|-----------------------|-------------------|--------------------|--------------------|
| HIGH (maximum) | 36 inches (915mm) | 40 inches (1015mm) | 44 inches (1120mm) |
| LOW (minimum) | 20 inches (510mm) | 18 inches (455mm) | 16 inches (405mm) |

| MOUNTING LOCATIONS | AGES 3 and 4 | AGES 5 through 8 | AGES 9 through 12 |
|--------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| WATER CLOSET CENTERLINE | 12 inches (305mm) | 12 inches to 15 inches (305 to 380mm) | 15 inches to 18 inches (380 to 455mm) |
| TOILET SEAT HEIGHT | 11 inches to 12 inches (280 to 305mm) | 12 inches to 15 inches (305 to 380mm) | 15 inches to 17 inches (380 to 430mm) |
| GRAB BAR HEIGHT | 18 inches to 20 inches (455 to 510mm) | 20 inches to 25 inches (510 to 635mm) | 25 inches to 27 inches (635 to 685mm) |
| TOILET TISSUE DISPENSER HEIGHT | 14 inches (355mm) | 14 inches to 17 inches (355 to 430mm) | 17 inches to 19 inches (430 to 485mm) |

**Recommended
Mounting heights for children
vary depending on age**

Children's Reach Ranges

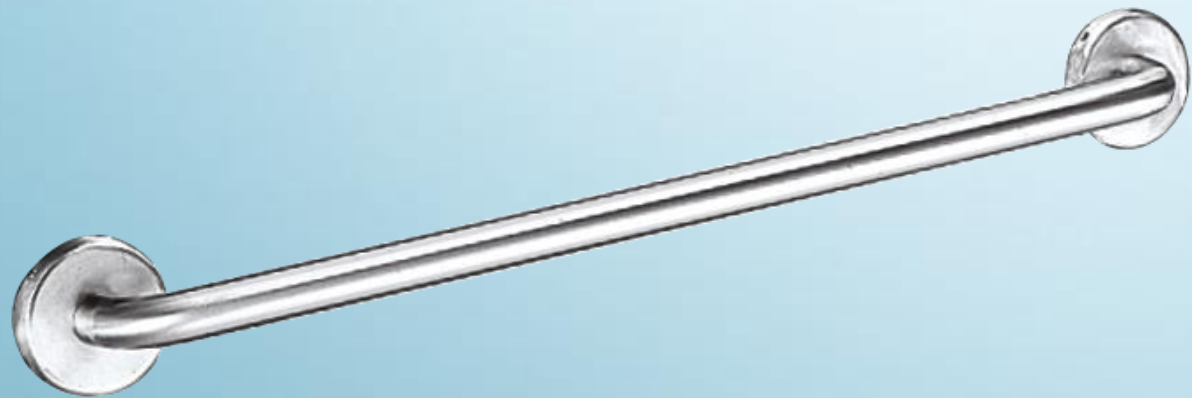
“The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”

-Ron Mace, The Center for Universal Design



Universal Design

- Same product for everyone
- Position products differently
- Modify or replace a product feature
- Replace a product with one that is more accommodating



Universal Design

- Asymmetrical restroom accessories limit usability for some.
- Left- and right-handed facilities should be provided in restrooms.



Left- and Right-Hand Use of Fixtures

Describe requirements for accessible lavatories and restroom accessories.



Learning Objective Two

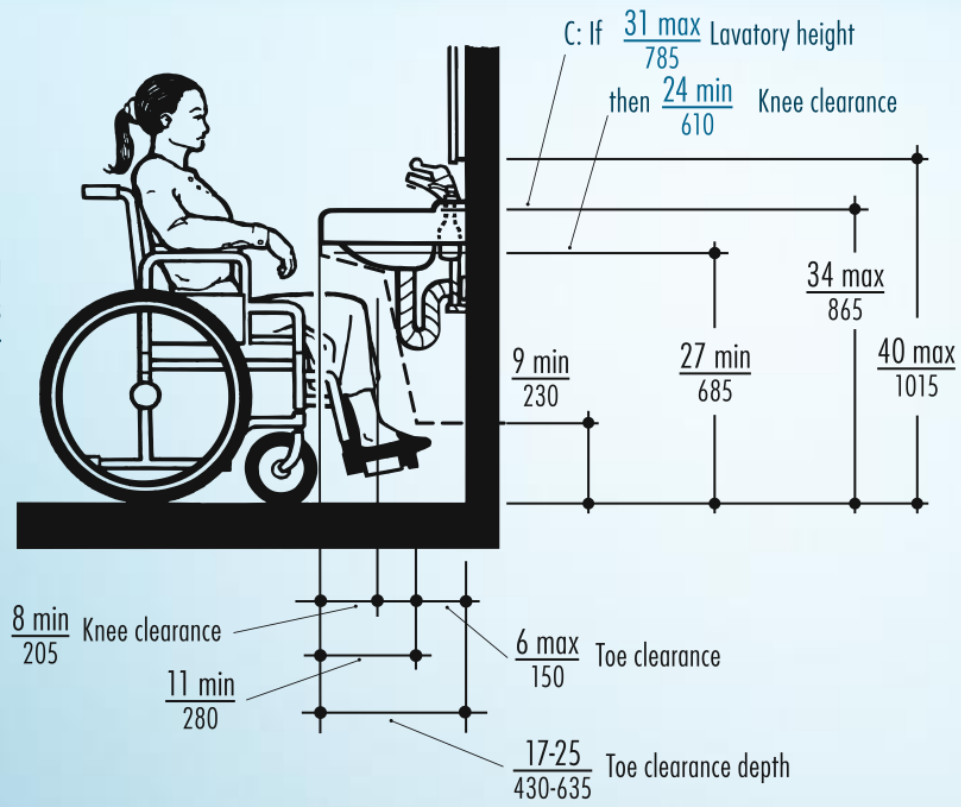
- Place lavatory as close as possible to front edge of countertop.
- 34" max above finish floor
- Knee clearance of 27" min. from bottom of apron to finish floor.
- Knee clearance must extend 8" min. under front edge of lavatory.



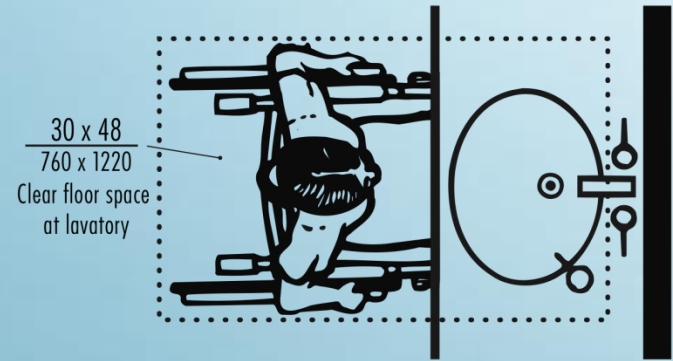
Special Considerations for Lavatories

- Clear floor space in front and under lavatory:
 - 30" wide by 48" deep min.
 - Toe clearance 17" min. to 25" max.
 - Toe clearance at least 9" above finish floor for full depth.

C: Kneespace not required for ages 5 and under if 30 x 48 inches (760 x 1220mm) clear floor space for parallel approach available



- Water supply, drain pipes and exposed surfaces:
 - Insulated to protect against contact
 - Install removable protective panel under lavatory.



