

CHAPTER 29

PLUMBING SYSTEMS

SECTION 2901 GENERAL

2901.1 Scope. The provisions of this chapter shall govern the location, availability, signage and minimum number of plumbing fixtures in a facility. Toilet and bathing rooms shall be constructed in accordance with Section 1210. Plumbing systems and equipment shall be installed in accordance with the *Plumbing Code*.

SECTION 2902 MINIMUM PLUMBING FACILITIES

2902.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy or use of space in relation to Table 2902.1 and in the minimum number shown in Table 2902.1. Types of occupancies not shown in Table 2902.1 shall be considered individually by the *building official* and shall reflect the use of the space being served by the fixtures. The number of occupants shall be determined by this code. Occupancy classification and use of space shall be determined in accordance with Chapter 3.

2902.1.1 Fixture calculations. To determine the *occupant load* of each sex, the total *occupant load* shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the *occupant load* of each sex in accordance with Table 2902.1. Fractional numbers resulting from applying the fixture ratios of Table 2902.1 shall be rounded up to the next whole number. For calculations involving multiple occupancies, such fractional numbers for each occupancy shall first be summed and then rounded up to the next whole number.

Exception: The total *occupant load* shall not be required to be divided in half where *approved* statistical data indicate a distribution of the sexes of other than 50 percent of each sex.

2902.1.2 Family or assisted-use toilet and bath fixtures. Fixtures located within family or assisted-use toilet and bathing rooms required by Section 1109.2.1 are permitted to be included in the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies.

TABLE 2902.1
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES^a
(See Sections 2902.1.1 and 2902.2)

No.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS MAY REPLACE WATER CLOSETS AT A RATIO OF 1 URINAL PER $\frac{2}{3}$ WATER CLOSETS)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAINS
				MALE	FEMALE	MALE	FEMALE		
1	Assembly (continued)	A-1 ^d	Theaters and other buildings for the performing arts and motion pictures	1 per 125	1 per 65	1 per 200		—	1 per floor
		A-2 ^{d,f}	Nightclubs, bars, taverns, dance halls and buildings for similar purposes	1 per 40	1 per 40	1 per 75		—	1 per floor
			Restaurants, banquet halls and food courts	1 per 75	1 per 75	1 per 200		—	1 per floor
		A-3 ^d	Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums	1 per 125	1 per 65	1 per 200		—	1 per floor
			Passenger terminals and transportation facilities	1 per 500	1 per 500	1 per 750		—	1 per floor
			Places of worship and other religious services without fixed seating	1 per 120	1 per 60	1 per 200		—	1 per floor
	Places of worship and other religious services with fixed seating	1 per 150	1 per 75	1 per 200		—	1 per floor		

(continued)

**TABLE 2902.1—(continued)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES^a
(See Sections 2902.2 and 2902.3)**

No.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS MAY REPLACE WATER CLOSETS AT A RATIO OF 1 URINAL PER 2/3 WATER CLOSETS)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAINS
				MALE	FEMALE	MALE	FEMALE		
1	Assembly	A-4	Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per floor
		A-5	Stadiums, amusement parks, bleachers and grandstands for outdoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per floor
2	Business	B	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		—	—
3	Educational	E	Educational facilities	1 per 50		1 per 50		—	1 per floor
4	Factory and industrial	F-1 and F-2	Structures in which occupants are engaged in work fabricating, assembly or processing of products or materials	1 per 100		1 per 100		See Section 411 of the <i>International Plumbing Code</i>	—
5	Institutional	I-1	Residential care	1 per 10		1 per 10		1 per 8	—
		I-2	Hospitals, ambulatory nursing home care recipient ^b	1 per room ^c		1 per room ^c		1 per 15	—
			Employees, other than residential care ^b	1 per 25		1 per 35		—	—
			Visitors, other than residential care	1 per 75		1 per 100		—	—
		I-3	Prisons ^b	1 per cell		1 per cell		1 per 15	—
		I-3	Reformatories, detention centers and correctional centers ^b	1 per 15		1 per 15		1 per 15	—
			Employees ^b	1 per 25		1 per 35		—	—
I-4	Adult day care and child day care	1 per 15		1 per 15		1	—		

(continued)

TABLE 2902.1—continued
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES^a
 (See Sections 2902.2 and 2902.3)

No.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS MAY REPLACE WATER CLOSETS AT A RATIO OF 1 URINAL PER ² / ₃ WATER CLOSETS)		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS
				MALE	FEMALE	MALE	FEMALE		
6	Mercantile	M	Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per 500		1 per 750		—	—
7	Residential	R-1	Hotels, motels, boarding houses (transient)	1 per sleeping unit		1 per sleeping unit		1 per sleeping unit	—
		R-2	Dormitories, fraternities, sororities and boarding houses (not transient)	1 per 10		1 per 10		1 per 8	—
		R-2	Apartment house	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—
		R-3	One- and two-family dwellings	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—
		R-3	Congregate living facilities with 16 or fewer persons	1 per 10		1 per 10		1 per 8	—
		R-4	Congregate living facilities with 16 or fewer persons	1 per 10		1 per 10		1 per 8	—
8	Storage	S-1 S-2	Structures for the storage of goods, warehouses, storehouses and freight depots, low and moderate hazard	1 per 100		1 per 100		—	—

