

# **FLORIDA BUILDING CODE**

## **PLUMBING**

### **2005 Revisions**

**This package of replacement pages is designed to update the 1st edition of the Florida Plumbing Code® to the latest revisions. To update your existing code, replace sheets by page number. Place all these sheets in the code and remove any existing sheets per instructions contained herein.**



# PREFACE

## History

The State of Florida first mandated statewide building codes during the 1970s at the beginning of the modern construction boom. The first law required all municipalities and counties to adopt and enforce one of the four state-recognized model codes known as the “state minimum building codes.” During the early 1990s a series of natural disasters, together with the increasing complexity of building construction regulation in vastly changed markets, led to a comprehensive review of the state building code system. The study revealed that building code adoption and enforcement was inconsistent throughout the state, and those local codes thought to be the strongest proved inadequate when tested by major hurricane events. The consequences of the building codes system failure were devastation to lives and economies and a statewide property insurance crisis. The response was a reform of the state building construction regulatory system that placed emphasis on uniformity and accountability.

The 1998 Florida Legislature amended Chapter 553, Florida Statutes, Building Construction Standards, to create a single state building code that is enforced by local governments. As of March 1, 2002, the Florida Building Code supercedes all local building codes which are developed and maintained by the Florida Building Commission. It is updated every three years and may be amended annually to incorporate interpretations and clarifications.

## Scope

The *Florida Building Code* is based on national model building codes and national consensus standards which are amended where necessary for Florida specific needs. The code incorporates all building construction-related regulations for public and private buildings in the State of Florida other than those specifically exempted by Section 553.73, Florida Statutes. It has been harmonized with the *Florida Fire Prevention Code*, which is developed and maintained by the Department of Financial Services, Office of the State Fire Marshal, to establish unified and consistent standards.

The base codes for the 2004 edition of the *Florida Building Code* include: the *International Building Code*, 2003 edition; the *International Plumbing Code*, 2003 edition; the *International Mechanical Code*, 2003 edition; the *International Fuel Gas Code*, 2003 edition; the *International Residential Code*, 2003 edition; the *International Existing Building Code*, 2003 edition; the *National Electrical Code*, 2002 edition; the U. S. Department of Housing and Urban Development, Fair Housing Guidelines, and; substantive criteria from the American Society of Heating, Refrigerating and Air-conditioning Engineers’ (ASHRAE) Standard 90.1-2001. State and local codes adopted and incorporated into the code include the *Florida Energy Efficiency Code for Building Construction*, the *Florida Accessibility Code for Building Construction* and special hurricane protection standards for the high-velocity hurricane zone.

The code is composed of six main volumes: the *Florida Building Code, Building*, which also includes Chapter 13 (energy efficiency) and Chapter 11 (accessibility) as well as state facility licensing agencies’ regulations; the *Florida Building Code, Plumbing*; the *Florida Building Code, Mechanical*; the *Florida Building Code, Fuel Gas*; the *Florida Existing Building Code*; and the *Florida Building Code, Residential*. Chapter 27 of the *Florida Building Code, Building*, adopts the *National Electrical Code*, NFPA 70, by reference. Chapter 33 of the *Florida Building Code, Residential* adopts the *National Electrical Code Requirements for One- and Two-Family Dwellings*, NFPA 70A, by reference.

Under certain strictly defined conditions, local governments may amend requirements to be more stringent than the code. All local amendments to the *Florida Building Code* must be adopted by local ordinance and reported to the Florida Building Commission, then posted on the [www.floridabuilding.org](http://www.floridabuilding.org) web site in Legislative format for a month before being enforced. Local amendments to the *Florida Building Code* and the *Florida Fire Prevention Code* may be obtained from the Florida Building Commission web site, or from the Florida Department of Community Affairs or the Florida Department of Financial Services, Office of the State Fire Marshal, respectively.