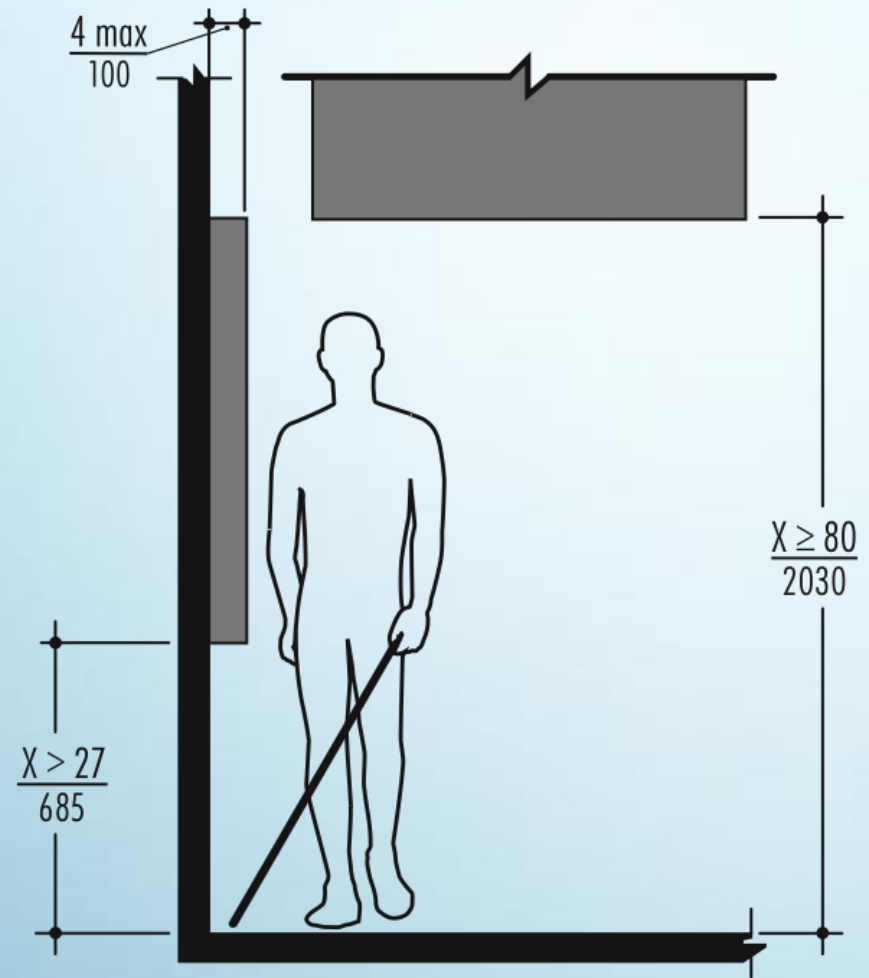
Special Considerations for Lavatories

- Controls must be operable with one hand, without tight grasping, pinching, or twisting of wrist and require less than 5 lbs. of force.
- Operable parts:
 - Push buttons
 - Valves
 - Knobs
 - Levers
 - One-hand operation
 - No tight grasping/ pinching or twisting
 - Force not to exceed 5 lbs.
- Controls centered over sufficient clear floor space for both left- and right-hand approaches.



Controls & Operating Mechanisms

- Limit protrusion to 4" maximum between 27" to 80" above floor.
- Ensure detection by a cane.
- Locate units protruding more than 4" in corners, alcoves or between structural elements.



Accessory Leading Edges

- Mirrors over lavatories installed 40" max above finish floor.
- Mirrors not over lavatories installed 35" max above finish floor.
- Single full-length mirror accommodates all.



Mirrors

- Soap dispenser mounting height is 44" max. above finish floor.
- Space lavatory-mounted soap dispensers and lever-handle faucets apart to avoid interference with their operations.



Soap Dispensers

- Locate in an area that is accessible to people using wheelchairs, preferably adjacent to an accessible lavatory.
- Install towel dispenser, waste receptacle unit with the paper towel dispenser opening, the operable part, 48" above floor.
- Install single hand dryer with operable parts 44" above floor.
- With two or more dryers mount one with operable parts 44" and other at 48" max. above floor.

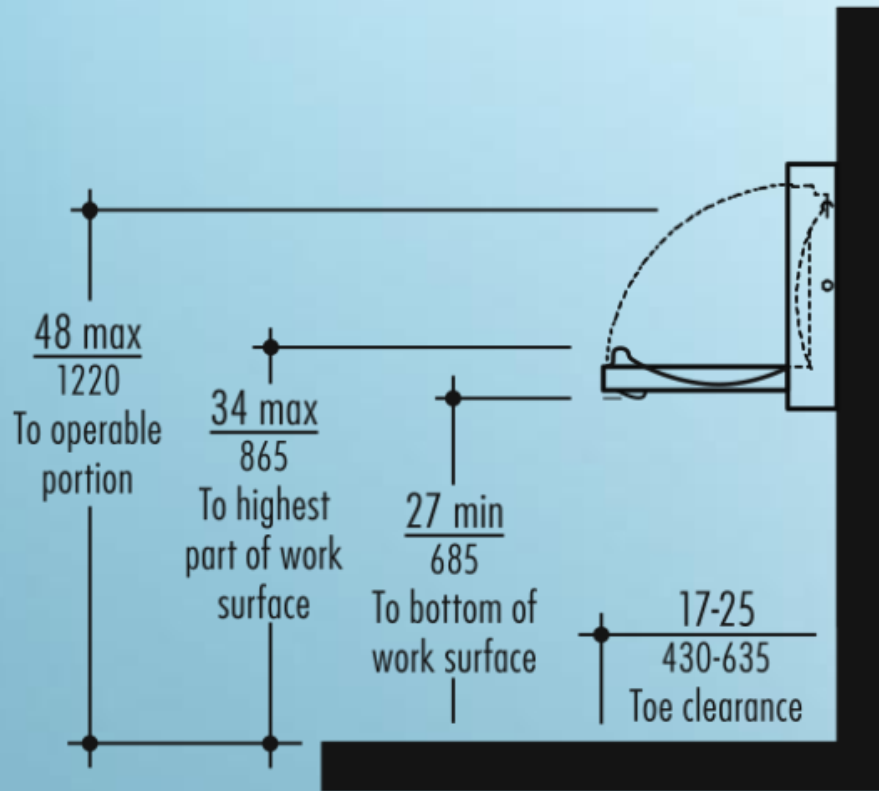


Paper Towel, Waste Receptacle & Hand Dryer

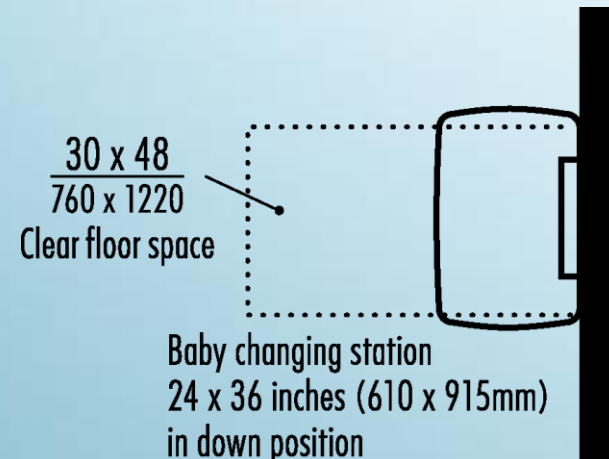
- Sanitary napkin /tampon vendors recommended in all women's restrooms.
- Vendors with push-button operation mechanisms activated with less than 5 lbs. of force are recommended choice for universally designed women's restrooms.



Feminine Product Vendors



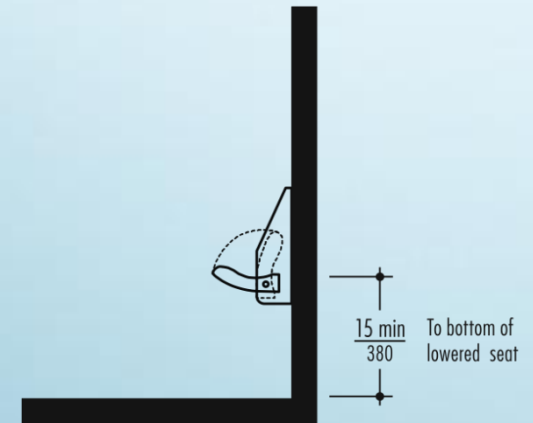
- Increasingly found in men's, women's and family restrooms.
- Not mandatory but widely regarded as important or essential feature in many facilities.
- Locate to provide for needs of users but not prevent other patrons (including those in wheelchairs) access to fixtures and dispensers in restroom.



