Chapter 6. Plumbing Elements and Facilities

601 General

601.1 Scope. Plumbing elements and facilities required to be accessible by scoping provisions adopted by the administrative authority shall comply with the applicable provisions of this chapter.

602 Drinking Fountains and Water Coolers

602.1 General. Accessible fixed drinking fountains and water coolers shall comply with Section 602.

602.2 Clear Floor or Ground Space. A clear floor or ground space complying with Section 305 shall be provided.

602.2.1 Forward Approach. Where a forward approach is provided, the clear floor or ground space shall be centered on the unit and shall include knee and toe clearance complying with Section 306.

602.2.2 Parallel Approach. Where a parallel approach is provided, the clear floor or ground space shall be centered on the unit.

602.3 Operable Parts. Operable parts shall comply with Section 309.

602.4 Spout Height. Spout outlets shall be 36 inches (915 mm) maximum above the floor or ground.

602.5 Spout Location. Units with a parallel approach shall have the spout 3 1/2 inches (89 mm) maximum from the front edge of the unit, including bumpers. Units with a forward approach shall have the spout 15 inches (380 mm) minimum from the vertical support and 5 inches (125 mm) maximum from the front edge of the unit, including bumpers.

602.6 Water Flow. The spout shall provide a flow of water 4 inches (100 mm) high minimum to allow the insertion of a cup or glass under the flow of water. The angle of the water stream from spouts within 3 inches (75 mm) of the front of the unit shall be 30 degrees maximum. The angle of the water stream from spouts between 3 inches (75 mm) and 5 inches (125 mm) from the front of the unit shall be 15 degrees maximum. The angle of the water stream shall be measured horizontally, relative to the front face of the unit.

602.7 Protruding Objects. Units shall comply with Section 307.

603 Toilet and Bathing Rooms

603.1 General. Accessible toilet and bathing rooms shall comply with Section 603.

603.2 Clearances.

603.2.1 Wheelchair Turning Space. A wheelchair turning space complying with Section 304 shall be provided within the room.

603.2.2 Overlap. Clear floor or ground spaces, clearances, and wheelchair turning spaces shall be permitted to overlap.
603.2.3 Doors. Doors shall not swing into the clear floor or ground space or clearance for any fixture.

EXCEPTION: Where the room is for individual use and a clear floor or ground space complying with Section 305.3 is provided within the room, beyond the arc of the door swing.

603.3 Mirrors. Mirrors shall be mounted with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor or ground.

603.4 Coat Hooks and Shelves. Coat hooks provided within toilet rooms shall accommodate a forward reach or side reach complying with Section 308. Where provided, a fold-down shelf shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor or ground.

604 Water Closets and Toilet Compartments

604.1 General. Accessible water closets and toilet compartments shall comply with Section 604.

604.2 Location. The water closet shall be positioned with a wall or partition to the rear and to one side. The centerline of the water closet shall be 16 inches (405 mm) minimum to 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be centered in the ambulatory accessible compartment specified in Section 604.8.2.

604.3 Clearance.

604.3.1 Size. Clearance around the water closet shall be 60 inches (1220 mm) minimum, measured perpendicular from the side wall, and 56 inches (1420 mm) minimum, measured perpendicular from the rear wall. No other fixtures or obstructions shall be within the water closet clearance.

604.3.2 Overlap. The clearance around the water closet shall be permitted to overlap the fixture, associated grab bars, tissue dispensers, accessible routes, and clear floor or ground space, or clearances at other fixtures and the wheelchair turning space.

604.4 Height. The top of water closet seats shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the floor or ground. Seats shall not return automatically to a lifted position.

604.5 Grab Bars. Grab bars for water closets shall comply with Section 609. Grab bars shall be provided on the rear wall and on the side wall closest to the water closet.

604.5.1 Side Wall. Side wall grab bar shall be 42 inches (1065 mm) long minimum, 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1370 mm) minimum from the rear wall.