## Adoption and Maintenance

The *Florida Building Code* is adopted and updated with new editions triennially by the Florida Building Commission. It is amended annually to incorporate interpretations, clarifications and to update standards. Minimum requirements for permitting, plans review and inspections are established by the Code, and local jurisdictions may adopt additional administrative requirements that are more stringent. Local technical amendments are subject to strict criteria established by Section 553.73, *F.S.* They are subject to commission review and adoption into the code or repeal when the code is updated triennially and are subject to appeal to the Commission according to the procedures established by Section 553.73, *F.S.*

Nine Technical Advisory Committees (TACs), which are constituted consistent with American National Standards Institute (ANSI) Guidelines, review proposed code changes and clarifications of the Code and make recommendations to the Commission. The TACs include: Joint Building Fire (a joint committee of the Commission and the State Fire Marshal); Building Structural; Plumbing and Fuel Gas; Mechanical; Electrical; Energy; Accessibility; Special Occupancy (state agency construction and facility licensing regulations); and Code Administration/Enforcement.

The Commission may only issue official code clarifications using procedures of Chapter 120, *Florida Statutes*. To obtain such a clarification, a request for a Declaratory Statement (DEC) must be made to the Florida Building Commission in a manner that establishes a clear set of facts and circumstances and identifies the section of the code in question. Requests are analyzed by staff, reviewed by the appropriate Technical Advisory Committee, and then the Florida Building Commission takes first action. Draft Declaratory Statements are subject to public comment and finalized by the Commission at its next meeting. These interpretations establish precedents for situations having similar facts and circumstances and are typically incorporated into the code in the next code amendment cycle.

## **Marginal Markings**

Vertical lines in the margins within the body of the code indicate a change from the requirements of the base codes to the 2004 *Florida Building Code* effective October 1, 2005.

An asterisk (\*) inserted in the margin indicates a change from the 2004 *Florida Building Code* to the 2005 *Florida Building Code* revisions filed with the Florida Department of State November 21, 2005.

Sections deleted from the base code are designated “Reserved.”

## **Acknowledgments**

The *Florida Building Code* is produced through the efforts and contributions of building designers, contractors, product manufacturers, regulators and other interested parties who participate in the Florida Building Commission’s consensus processes, Commission staff and the participants in the national model code development processes.

official shall require the removal of any cleanouts if necessary to ascertain whether the pressure has reached all parts of the system.

**312.1.1 Test gauges.** Gauges used for testing shall be as follows:

1. Tests requiring a pressure of 10 pounds per square inch (psi) (69 kPa) or less shall utilize a testing gauge having increments of 0.10 psi (.69 kPa) or less.
2. Tests requiring a pressure of greater than 10 psi (69 kPa) but less than or equal to 100 psi (689.5 kPa) shall utilize a testing gauge having increments of 1 psi (6.9 kPa) or less.
3. Tests requiring a pressure of greater than 100 psi (689.5 kPa) shall utilize a testing gauge having increments of 2 psi (13.79 kPa) or less.

**312.2 Drainage and vent water test.** A water test shall be applied to the drainage system either in its entirety or in sections. If applied to the entire system, all openings in the piping shall be tightly closed, except the highest opening, and the system shall be filled with water to point of overflow. If the system is tested in sections, each opening shall be tightly plugged except the highest openings of the section under test, and each section shall be filled with water, but no section shall be tested with less than a 5-foot (1524 mm) head of water. In testing successive sections, at least the upper 5 feet (1524 mm) of the next preceding section shall be tested so that no joint or pipe in the building, except the uppermost 5 feet (1524 mm) of the system, shall have been submitted to a test of less than a 5-foot (1524 mm) head of water. The water shall be kept in the system, or in the portion under test, for at least 15 minutes before inspection starts. The system shall then be tight at all points.

**312.3 Drainage and vent air test.** An air test shall be made by forcing air into the system until there is a uniform gauge pressure of 5 psi (34.5 kPa) or sufficient to balance a 10-inch (254 mm) column of mercury. This pressure shall be held for a test period of at least 15 minutes. Any adjustments to the test pressure required because of changes in ambient temperature or the seating of gaskets shall be made prior to the beginning of the test period.

**312.4 Drainage and vent final test.** The final test of the completed drainage and vent system shall be visual and insufficient detail to determine compliance with the provisions of this code except that the plumbing shall be subjected to a smoke test where necessary for cause. Where the smoke test is utilized, it shall be made by filling all traps with water and then introducing into the entire system a pungent, thick smoke produced by one or more smoke machines. When the smoke appears at stack openings on the roof, the stack openings shall be closed and a pressure equivalent to a 1-inch water column (248.8 Pa) shall be held for a test period of not less than 15 minutes.