Baby Changing Stations



- Safe, secure and convenient location for child up to 50 lbs.
- Install inside toilet compartment.
- Ensure adequate space to maneuver around when in down position.
- Bottom of lowered seat should be no less than 15" above floor.



Child Protection Seats

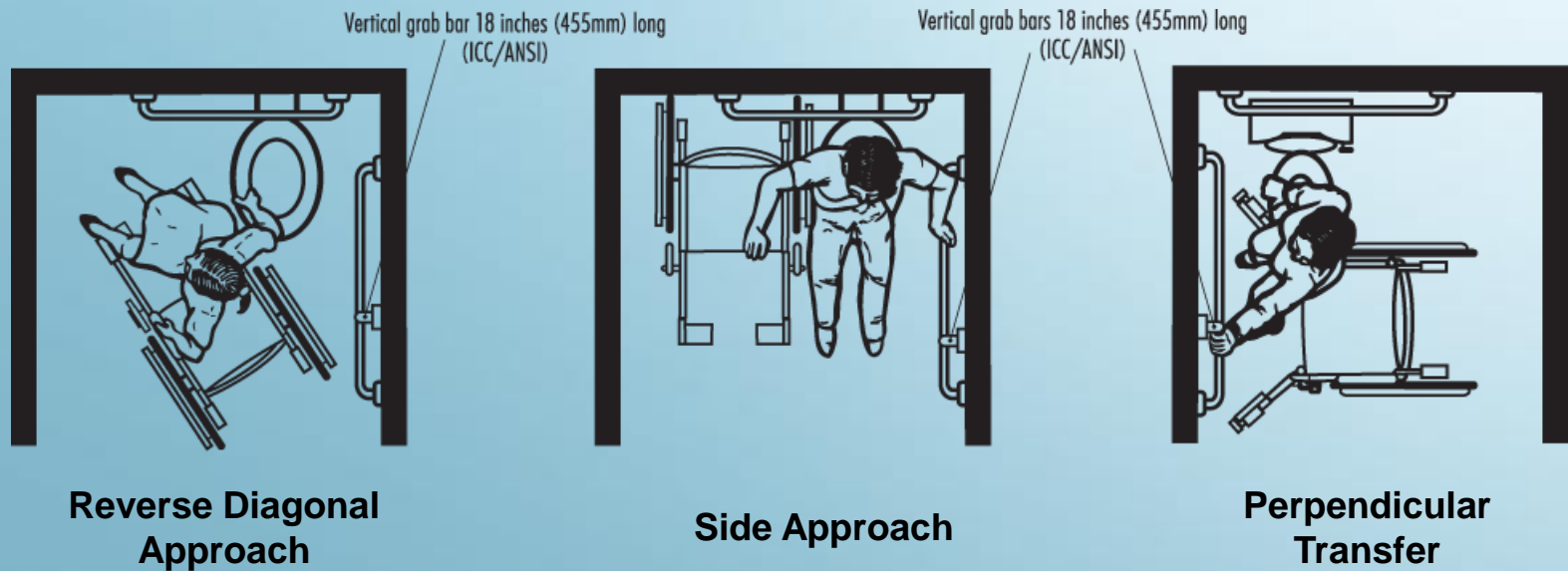


Describe requirements for accessible toilet compartments of varying sizes and the accessories needed to complete their specification.