Fig. 604.2
Water Closet Location

Fig. 604.3.1
Size of Clearance for Water Closet

Fig. 604.4
Height of Water Closet
604.5.2 Rear Wall. The rear wall grab bar shall be 24 inches (610 mm) long minimum, centered on the water closet. Where space permits, the bar shall be 36 inches (915 mm) long minimum, with the additional length provided on the transfer side of the water closet.

604.6 Flush Controls. Flush controls shall be hand operated or automatic. Hand-operated flush controls shall comply with Section 309.

604.7 Dispensers. Toilet paper dispensers shall comply with Section 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet. The outlet of the dispenser shall be 15 inches (380 mm) minimum and 48 inches (1220 mm) maximum above the floor or ground. There shall be a clearance of 1 1/2 inches (38 mm) minimum below and 12 inches (305 mm) minimum above the grab bar. Dispensers shall not be of a type that control delivery, or that do not allow continuous paper flow.

604.8 Toilet Compartments. Accessible toilet compartments shall comply with Sections 604.8.1 through 604.8.5. Compartments containing more than one plumbing fixture shall comply with Section 603. Water closets in accessible toilet compartments shall comply with Sections 604.1 through 604.7.

604.8.1 Wheelchair Accessible Compartments.

604.8.1.1 Size. Wheelchair accessible compartments shall be 60 inches (1525 mm) wide minimum measured perpendicular to the side wall, and 56 inches (1420 mm) deep minimum for wall hung water closets and 59 inches (1500 mm) deep
minimum for floor mounted water closets, measured perpendicular to the rear wall.

604.8.1.2 Doors. Compartment doors shall not swing into the minimum required compartment area.

604.8.1.3 Approach. Compartment arrangements shall be permitted for left-hand or right-hand approach to the water closet.

604.8.1.4 Toe Clearance. In wheelchair accessible compartments, the front partition and at least one side partition shall provide a toe clearance complying with Section 306.2 and extending 6 inches (150 mm) deep beyond the compartment-side face of the partition, exclusive of partition support members. Toe clearance at the front of the partition is not required in a compartment greater than 62 inches (1575 mm) deep with a wall-hung water closet or 65 inches
(1650 mm) deep with a floor-mounted water closet. Toe clearance at the side partition is not required in a compartment greater than 66 inches (1675 mm) wide.

604.8.2 Ambulatory Accessible Compartments. Ambulatory accessible compartments shall be 60 inches (1525 mm) deep minimum and 36 inches (915 mm) wide. Compartment doors shall not swing into the minimum required compartment area.

604.8.3 Doors. Toilet compartment doors shall comply with Section 404, except that if the approach is to the latch side of the compartment door, the clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. The door shall be hinged 4 inches (100 mm) maximum from the adjacent wall or partition farthest from the water closet. The door shall be self-closing. A door pull complying with Section 404.2.7 shall be placed on both sides of the door near the latch.

604.8.4 Grab Bars. Grab bars shall comply with Section 609.

604.8.4.1 Wheelchair Accessible Compartments. A side-wall grab bar complying with Section 604.5.1 shall be provided on the wall closest to the water closet, and a rear-wall grab bar complying with Section 604.5.2 shall be provided.

604.8.4.2 Ambulatory Accessible Compartments. A side-wall grab bar complying with Section 604.5.1 shall be provided on both sides of the compartment.

604.8.5 Coat Hooks and Shelves. Coat hooks provided within toilet compartments shall be 48 inches (1220 mm) maximum above the floor or ground. Where provided, a fold-down shelf shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor or ground.

605 Urinals

605.1 General. Accessible urinals shall comply with Section 605.

605.2 Height. Urinals shall be of the stall type or shall be of the wall-hung type with the rim at 17 inches (430 mm) maximum above the floor or ground.

605.3 Clear Floor or Ground Space. A clear floor or ground space complying with Section 305 positioned for forward approach shall be provided.

605.4 Flush Controls. Flush controls shall be hand operated or automatic. Hand-operated flush controls shall comply with Section 309.