**312.5 Water supply system test.** Upon completion of a section of or the entire water supply system, the system, or portion completed, shall be tested and proved tight under a water pressure not less than the working pressure of the system; or, for piping systems other than plastic, by an air test of not less than 50 psi (344 kPa). The water utilized for tests shall be obtained from a potable source of supply. The required tests shall be per-

formed in accordance with this section and Section 312 of this code.

**312.6 Gravity sewer test.** Gravity sewer tests shall consist of plugging the end of the building sewer at the point of connection with the public sewer, completely filling the building sewer with water from the lowest to the highest point thereof, and maintaining such pressure for 15 minutes. The building sewer shall be water tight at all points.

**312.7 Forced sewer test.** Forced sewer tests shall consist of plugging the end of the building sewer at the point of connection with the public sewer and applying a pressure of 5 psi (34.5 kPa) greater than the pump rating, and maintaining such pressure for 15 minutes.

**312.8 Storm drainage system test.** Storm drain systems within a building shall be tested by water or air in accordance with Section 312.2 or 312.3.

**312.9 Inspection and testing of backflow prevention assemblies.** Inspection and testing shall comply with Sections 312.9.1 and 312.9.2.

**312.9.1 Inspections.** Inspections shall be made of all backflow prevention assemblies and air gaps once every three years to determine whether they are operable.

**312.9.2 Testing.** Reduced pressure principle backflow preventer assemblies, double check-valve assemblies, pressure vacuum breaker assemblies, reduced pressure detector fire protection backflow prevention assemblies, double check detector fire protection backflow prevention assemblies, hose connection backflow preventers, and spill-proof vacuum breakers shall be tested at the time of installation, immediately after repairs or relocation and at least annually. The testing procedure shall be performed in accordance with one of the following standards:

ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CAN/CSA B64.10

## SECTION 313 EQUIPMENT EFFICIENCIES

**313.1 General.** Equipment efficiencies shall be in accordance with *Chapter 13, Florida Building Code, Building*.

## SECTION 314 CONDENSATE DISPOSAL

**314.1 Fuel-burning appliances.** Liquid combustion byproducts of condensing appliances shall be collected and discharged to an approved plumbing fixture or disposal area in accordance with the manufacturer's installation instructions. Condensate piping shall be of approved corrosion-resistant material and shall not be smaller than the drain connection on the appliance. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

**314.2 Evaporators and cooling coils.** Condensate drain systems shall be provided for equipment and appliances containing evaporators or cooling coils. Condensate drain systems

## GENERAL REGULATIONS

shall be designed, constructed and installed in accordance with Sections 314.2.1 through 314.2.3.

**314.2.1 Condensate disposal.** Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

**314.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC, or PVC pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Condensate waste and drain line size shall not be less than  $\frac{3}{4}$ -inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope.

**Exception:** On wall mounted ductless split units less than 36,001 Btu/h where the drain line is less than 10 feet (3048 mm) in length, the factory drain outlet size shall be acceptable from the equipment to the place of disposal.

**314.2.3 Auxiliary and secondary drain systems.** In addition to the requirements of Section 314.2.1, a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil where damage to any building components will occur as a result of overflow from the equipment drain pan or stoppage in the condensate drain piping. One of the following methods shall be used:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1.5 inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Metallic pans shall have a minimum thickness of not less than 0.0276-inch (0.7 mm) galvanized sheet metal. Non-metallic pans shall have a minimum thickness of not less than 0.0625 inch (1.6 mm).
2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.
3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water level detection device that will shut off the equipment served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.

**314.2.4 Traps.** Condensate drains shall be trapped as required by the equipment or appliance manufacturer.

**314.2.5 Pipe insulation.** All horizontal primary condensate drains within unconditioned areas shall be insulated to prevent condensation from forming on the exterior of the drain pipe.

## SECTION 315 PUBLIC FOOD SERVICE ESTABLISHMENTS AND FOOD ESTABLISHMENTS

**315.1 Requirements.** Public food service establishments and food establishments, as defined in Chapter 381, *Florida Statutes*, Chapter 500, *Florida Statutes* and Chapter 509, *Florida Statutes*, shall comply with the applicable code requirements found in the *Florida Building Code, Building*, Chapter 4, Special Occupancy.

## SECTION 316 IRRIGATION

**316.1 General.** Irrigation/sprinkler systems and risers for spray heads shall not be installed within 1 foot (305 mm) of the building sidewall.