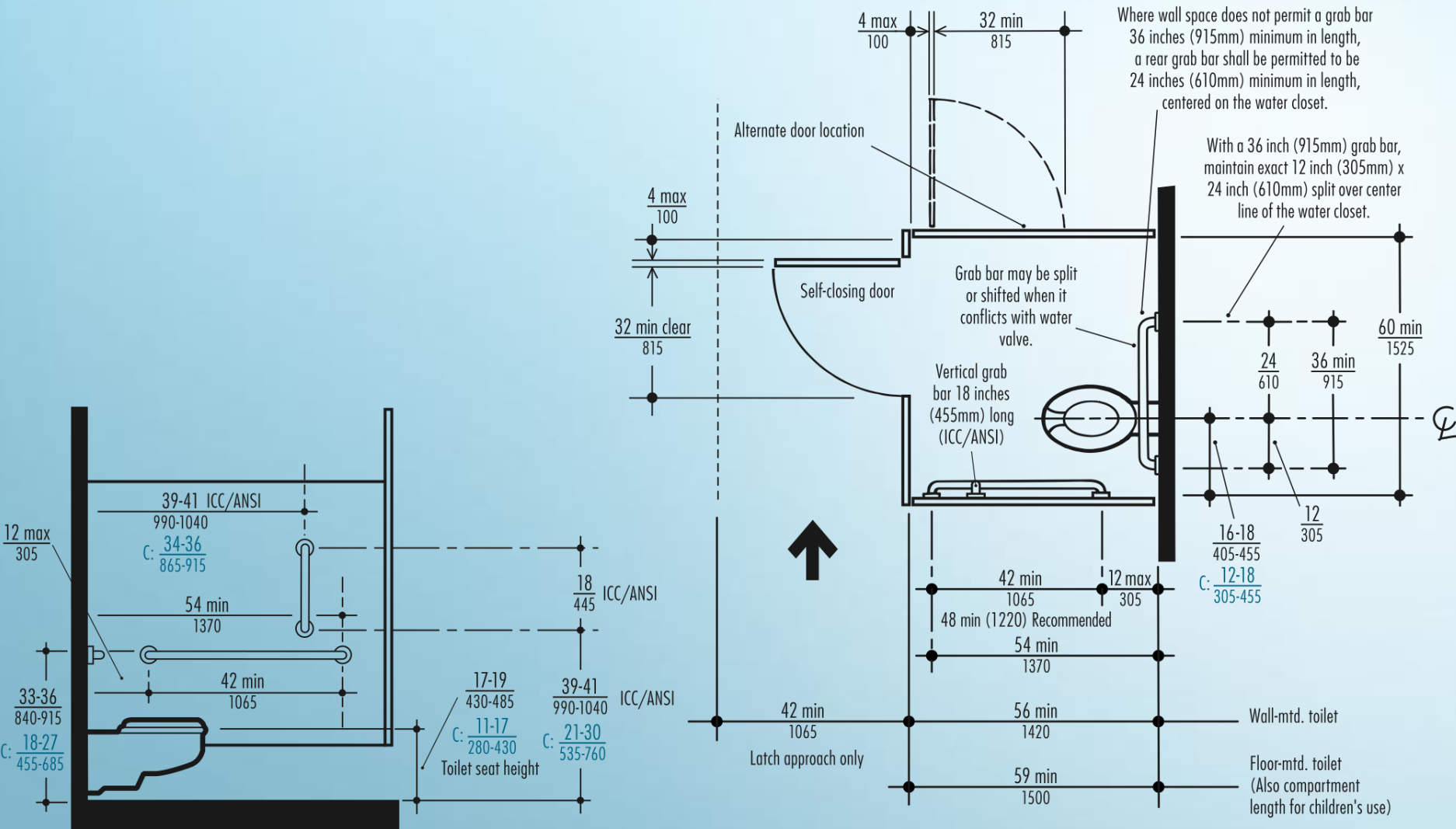


Learning Objective Three

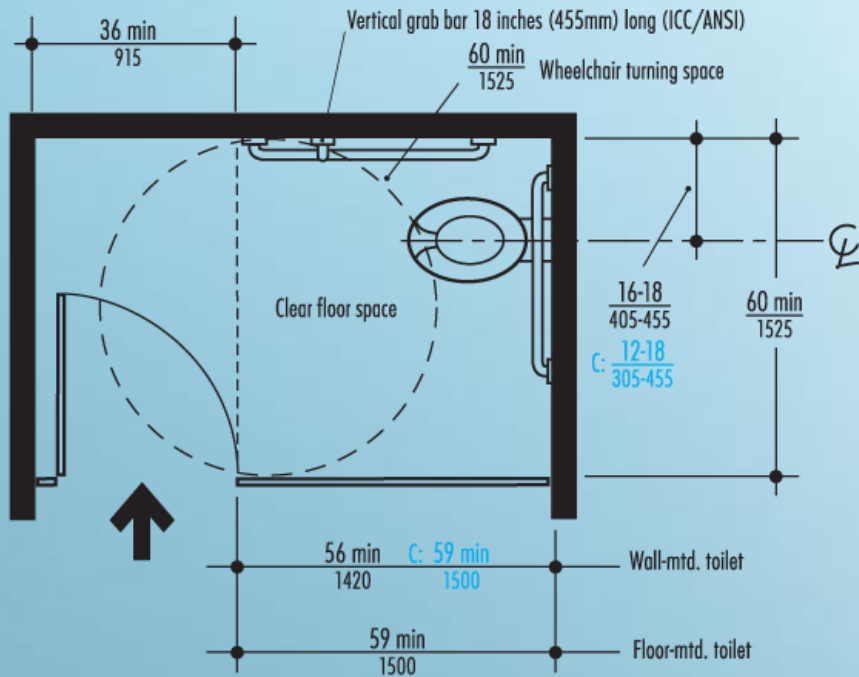
- Required in all public restrooms.
- Two basic toilet compartment designs:
 - Wheelchair Accessible Toilet Compartment
 - Ambulatory Accessible Toilet Compartment
- Third variant is Large Wheelchair Accessible Toilet Compartment.
- Should accommodate people who use wheelchairs.
- Three common transfer positions onto a toilet:
 - Diagonal
 - Side
 - Perpendicular