606 Lavatories and Sinks

606.1 General. Accessible lavatories and sinks shall comply with Section 606.

606.2 Clear Floor or Ground Space. A clear floor or ground space complying with Section 305.3, positioned for forward approach, shall be provided. Knee and toe clearance complying with Section 306 shall be provided.

EXCEPTIONS:

1. A parallel approach shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided.
2. The dip of the overflow shall not be considered in determining knee and toe clearances.

606.3 Height and Clearances. The front of lavatories and sinks shall be 34 inches (865 mm) maximum above the floor or ground, measured to the higher of the fixture rim or counter surface.

606.4 Faucets. Faucets shall comply with Section 309. Hand-operated, self-closing faucets shall remain open for 10 seconds minimum.

606.5 Bowl Depth. Sinks shall be 6 1/2 inches (165 mm) deep maximum. Multiple compartment sinks shall have at least one compartment complying with this requirement.
**606.6 Exposed Pipes and Surfaces.** Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks.

**607 Bathtubs**

**607.1 General.** Accessible bathtubs shall comply with Section 607.

**607.2 Clearance.** Clearance in front of bathtubs shall extend the length of the bathtub and shall be 30 inches (760 mm) wide minimum. A lavatory complying with Section 606 shall be permitted at the foot end of the clearance. Where a permanent seat is provided at the head end of the bathtub, the clearance shall extend a minimum of 12 inches (305 mm) beyond the wall at the head end of the bathtub.

**607.3 Seat.** A permanent seat at the head end of the bathtub or a removable in-tub seat shall be provided. Seats shall comply with Section 610.

**607.4 Grab Bars.** Grab bars shall comply with Sections 607.4 and 609.

**607.4.1 Bathtubs With Permanent Seats.** For bathtubs with permanent seats, grab bars complying with Sections 607.4.1.1 and 607.4.1.2 shall be provided.

**607.4.1.1 Back Wall.** Two grab bars shall be provided on the back wall, one complying with Section 609.4 and other 9 inches (230 mm) above the rim of the bathtub. Each grab bar shall be 15 inches (380 mm) maximum from the head end wall and 12 inches (305 mm) maximum from the foot end wall.

**607.4.1.2 Foot End Wall.** A grab bar 24 inches (610 mm) long minimum shall be provided on the foot end wall at the front edge of the bathtub.

**607.4.2 Bathtubs Without Permanent Seats.** For bathtubs without permanent seats, grab bars complying with Sections 607.4.2.1 through 607.4.2.3 shall be provided.

**607.4.2.1 Back Wall.** Two grab bars shall be provided on the back wall, one complying with Section 609.4 and other 9 inches (230 mm) above the rim of the bathtub. Each grab bar shall be 24 inches (610 mm)
long minimum and shall be 24 inches (610 mm) maximum from the head end wall and 12 inches (305 mm) maximum from the foot end wall.

**607.4.2.2 Foot End Wall.** A grab bar 24 inches (610 mm) long minimum shall be provided on the foot end wall at the front edge of the bathtub.

**607.4.2.3 Head End Wall.** A grab bar 12 inches (305 mm) long minimum shall be provided on the head end wall at the front edge of the bathtub.

**607.5 Controls.** Controls, other than drain stoppers, shall be on an end wall. Controls shall be between the bathtub rim and grab bar, and between the open side of the bathtub and the mid-point of the width of the bathtub. Controls shall comply with Section 309.4.

**607.6 Shower Unit.** A shower spray unit shall be provided, with a hose 59 inches (1500 mm) long minimum, that can be used as a fixed shower head and as a hand-held shower. If an adjustable-height shower head on a vertical bar is used, the bar shall not obstruct the use of grab bars.

**607.7 Bathtub Enclosures.** Bathtub enclosures shall not obstruct controls or transfer from wheelchairs onto bathtub seats or into bathtubs. Bathtub enclosures shall not have tracks on the rim of the bathtub.