**TABLE 403.1—continued**  
**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES**  
 (See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
6	Mercantile (see Sections 403.2, 403.5 and 403.6) <sup>1a</sup>	M	Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per 500		1 per 750		—	1 per 1,000	—
7	Residential	R-1	Hotels, motels, boarding houses (transient)	1 per guestroom		1 per guestroom		1 per guestroom	—	1 service sink
		R-2	Dormitories, fraternities, sororities and boarding houses (not transient)	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
		R-2	Apartment house	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per 20 dwelling units <sup>2</sup>
		R-3	One- and two-family dwellings	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1 automatic clothes washer connector per dwelling unit <sup>2</sup>
		R-4	Residential care/assisted living facilities	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
8	Storage (see Sections 403.2 and 403.4)	S-1 S-2	Structures for the storage of goods, warehouses, storehouse and freight depots. Low and Moderate Hazard.	1 per 100		1 per 100		See Section 411	1 per 1,000	1 service sink

- a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by the *Florida Building Code, Building*.
- b. Toilet facilities for employees shall be separate from facilities for inmates or patients.
- c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient rooms shall be permitted where such room is provided with direct access from each patient room and with provisions for privacy.
- d. For day nurseries, a maximum of one bathtub shall be required.
- e. For attached one- and two-family dwellings, one automatic clothes washer connection shall be required per 20 dwelling units.
- f. In assembly and mercantile occupancies, a unisex toilet room, in accordance with Section 403.7, shall be provided where an aggregate of six or more male and female water closets are required. In buildings of mixed occupancy, only those water closets required for the assembly or mercantile occupancy shall be used to determine the unisex toilet room requirement.
- g. In recreational facilities (coliseums, arenas, stadiums, pools, etc., with less than 3,000 seats and coliseums, arenas & stadiums with more 3,000 seats or greater) where separate-sex bathing rooms are provided, a unisex bathing room in accordance with 403.7 shall be provided. Where each separate sex bathing room has only one shower or bathtub fixture, a unisex bathing room is not required.

**403.1.1 Potty parity.** In assembly occupancies, restrooms which are open to the public must have a ratio of 3:2 water closets provided for women as the combined total of water closets and urinals provided for men, unless these are two or fewer such fixtures for men, in accordance with §553.86, *Florida Statutes*.

**Exception:** This section does not apply to establishments licensed under Chapter 509, *Florida Statutes*, if the establishment does not provide meeting or banquet

rooms which accommodate more than 150 people, and the establishment has at least the same number of water closets for women as the combined total of water closets and urinals for men.

**403.1.1.1 Definitions.**

- 1. **New construction.** Means new construction, building, alteration, rehabilitation or repair that equals or exceeds 50 percent of the replacement

value existing on October 1, 1992, unless the same was under design or construction, or under construction contract before October 1, 1992.

2. **Assembly occupancy.** The use of a building or structure, or any portion thereof, for the gathering together of people for purposes such as civic, social or religious functions or for recreation, or for food or drink consumption, or awaiting transportation.
3. **Historic building.** A building which is (a) listed on the National Register of Historic Places; (b) listed on the State Register of Historic Places; (c) listed on a municipal register of historic property, designated according to local ordinance; or (d) included in a district which is listed on a municipal, state or national register of historic property and which has been determined to contribute to the historic significance of the district.

**403.1.1.2 Occupancy content calculation.** The occupancy content of a building, which determines the number of water closets required for men, shall be calculated using the square footage per person requirements established by the building code in effect in a jurisdiction.

**403.1.2 Unisex toilet and bath fixtures.** Fixtures located within unisex toilet and bathing rooms complying with Section 403.7 shall be included in determining the minimum required number of fixtures for assembly and mercantile occupancies.

**403.1.3** For the purposes of calculating the minimum number of required plumbing facilities, the requirements of Table 403.1 shall apply to any areas outside of the building that are used as part of the building's designated occupancy (single or mixed). Where additional seating is also utilized in these areas, the actual number of seats shall be added to the number of persons calculated by Table 403.1 to obtain the total additional facilities required.