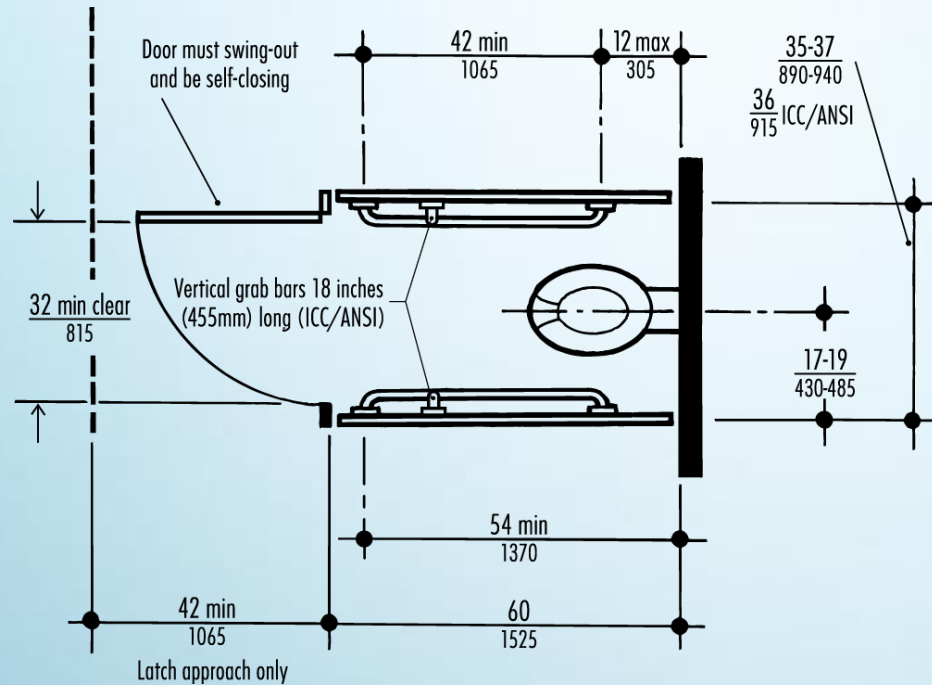
Accessible Toilet Compartments



Wheelchair Accessible Toilet Compartment

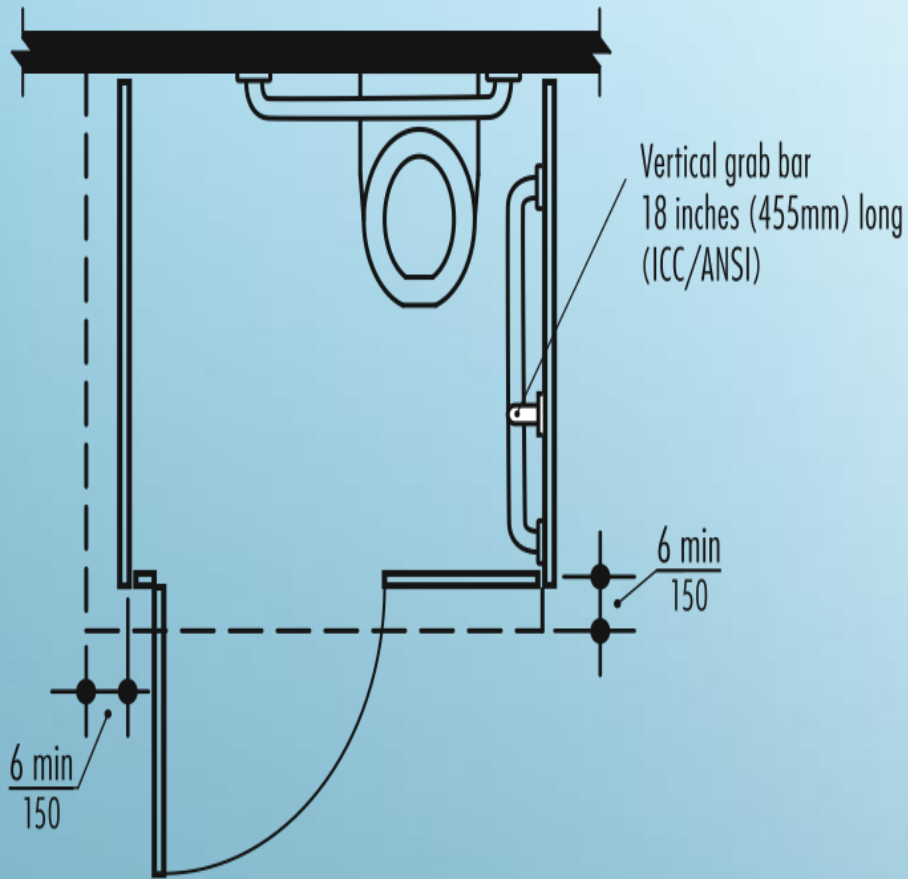


**Large Wheelchair Accessible
Toilet Compartment**

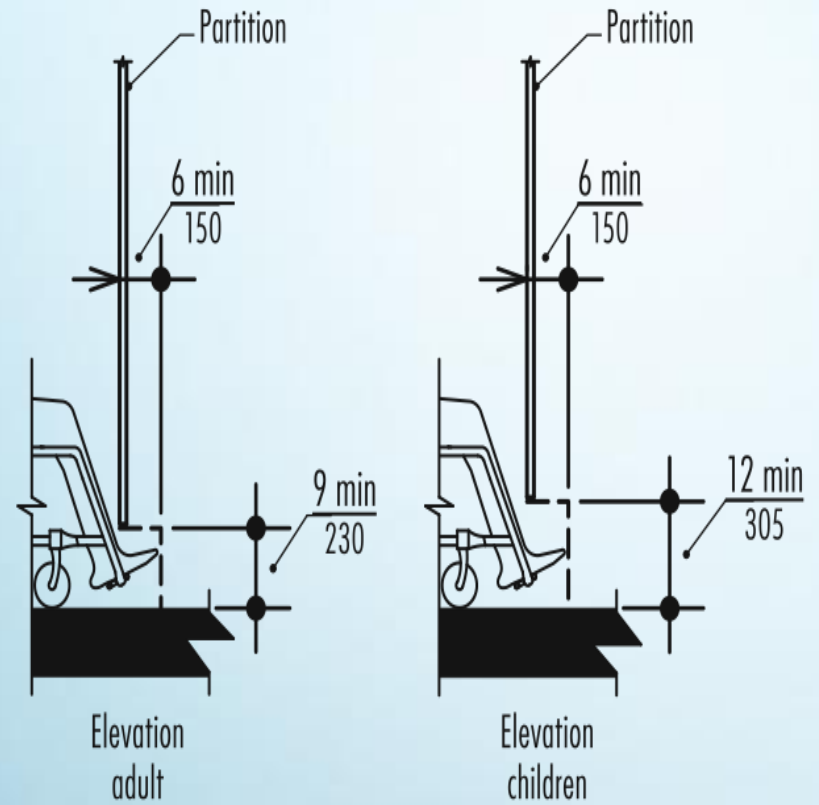


**Ambulatory Accessible
Toilet Compartment**

Large Wheelchair & Ambulatory Accessible



Horizontal Toe Clearance



Vertical Toe Clearance

Toe Clearance

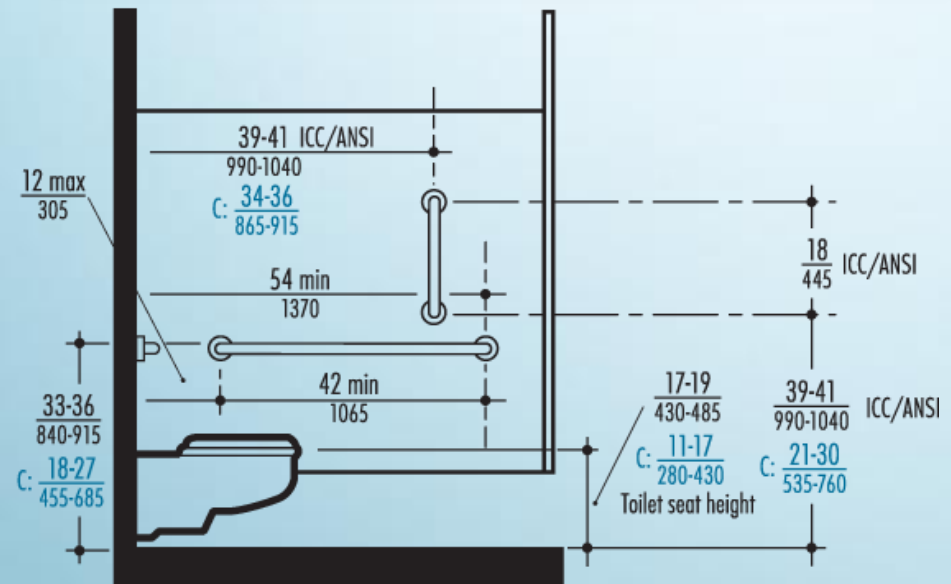
- All accessible toilet compartment doors must include door pull hardware and self-closer.
- All out-swinging doors should close completely so as not to encroach into required maneuvering clearances and impede access.



View from Outside an End-of-Room Toilet Compartment

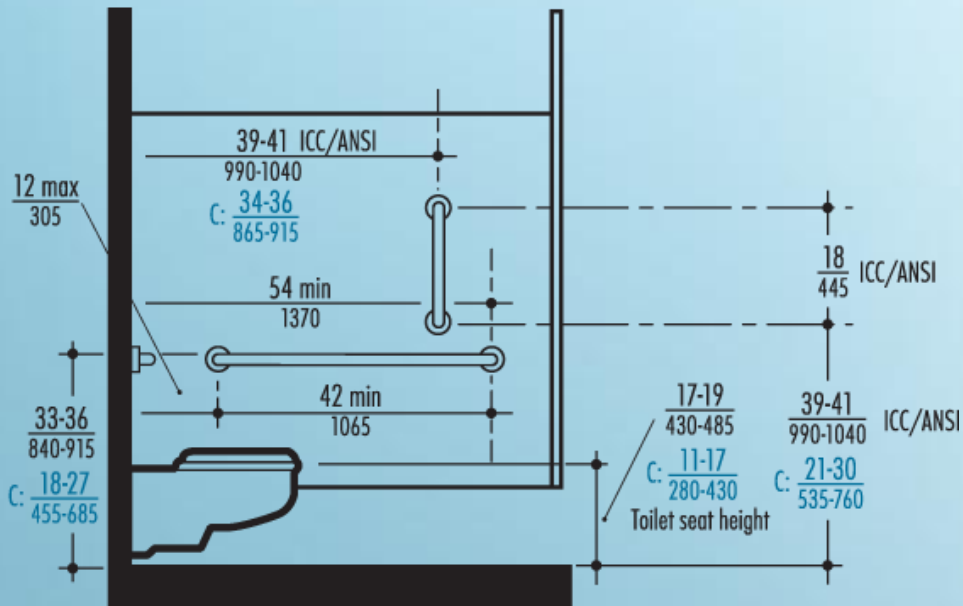


- Toilets with undercut bowls recommended.
- Lever flush controls recommended – must be located on open side of toilet.
- The height of toilet seats is – 17" min. to 19" max measured from floor to top of seat.
- Toilet seats cannot be sprung.



Seat Height Dimensions

Toilets

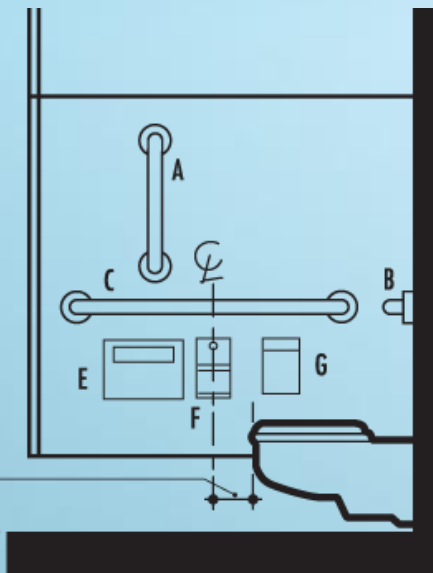


Grab Bar Locations

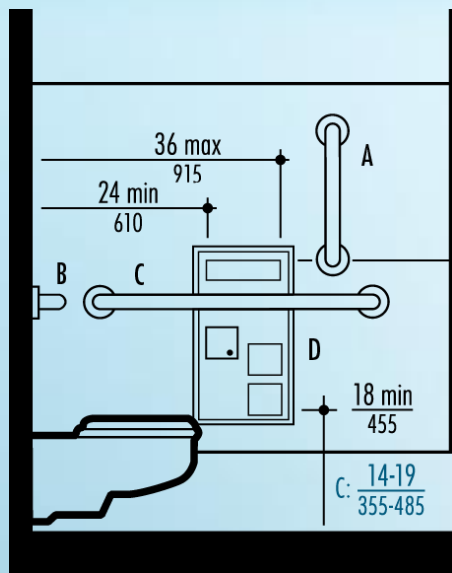


Grab Bars Required in All Compartments

7-9
180-230
2010 ADA

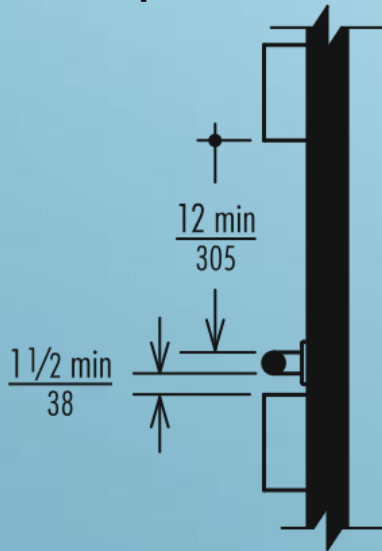


**Surface Mounted
Dispensers**



Recessed Dispensers

- All accessories must be located on a side wall or partition, nearest toilet in accessible compartments and just in front of leading edge of toilet.
- No accessory should interfere with maneuvering space or access to grab bars.