**608 Shower Compartments**

**608.1 General.** Accessible shower compartments shall comply with Section 608.

**608.2 Size and Clearances.**

**608.2.1 Transfer-Type Shower Compartments.** Transfer-type shower compartments shall be 36 inches (915 mm) wide by 36 inches (915 mm) deep inside finished dimension, measured at the centerpoint of opposing sides, and shall have a minimum 36 inches (915 mm) wide entry on the face of the shower compartment. The clearance in front of the compartment shall be 48 inches (1220 mm) long minimum measured from the control wall and 36 inches (915 mm) wide minimum.

**608.2.2 Standard Roll-In-Type Shower Compartment.** Roll-in-type shower compart-
ments shall be 30 inches (760 mm) wide minimum by 60 inches (1525 mm) deep minimum, clear inside dimension, measured at the centerpoint of opposing sides and shall have a minimum 60 inches (1220 mm) wide entry on the face of the shower. A 30 inches (760 mm) wide minimum by 60 inches (1525 mm) long minimum clearance shall be provided adjacent to the open face of the shower compartment. A lavatory complying with Section 606 shall be permitted at the end of the clear space, opposite the shower compartment side where shower controls are positioned.

608.2.3 Alternate Roll-In-Type Shower Compartment. Alternate roll-in shower compartments shall be 36 inches (915 mm) wide and 60 inches (1220 mm) deep minimum. A 36 inch (915 mm) wide minimum entry shall be provided at one end of the long side of the compartment. The shower unit and controls shall be mounted on the end wall furthest from the compartment entry.

608.3 Grab Bars. Grab bars shall comply with Sections 608.3 and 609 and shall be provided.

608.3.1 Transfer-Type Showers. Grab bars shall be provided across the control wall and on the back wall to a point 18 inches (455 mm) from the control wall.

608.3.2 Roll-In-Type Showers. Grab bars shall be provided on the three walls of the shower. Grab bars shall be 6 inches (150 mm) maximum from the adjacent wall.

EXCEPTIONS:
1. Where a seat is provided in a roll-in shower, grab bars shall not extend over
the seat at the control wall and shall not be behind the seat.

2. In alternate roll-in-type showers, grab bars shall not be required on the side wall opposite the control wall and shall not be behind the seat.

608.4 Seats. An attachable or integral seat shall be provided in transfer-type shower compartments. Seats shall comply with Section 610.

608.5 Controls. Shower or bathtub/shower facilities shall deliver water that is thermal shock protected to 120°F maximum. Faucets and controls shall comply with Section 309.4. Controls in roll-in showers shall be above the grab bar but no higher than 48 inches (1220 mm) above the shower floor. In transfer-type shower compartments, controls, faucets, and the shower unit shall be on the side wall opposite the seat at 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.

608.6 Shower Unit. A shower spray unit shall be provided, with a hose 59 inches (1500 mm) long minimum, that can be used as a fixed shower head and as a hand-held shower. In transfer type showers, the controls and shower unit shall be on the control wall within 15 inches (380 mm), left or right, of the centerline of the seat. In roll-in-type showers, shower spray units mounted on the back wall shall be 27 inches (685 mm) maximum from the side wall. If an adjustable-height shower head mounted on a vertical bar is used, the bar shall not obstruct the use of grab bars.

608.7 Thresholds. Shower compartment thresholds shall be 1/2 inch (13 mm) high maximum and shall comply with Section 303.

608.8 Shower Enclosures. Shower compartment enclosures for shower compartments shall not obstruct controls or obstruct transfer from wheelchairs onto shower seats.

609 Grab Bars

609.1 General. Grab bars in accessible toilet or bathing facilities shall comply with Section 609.

609.2 Size. Grab bars shall have a circular cross section with a diameter of 1 1/4 inch (32 mm) minimum and 2 inches (51 mm) maximum, or shall pro-
vide equivalent graspability complying with Section 609.2.1.

609.2.1 Non-Circular Cross Sections. Grab bars with other shapes shall be permitted provided they have a perimeter dimension of 4 inches (100 mm) minimum and 4.8 inches (120 mm) maximum and with edges having a \( \frac{1}{8} \) inch (3.2 mm) minimum radius.