**403.2 Separate facilities.** Where plumbing fixtures are required, separate facilities shall be provided for each sex.

**Exceptions:**

1. Separate facilities shall not be required for private facilities.
2. Separate employee facilities shall not be required in occupancies in which 15 or less people are employed.
3. Separate facilities shall not be required for food service establishments which seat 10 persons or less.
4. Separate facilities shall not be required in business and mercantile occupancies with a total floor area of 3,000 square feet (279 m<sup>2</sup>) or less.

**403.3 Number of occupants of each sex.** The required water closets, lavatories, and showers or bathtubs shall be distributed equally between the sexes based on the percentage of each sex anticipated in the occupant load. The occupant load shall be composed of 50 percent of each sex, unless statistical data approved by the code official indicate a different distribution of the sexes (see also Section 403.1.1).

**403.4 Location of employee toilet facilities in occupancies other than assembly or mercantile.** Access to toilet facilities in occupancies other than mercantile and assembly occupancies shall be from within the employees' working area. Employee facilities shall be either separate facilities or combined employee and public facilities.

**Exception:** Facilities that are required for employees in storage structures or kiosks, and are located in adjacent structures under the same ownership, lease or control, shall be a maximum travel distance of 500 feet (152 m) from the employees' working area.

**403.4.1 Travel distance.** The required toilet facilities in occupancies other than assembly or mercantile shall be located not more than one story above or below the employee's working area and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).

**Exception:** The location and maximum travel distances to required employee toilet facilities in factory and industrial occupancies are permitted to exceed that required in Section 403.4.1, provided the location and maximum travel distance are approved by the code official.

**403.5 Location of employee toilet facilities in mercantile and assembly occupancies.** Employees shall be provided with toilet facilities in building and tenant spaces utilized as restaurants, nightclubs, places of public assembly and mercantile occupancies. The employee facilities shall be either separate facilities or combined employee and public facilities. The required toilet facilities shall be located not more than one story above or below the employees' work area and the path of travel to such facilities, in other than covered malls, shall not exceed a distance of 500 feet (152 m). The path of travel to required facilities in covered malls shall not exceed a distance of 300 feet (91m).

**Exception:** Employee toilet facilities shall not be required in tenant spaces where the travel distance from the main entrance of the tenant space to a central toilet area does not exceed 300 feet (91m) and such central toilet facilities are located not more than one story above or below the tenant space.

**403.6 Public facilities.** Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization. Public toilet facilities shall be located not more than one story above or below the space required to be provided with public toilet facilities and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).

**403.6.1 Covered malls.** In covered mall buildings, the path of travel to required toilet facilities shall not exceed a distance of 300 feet (91m). Facilities shall be installed in each individual store or in a central toilet area located in accordance with this section. The maximum travel distance to the central toilet facilities in covered mall buildings shall be measured from the main entrance of any store or tenant space.

**403.6.2 Pay facilities.** Where pay facilities are installed, such facilities shall be in excess of the required minimum facilities. Required facilities shall be free of charge.



**403.7 Unisex toilet and bathing rooms.** In assembly and mercantile occupancies, an accessible unisex toilet room shall be provided where an aggregate of six or more male and female water closets is required. In buildings of mixed occupancy, only those water closets required for the assembly or mercantile occupancy shall be used to determine the unisex toilet room requirement. In recreational facilities where separate-sex bathing rooms are provided, an accessible unisex bathing room shall be provided. Fixtures located within unisex toilet and bathing rooms shall be included in determining the number of fixtures provided in an occupancy.

**Exception:** Where each separate-sex bathing room has only one shower or bathtub fixture, a unisex bathing room is not required.

**403.7.1 Required fixtures.** Unisex toilet and bathing rooms shall comply with Sections 403.7.2 through 403.7.7.

**403.7.2 Unisex toilet rooms.** Unisex toilet rooms shall include only one water closet and only one lavatory. A unisex bathing room in accordance with Section 403.7.3 shall be considered a unisex toilet room.

**Exception:** A urinal is permitted to be provided in addition to the water closet in a unisex toilet room.

**403.7.3 Unisex bathing rooms.** Unisex bathing rooms shall include only one shower or bathtub fixture. Unisex bathing rooms shall also include one water closet and one lavatory. Where storage facilities are provided for separate-sex bathing rooms, accessible storage facilities shall be provided for unisex bathing rooms.

**403.7.4 Location.** Unisex toilet and bathing rooms shall be located on an accessible route. Unisex toilet rooms shall be located not more than one story above or below separate-sex toilet rooms. The accessible route from any separate-sex toilet room to a unisex toilet room shall not exceed 500 feet (152 m).