**Protruding Objects
Mounted Near Grab Bars**



**Recessed Objects Mounted
Near Grab Bars**

Accessories Complete Specification

- Roll toilet dispensers that allow continuous paper flow are required.
- 2010 ADA Standards – 7” to 9” in front of toilet
- 2009 ICC/ANSI Standards – 24” to 42” from rear wall



Toilet Tissue Dispensers

- Sanitary napkin disposals and toilet seat cover dispensers are recommended
- Recessed combination units organize and unify installations:
 - Toilet tissue dispensers
 - Toilet seat-cover dispensers
 - Sanitary napkin disposals



Dispensers & Disposals

- At least one wall-hung urinal installed with the rim 17 inches max. above the floor.
- Flush valve must be mounted no higher than 48" max. above the floor.
- Clear floor space of 30" x 48" min. for forward approach.



Urinals

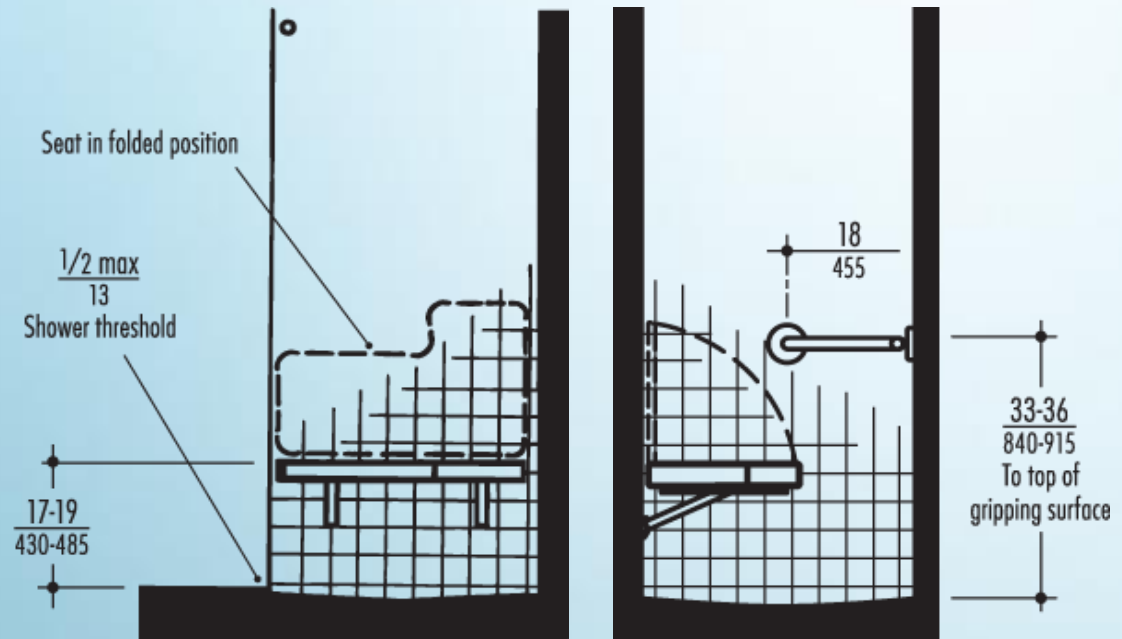
Discuss requirements for accessible bathing facilities.



Learning Objective Four

- Accessible bathing facilities required in wide variety of buildings:

- Hotels
- Athletic clubs
- School gymnasiums
- Dormitories
- Parks and campgrounds
- Long-term care facilities
- Hospitals



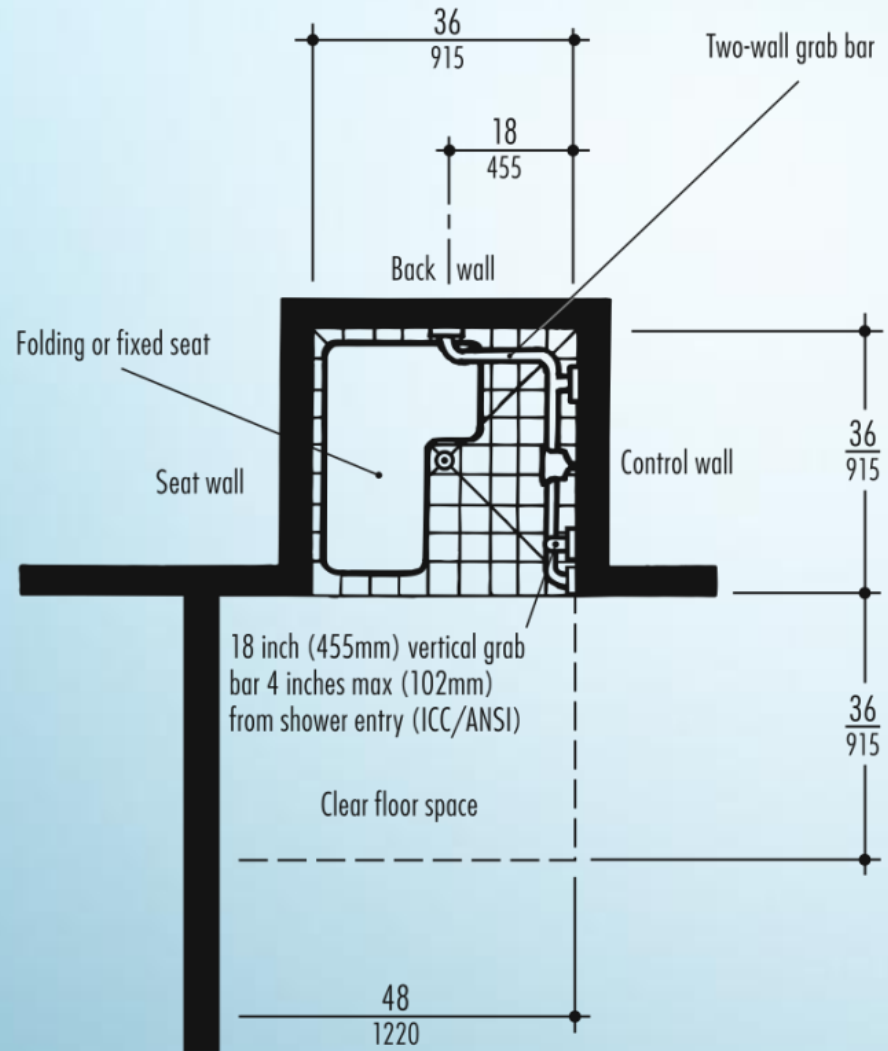
Seat Wall

Back Wall

- Two Categories:
 - Individual shower compartments
 - Combination tub/shower units