- 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 this code.
- b. Toilet facilities for employees shall be separate from facilities for inmates or care recipients.
- c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units shall be permitted where such room is provided with direct access from each patient sleeping unit and with provisions for privacy.
- d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
- e. The minimum number of required drinking fountains shall comply with Table 2902.1 and Chapter 11.
- f. A drinking fountain need not be provided in a drinking or dining establishment.

2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for *dwelling units* and *sleeping units*.
2. Separate facilities shall not be required in structures or tenant spaces with a total *occupant load*, including both employees and customers, of 15 or less.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or less.

2902.2.1 Family or assisted-use toilet facilities serving as separate facilities. Where a building or tenant space requires a separate toilet facility for each sex and each toilet facility is required to have only one water closet, two

family/assisted-use toilet facilities shall be permitted to serve as the required separate facilities. Family or assisted-use toilet facilities shall not be required to be identified for exclusive use by either sex as required by Section 2902.4.

2902.3 Employee and public toilet facilities. Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization. The number of plumbing fixtures located within the required toilet facilities shall be provided in accordance with Section 2902.1 for all users. Employees shall be provided with toilet facilities in all occupancies. Employee toilet facilities shall either be separate or combined employee and public toilet facilities.

Exception: Public toilet facilities shall not be required in open or enclosed parking garages. Toilet facilities shall not be required in parking garages where there are no parking attendants.

2902.3.1 Access. The route to the public toilet facilities required by Section 2902.3 shall not pass through kitchens, storage rooms or closets. Access to the required facilities shall be from within the building or from the exterior of the building. All routes shall comply with the accessibility requirements of this code. The public shall have access to the required toilet facilities at all times that the building is occupied.

2902.3.2 Location of toilet facilities in occupancies other than malls. In occupancies other than covered and open mall buildings, the required *public* and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).

Exceptions:

1. In Group B (other than restaurants and dining facilities), F, H, M and S occupancies, toilet facilities may be located in an adjacent building on the same property. The path of travel to such facilities shall not exceed a distance of 300 feet (91 440 mm) and be on an accessible route complying with Chapter 11.
2. The location and maximum travel distances to required employee facilities in factory and industrial occupancies are permitted to exceed that required by this section, provided that the location and maximum travel distance are *approved*.

2902.3.3 Location of toilet facilities in malls. In covered and open mall buildings, the required *public* and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 300 feet (91 440 mm). In mall buildings, the required facilities shall be based on total square footage (m²) within a covered mall building or within the perimeter line of an open mall building, and 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 central toilet facilities in mall buildings shall be measured from the main entrance of any store or tenant space. In mall buildings, where employees' toilet facilities are not provided in the individual store, the maximum travel distance shall be measured from the employees' work area of the store or tenant space.

2902.3.4 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.

2902.3.5 Door locking. Where a toilet room is provided for the use of multiple occupants, the egress door for the room shall not be lockable from the inside of the room. This section does not apply to family or assisted-use toilet rooms.

2902.4 Signage. Required public facilities shall be designated by a legible sign for each sex. Signs shall be readily visible and located near the entrance to each toilet facility. Signs for accessible toilet facilities shall comply with Section 1110.

2902.4.1 Directional signage. Directional signage indicating the route to the public facilities shall be posted in accordance with Section 3107. Such signage shall be located in a *corridor* or aisle, at the entrance to the facilities for customers and visitors.

2902.5 Drinking fountain location. Where the drinking fountains are in a covered or open mall, such distance shall not exceed 300 feet. Drinking fountains shall be located on an accessible route.

**SECTION 2903
ALTERATION OF EXISTING
GROUP A, M AND E OCCUPANCIES**

2903.1 Definitions. The following terms are defined in Chapter 2.

SUBSTANTIAL ALTERATION.

STRUCTURALLY IMPRACTICAL.

2903.2 Requirements. Where substantial alterations are made to existing Group A, M and E occupancies with an occupant load in excess of 300, water closets, as specified in Table 2902.1 for new construction, shall be provided.

Exception: The building official may approve substantial alterations without the installation of additional water closets only where it is structurally infeasible to make such alterations; where existing site conditions, including the size of existing public water or sewer lines, prohibit such installations; or where zoning regulations prohibit adding floor area to the existing building. The number of water closets provided shall be the maximum number feasible but need not exceed the number required for new construction.

*
←