**403.7.5 Prohibited location.** In passenger transportation facilities and airports, the accessible route from separate-sex toilet rooms to a unisex toilet room shall not pass through security checkpoints.

**403.7.6 Clear floor space.** Where doors swing into a unisex toilet or bathing room, a clear floor space not less than 30 inches by 48 inches (762 mm by 1219 mm) shall be provided, within the room, beyond the area of the door swing.

**403.7.7 Privacy.** Doors to unisex toilet and bathing rooms shall be securable from within the room.

**403.8 Sanitary facilities for public swimming pools.** Separate sanitary facilities shall be provided and labeled for each sex and shall be located within a 200-foot (60 960 mm) radius of the nearest water’s edge of each pool served by the facilities.

**Exception:** Where a swimming pool serves only a designated group of residential dwelling units and not the general public, poolside sanitary facilities are not required if all living units are within a 200-foot (60 960 mm) radius of the nearest water’s edge, are not over three stories in height and are each equipped with private sanitary facilities.

**403.8.1 Required fixtures.** Fixtures shall be provided as indicated on Table 403.8. An additional set of fixtures shall be provided in the men’s restroom for every 5,000 square feet (465 m<sup>2</sup>) or major fraction thereof for pools greater than 10,000 square feet (929 m<sup>2</sup>). Women’s restrooms shall have a ratio of 3:2 water closets provided for women as the combined total of water closets and urinals provided for men.

**403.8.2 Outside access.** Outside access to facilities shall be provided for bathers at outdoor pools. If they are not visible from any portion of the pool deck, signs shall be posted showing directions to the facilities. Directions shall be legible from any portion of the pool deck; letters shall be a minimum of 1-inch (25 mm) high.

**403.8.3 Sanitary facility floors.** Floors of sanitary facilities shall be constructed of concrete or other nonabsorbent materials, shall have a smooth, slip-resistant finish and shall slope to floor drains. Carpets, duckboards and footbaths are prohibited. The intersection between the floor and walls shall be covered.

**SECTION 404  
ACCESSIBLE PLUMBING FACILITIES**

**404.1 General.**

**404.1.1 Accessibility.** The sections contained herein are plumbing fixture accessibility requirements only. For complete accessibility requirements, and associated figures, refer to *Florida Building Code, Building*, Chapter 11.

**404.2 (Florida Building Code, Building, 11-4.15) Drinking fountains and water coolers.**

**404.2.1 (Florida Building Code, Building, 11-4.15.1) Minimum number.** Drinking fountains or water coolers required to be accessible by *Florida Building Code, Building*, Section 11-4.1 shall comply with Section 404.2.

**404.2.2 (Florida Building Code, Building, 11-4.15.2) Spout height.** Spouts shall be no higher than 36 inches (915

**TABLE 403.8  
PUBLIC SWIMMING POOL FIXTURES REQUIRED**

SIZE	MEN'S RESTROOMS		WOMEN'S RESTROOMS		
	URINALS	WC	LAVATORY	WC	LAVATORY
0 - 2500 sq ft	1	1	1	1	1
2501 - 5000 sq ft	2	1	1	5	1
5001 - 7500 sq ft	2	2	2	6	2
7501 - 10,000 sq ft	3	3	3	9	3

For SI: 1 square foot = .0929 m<sup>2</sup>.

mm), measured from the floor or ground surfaces to the spout outlet [see Figure 404.2.2(a)].

**404.2.3** (Florida Building Code, Building, 11-4.15.3)

**Spout location.** The spouts of drinking fountains and water coolers shall be at the front of the unit and shall direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit. The spout shall provide a flow of water at least 4 inches (100 mm) high so as to allow the insertion of a cup or glass under the flow of water. On an accessible drinking fountain with a round or oval bowl, the spout must be positioned so the flow of water is within 3 inches (75 mm) of the front edge of the fountain.

**404.2.4** (Florida Building Code, Building, 11-4.15.4)

**Controls.** Controls shall comply with Section 404.13. Unit controls shall be front mounted or side mounted near the front edge.