Accessible Bathing Facilities

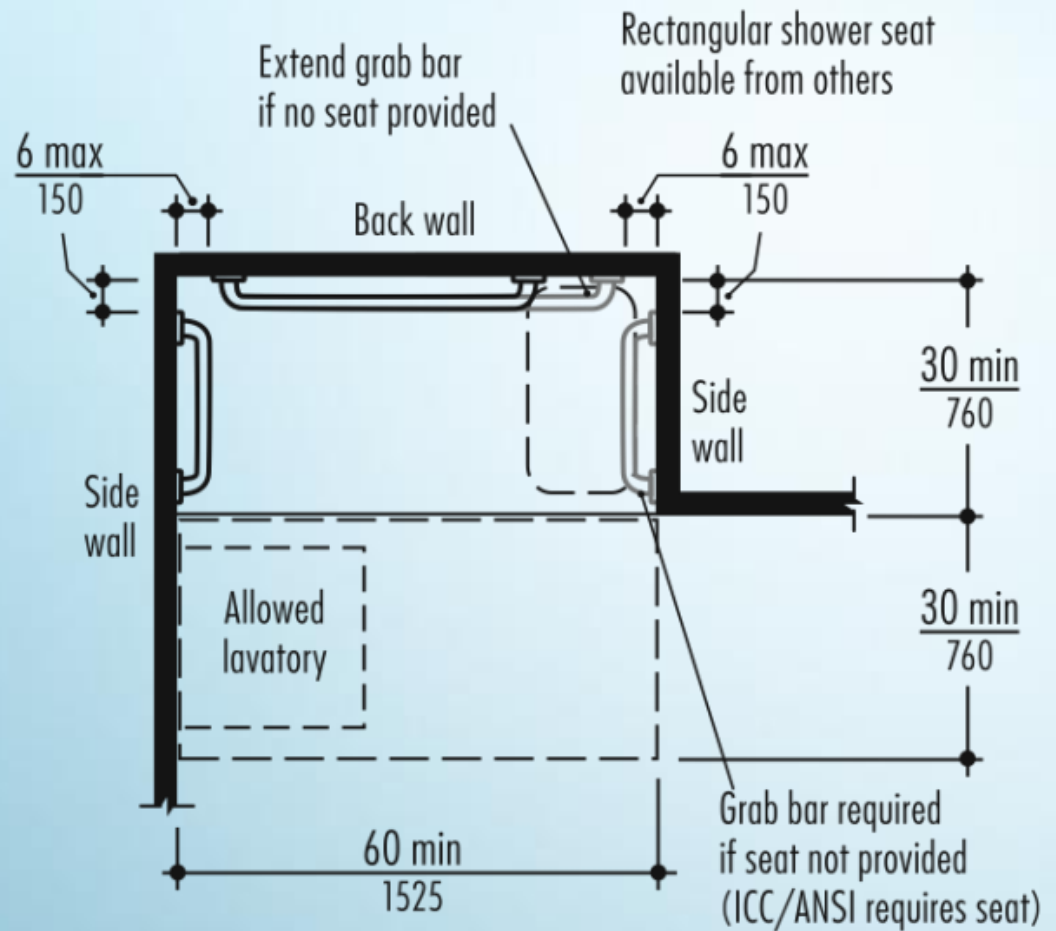
- Most common type of individual shower compartment used to accommodate people with disabilities.
- 36"x36" inside dimension addresses reach and safety needs of adult users.
- Hand-held showers on hose are required in accessible showers.
- Use of adjustable vertical slide bar for hand-held unit is optional.



Required Clear Floor Space

Transfer Shower Compartments

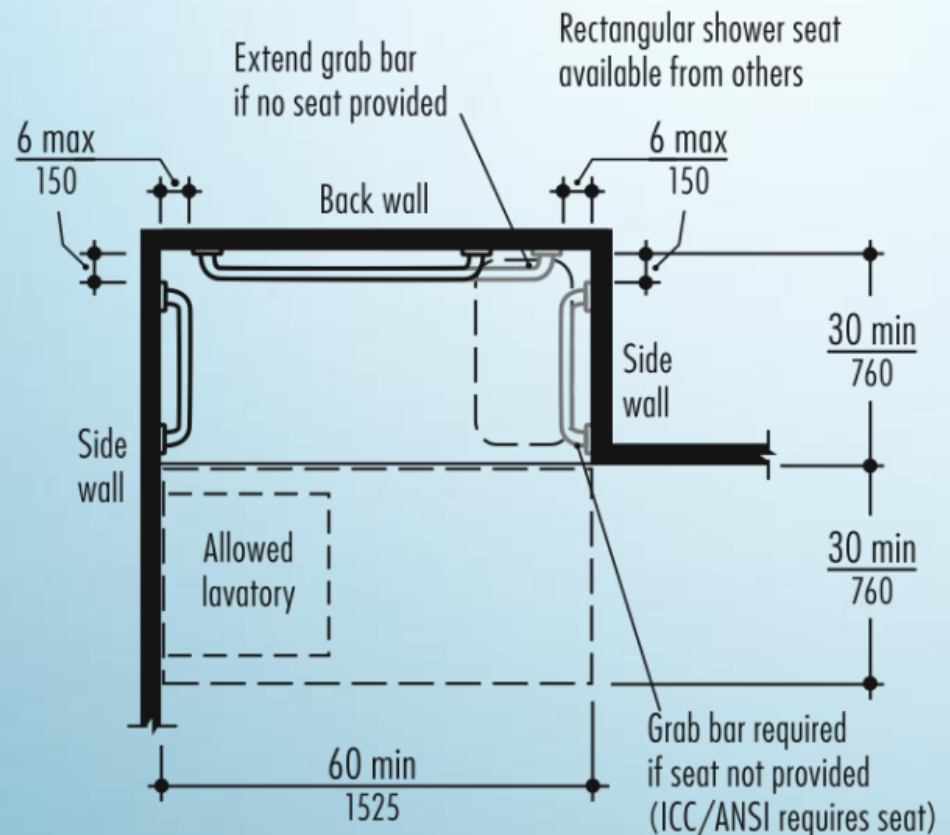
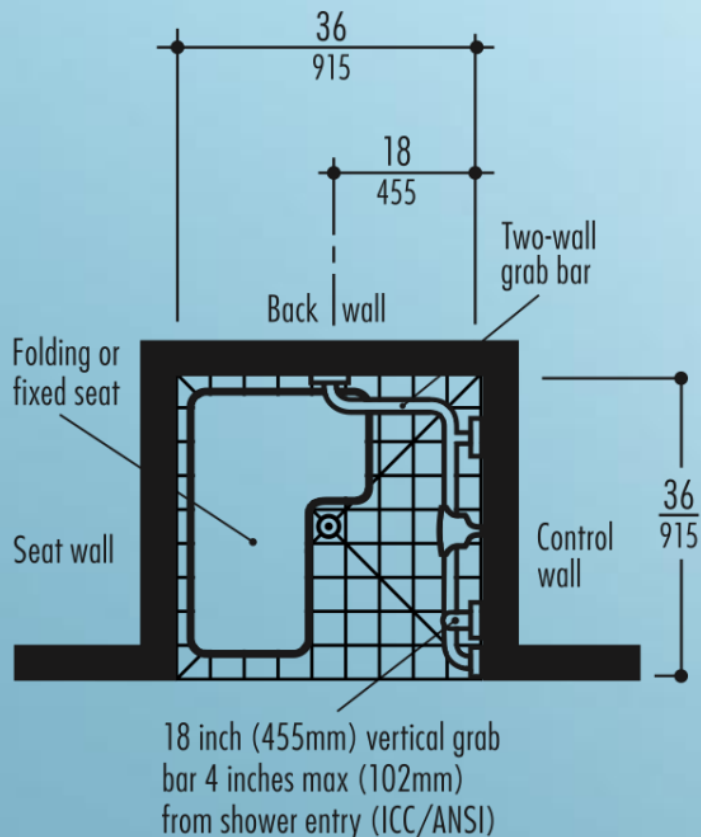
- Also referred to as curbless showers.
- Minimum required size of 30" x 60" not recommended because of difficulty containing water.
- Consider larger size for less water spillage.
- Avoid curbs or minimize – ½" high max.