609.3 Spacing. The space between the wall and the grab bar shall be \( \frac{1}{2} \) inches (38 mm). The space between the grab bar and objects below and at the ends shall be \( \frac{1}{2} \) inches (38 mm) minimum. The space between the grab bar and projecting objects above shall be 15 inches (355 mm) minimum.

**EXCEPTION:** The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be \( \frac{1}{2} \) inches (38 mm) minimum.

609.4 Position of Grab Bars. Grab bars shall be mounted in a horizontal position, 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the floor.

**EXCEPTION:** Height of grab bars on the back wall of a bathtub shall comply with Sections 607.4.1.1 and 607.4.2.1.

609.5 Surface Hazards. Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive elements. Edges shall have a radius of \( \frac{1}{8} \) inch (3 mm) minimum.
609.6 **Fittings.** Grab bars shall not rotate within their fittings.

609.7 **Installation.** Grab bars shall be installed in any manner that provides a gripping surface at the locations specified in this standard and that does not obstruct the clear floor space.

609.8 **Structural Strength.** Allowable stresses in bending, shear, and tension shall not be exceeded for materials used where a vertical or horizontal force of 250 lb (1112 N) is applied at any point on the grab bar, fastener mounting device, or supporting structure.

**610 Seats**

610.1 **General.** Seats in accessible bathtubs and shower compartments shall comply with Section 610.

610.2 **Bathtub Seats.** A removable in-tub seat shall be 15 inches (380 mm) minimum and 16 inches (405 mm) deep maximum, and shall be capable of secure placement. A permanent seat shall be 15 inches (380 mm) deep minimum and be positioned at the head end of the bathtub. The top of the seat shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the bathroom floor.

610.3 **Shower Compartment Seats.** Where a seat is provided in a roll-in shower compartment, it shall be a folding type and shall be on the wall adjacent to the controls. Seats shall be L-shaped or rectangular. The top of the seat shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the bathroom floor. In a transfer-type shower, the seat shall extend from the back wall to a point within 3 inches (75 mm) of the compartment entry. In a roll-in-type shower, the seat shall extend from the control wall to a point within 3 inches (75 mm) of the minimum required seat wall width.

610.3.1 **Rectangular Seats.** The rear edge of a rectangular seat shall be 21/2 inches (64 mm) maximum from the seat wall, and the front edge 15 inches (380 mm) minimum and 16 inches (405 mm) maximum from the seat wall. In a transfer-type shower the side edge of a rectangular seat shall be 11/2 inches (38 mm) maximum. In a roll-in-type shower, the side edge of a rectangular seat shall be 11/2 inches (38 mm) maximum from the control wall.

610.3.2 **L-Shaped Seats.** The rear edge of an L-shaped seat shall be 21/2 inches (64 mm) maximum from the seat wall, and the front edge 15 inches (380 mm) minimum and 16 inches (405 mm) maximum from the seat wall. The rear edge of the “L” portion of the seat shall be 11/2 inches (38 mm) maximum from the wall and the front edge shall be 14 inches (355 mm) minimum and 15 inches (380 mm) maximum from the wall. The end of the “L” shall be 22 inches (560 mm) minimum and 23 inches (585 mm) maximum from the main seat wall.

610.4 **Structural Strength.** Allowable stresses in bending, shear, and tension shall not be exceeded
for materials used where a vertical or horizontal force of 250 pound (1112 N) is applied at any point on the seat, fastener mounting device, or supporting structure.

611 Laundry Equipment

611.1 General. Accessible washing machines and clothes dryers shall comply with Section 611.

611.2 Clear Floor or Ground Space. A clear floor or ground space complying with Section 305 positioned for parallel approach shall be provided. The clear floor or ground space shall be centered on the appliance.

611.3 Operable Parts. Operable parts, including doors, lint screens, detergent and bleach compartments, shall comply with Section 309.

611.4 Height. Top loading machines shall have the door to the laundry compartment 34 inches (865 mm) maximum above the floor or ground. Front loading machines shall have the bottom of the opening to the laundry compartment 15 inches (380 mm) minimum and 34 inches (865 mm) maximum above the floor or ground.