**404.2.5** (Florida Building Code, Building, 11-4.15.5)

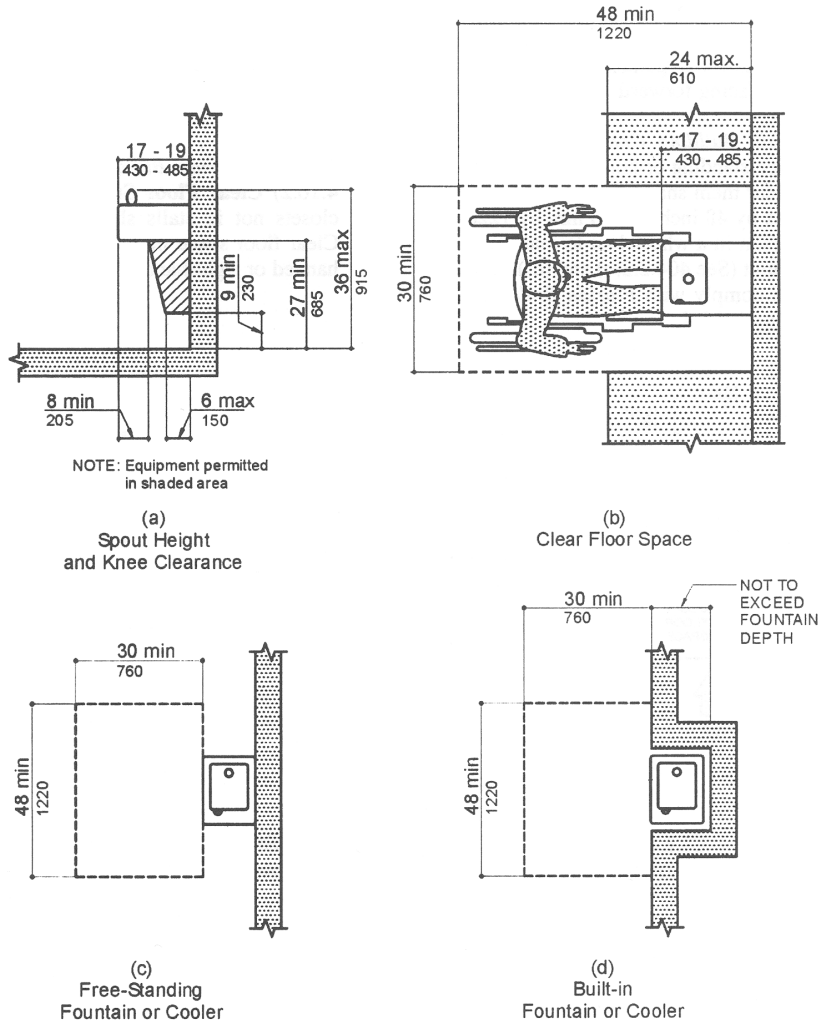
**Clearances.**

**404.2.5.1** [Florida Building Code, Building, 11-4.15.5(1)].

Wall- and post-mounted cantilevered units shall have a clear knee space between the bottom of the apron and the floor or ground at least 27 inches (685 mm) high, 30 inches (760 mm) wide, and 17 inches to 19 inches (430 mm to 485 mm) deep [see Figure 404.2.2(a) and Figure 404.2.2(b)]. Such units shall also have a minimum clear floor space 30 inches by 48 inches (760 mm by 1220 mm) to allow a person in a wheelchair to approach the unit facing forward.

**404.2.5.2** [Florida Building Code, Building, 11-4.15.5(2)]

Free-standing or built-in units not having a clear space under them shall have a clear floor space at least 30 inches by 48 inches (760 mm by 1220 mm) that allows a person in a wheelchair to make a parallel approach to the unit [see Figure 404.2.2(c) and Figure 404.2.2(d)]. This clear floor space shall comply with Florida Building Code, Building, §11-4.2.4.



**FIGURE 404.2.2**  
**DRINKING FOUNTAINS AND WATER COOLERS**  
 Florida Building Code, Building Chapter 11, Figure 27

# CHAPTER 7

## SANITARY DRAINAGE

### SECTION 701 GENERAL

**701.1 Scope.** The provisions of this chapter shall govern the materials, design, construction and installation of sanitary drainage systems.

**701.2 Sewer required.** Every building in which plumbing fixtures are installed and all premises having drainage piping shall be connected to a public sewer, where available, or an approved private sewage disposal system.