Standard Roll-In Type Shower Compartment

Roll-In Shower Compartments

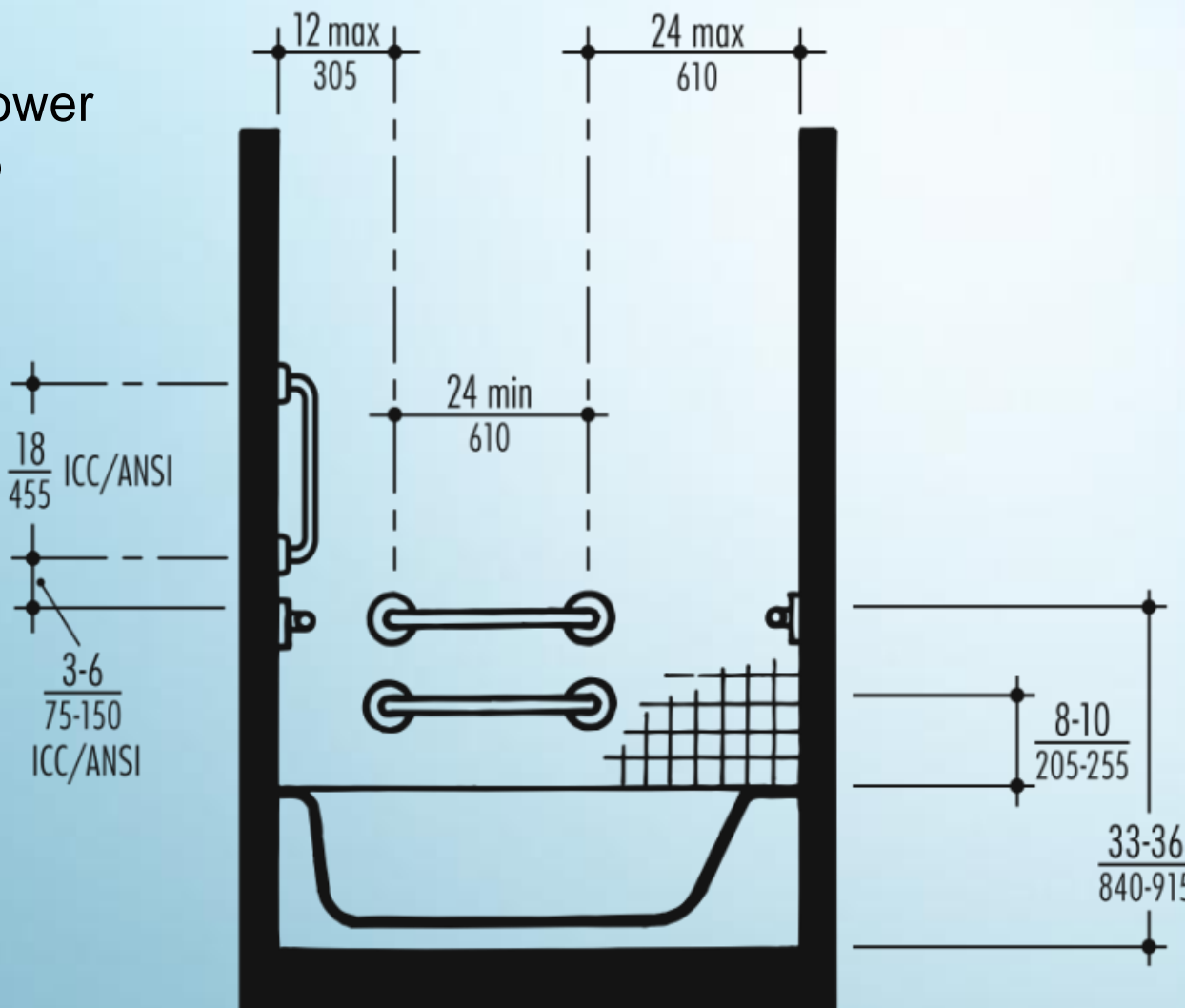
- Must be installed in all accessible bathing facilities.
- Grab bars in showers must be mounted 33" to 36" above finish floor.
- Two horizontal grab bars or a single two-wall grab bar must be installed on walls next to and opposite folding shower seat in transfer compartments.



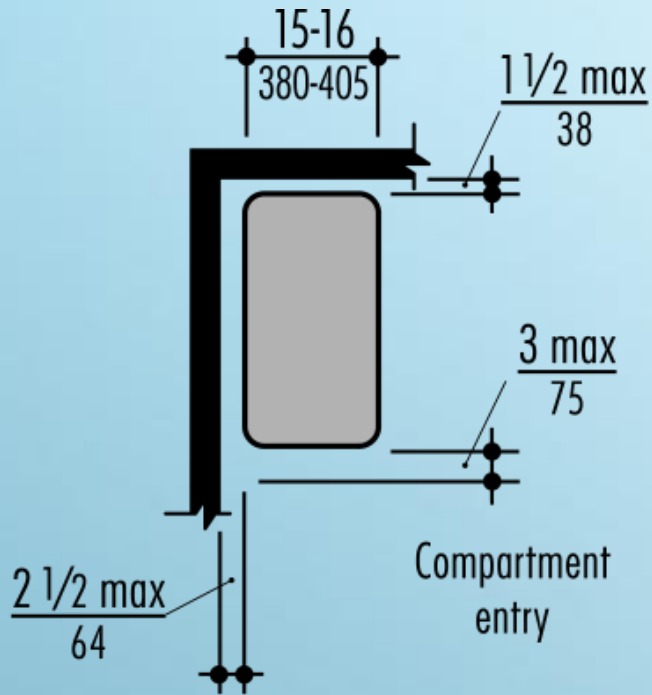
Shower Grab Bars

- Combination Tub/Shower Units must have grab bars installed:

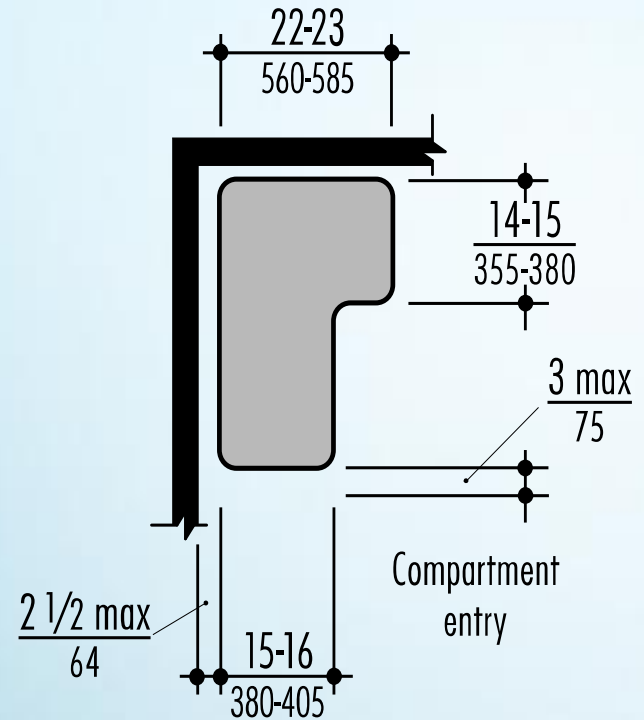
- at foot of tub
- on back wall
- at head of tub
- on the control wall



Combination Tub/Shower Units Grab Bars



Rectangular



L-Shaped

- Permanent or folding seats required by 2009 ICC/ANSI Standards.
- Upholstered, cushioned seats preferred by many with disabilities.
- Water-resistant solid phenolic seats more sanitary and vandal-resistant.



Shower Seats



Accessories

Thank you for your interest in this Planning Guide
for Accessible Restrooms.

Please contact Bobrick Washroom Equipment, Inc.
If you have questions related to the information
presented within this program.



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Thank You