**701.3 Separate sewer connection.** Every building having plumbing fixtures installed and intended for human habitation, occupancy or use on premises abutting on a street, alley or easement in which there is a public sewer shall have a separate connection with the sewer. Where located on the same lot, multiple buildings shall not be prohibited from connecting to a common building sewer that connects to the public sewer.

**701.4 Sewage treatment.** Sewage or other waste from a plumbing system that is deleterious to surface or subsurface waters shall not be discharged into the ground or into any waterway unless it has first been rendered innocuous through subjection to an approved form of treatment.

**701.5 Damage to drainage system or public sewer.** Wastes detrimental to the public sewer system or to the functioning of the sewage-treatment plant shall be treated and disposed of in accordance with Section 1003 as directed by the code official.

**701.6 Tests.** The sanitary drainage system shall be tested in accordance with Section 312.

**701.7 Connections.** Direct connection of a steam exhaust, blowoff or drip pipe shall not be made with the building drainage system. Wastewater when discharged into the building drainage system shall be at a temperature not higher than 140° F (60° C). When higher temperatures exist, approved cooling methods shall be provided.

**701.8 Engineered systems.** Engineered sanitary drainage systems shall conform to the provisions of Sections 105.4 and 714.

**701.9 Drainage piping in food service areas.** Exposed soil or waste piping shall not be installed above any working, storage or eating surfaces in food service establishments.

### SECTION 702 MATERIALS

**702.1 Above-ground sanitary drainage and vent pipe.** Above-ground soil, waste and vent pipe shall conform to one of the standards listed in Table 702.1.

**702.2 Underground building sanitary drainage and vent pipe.** Underground building sanitary drainage and vent pipe shall conform to one of the standards listed in Table 702.2.

**702.3 Building sewer pipe.** Building sewer pipe shall conform to one of the standards listed in Table 702.3.

**TABLE 702.1  
ABOVE-GROUND DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; CSA B181.1
Brass pipe	ASTM B 43
Cast-iron pipe	ASTM A 74; CISPI 301; ASTM A 888
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488, ASTM F 891
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488
Copper or copper-alloy pipe	ASTM B 42; ASTM B 302
Copper or copper-alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Galvanized steel pipe	ASTM A 53
Glass pipe	ASTM C 1053
Polyolefin pipe	CAN/CSA-B181.3
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; ASTM F 891; CSA B181.2; ASTM F 1488
Stainless steel drainage systems, Types 304 and 316L	ASME A112.3.1

**702.4 Fittings.** Pipe fittings shall be approved for installation with the piping material installed and shall conform to the respective pipe standards or one of the standards listed in Table 702.4.

**702.5 Chemical waste system.** A chemical waste system shall be completely separated from the sanitary drainage system. The chemical waste shall be treated in accordance with Section 803.2 before discharging to the sanitary drainage system. Separate drainage systems for chemical wastes and vent pipes shall be of an approved material that is resistant to corrosion and degradation for the concentrations of chemicals involved.

**SANITARY DRAINAGE**

**TABLE 702.2  
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; CSA B181.1
Asbestos-cement pipe	ASTM C 428
Cast-iron pipe	ASTM A 74; CISPI 301; ASTM A 888
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488
Copper or copper-alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Polyolefin pipe	CAN/CSA-B181.3
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; ASTM F 891; CSA-B181.2
Stainless steel drainage systems, Type 316L	ASME A112.3.1

**TABLE 702.3  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM D 2751; ASTM F 628
Asbestos-cement pipe	ASTM C 428
Cast-iron pipe	ASTM A 74; ASTM A 888; CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488, ASTM F 891
Coextruded composite PVC IPS-DR, PS140, PS200, DWV	ASTM F 1488
Coextruded composite ABS sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488
Coextruded composite PVC sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488
Coextruded PVC sewer and drain PS25, PS50, PS100 (cellular core)	ASTM F 891
Concrete pipe	ASTM C14; ASTM C76; CAN/CSA A257.1M; CAN/CSA A257.2M
Copper or copper-alloy tubing (Type K or L)	ASTM B 75; ASTM B 88; ASTM B 251
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; ASTM F 891; CSA B182.2; CAN/CSA B182.4
Stainless steel drainage systems, Types 304 and 316L	ASME A112.3.1
Vitrified clay pipe	ASTM C 4; ASTM C 700