

PROPOSED AMENDMENTS TO THE 2000 UNIFORM PLUMBING CODE

BUILDING CODES

UNIFORM PLUMBING CODE

SECTION:

Short Title
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SHORT TITLE: This will be known and cited as the Uniform Plumbing Code.

CODE ADOPTED BY REFERENCE: Pursuant to Title 31, Article 16, Part 2, C.R.S., as amended, there is hereby adopted by reference the Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials, 5001 E. Philadelphia Street, Ontario, CA 91761, 2000 Edition. Three (3) copies of the Code are now filed in the office of the Clerk of the City and may be inspected during regular business hours. The Code is being adopted as if set out at length, to include International Association of Plumbing and Mechanical Officials (IAPMO) Installation Standards, plus Appendices A, B, D, H, I and L save and except the following which are declared to be non-applicable and therefore expressly deleted:

- A. Chapter 1 except Sections 101.4.1.1, 103.5.3 and 103.5.5
- B. Chapter 5
- C. Chapter 12
- D. Chapter 13
- E. Chapter 15

ADDITIONS AND MODIFICATIONS: The adopted Code is subject to the following additions and modifications:

- A. **Section 204.** Add new definition to read as follows:

Building Code. Any reference to the building code shall mean the 2003 addition of the *International Building Code* as adopted by this jurisdiction.

- B. **Section 313.6.** After the last sentence, insert the following:

When it is necessary to relocate a trap that would normally be within a cantilever to the interior of the structure, the trap shall be located immediately inside the heated space and be vented.

- C. **Section 313.11.** Delete entire section, and insert the following provisions:

Section 313.11 Structural safety. The building shall not be weakened by the installation of any plumbing. In the process of installing or repairing any plumbing, the finished floors, walls, ceilings, tile work or any

other part of the building or premises which is required to be changed or replaced shall be left in a safe structural condition in accordance with the requirements of the *International Building Code*.

Section 313.11.1 Penetrations of floor/ceiling assemblies and fire-resistance-rated assemblies. Penetrations of floor/ceiling assemblies and assemblies required to have a fire-resistance rating shall be protected in accordance with the *International Building Code*.

Section 313.11.2 Cutting, notching and boring in wood members. The cutting, notching and boring of wood members shall comply with Sections 313.11.2.1 through 313.11.2.4.

Section 313.11.2.1 Engineered wood products. Cuts, notches and holes bored in trusses, laminated veneer lumber, glued-laminated members and I-joists are prohibited except where the effects of such alterations are specifically considered in the design of the member.

Section 313.11.2.2 Joist notching. Notching at the ends of joists shall not exceed one-fourth the joist depth. Holes bored in joists shall not be within 2 inches (51 mm) of the top and bottom of the joist and their diameter shall not exceed one-third the depth of the member. Notches in the top or bottom of the joist shall not exceed one-sixth the depth and shall not be located in the middle one-third of the span.

Section 313.11.2.3 Stud cutting and notching. In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched to a depth not exceeding 25 percent of its width. Cutting or notching of studs to a depth not greater than 40 percent of the width of the stud is permitted in non load-bearing partitions supporting no loads other than the weight of the partition.

Section 313.11.2.4 Bored holes. A hole not greater in diameter than 40 percent of the stud depth is permitted to be bored in any wood stud. Bored holes not greater than 60 percent of the depth of the stud are permitted in non load-bearing partitions or in any wall where each bored stud is doubled, provided not more than two such successive doubled studs are so bored. In no case shall the edge of the bored hole be nearer than 5/8 inch (15.9mm) to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch.

Section 313.11.3 Alterations to trusses. Truss members and components shall not be cut, drilled, notched, spliced or otherwise altered in any way without the written concurrence and approval of a registered design professional. Alterations resulting in the addition of loads to any member (e.g., HVAC equipment, water heaters) shall not be permitted without verification that the truss is capable of supporting such additional loading.

Section 313.11.4 Cutting, notching and boring holes in structural steel framing. The cutting, notching and boring of holes in structural steel framing members shall be as prescribed by the registered design professional.

Section 313.11.5 Cutting, notching and boring holes in cold-formed steel framing. Flanges and lips of load-bearing, cold-formed steel framing members shall not be cut or notched. Holes in webs of load-bearing, cold-formed steel framing members shall be permitted along the centerline of the web of the framing member and shall not exceed the dimensional limitations, penetrations spacing or minimum hole edge distance as prescribed by the registered design professional. Cutting, notching and boring holes of steel floor/roof decking shall be as prescribed by the registered design professional.

Section 313.11.6 Cutting, notching and boring holes in nonstructural cold-formed steel wall framing. Flanges and lips of nonstructural cold-formed steel wall studs shall be permitted along the centerline of the web of the framing member, shall not exceed 1 ½ inches (38mm) in width or 4 inches (102mm) in length, and the holes shall not be spaced less than 24 inches (610mm) center to center from another hole or less than 10 inches (254mm) from the bearing end.

D. Section 318. Delete entire section.

E. Section 319. Delete the entire section and subsections, and insert the following:

Test Gauges. Tests required by this code, which are performed utilizing dial gauges, shall be limited to gauges having a range not less than twice or greater than three times the specified test pressure. Gauge increments shall be no greater than one pound.

F. **Section 402.** Delete entire section and subsections.

G. **Section 409.2.2.** Delete entire section, and insert the following:

All water closet seats, except those for private use, shall be of the open front type.

H. **Sections 412.3 through 412.4:** Delete entire sections.

I. **Section 413.** Delete entire section and subsections; and insert the following:

413.0 MINIMUM NUMBER OF REQUIRED FIXTURES:

413.1 Plumbing Fixtures Required. Each building shall be provided with sanitary facilities as prescribed by this section. Specific requirements for accessible plumbing facilities shall be as prescribed in the building code.

413.2 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Table 413. Types of occupancies not shown in Table 413 shall be considered individually by the Building Official. The number of occupants shall be determined by the building code. Occupancy classification shall be determined in accordance with the building code.

413.3 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each gender.

Exception 1: Separate facilities shall not be required in residential occupancies.

Exception 2: In occupancies serving ten or fewer people, one toilet facility, designed for use by no more than one person at a time, shall be permitted for use by both genders.

Exception 3: Separate facilities shall not be required in structures or tenant spaces in which food or beverage is served for consumption with a seating capacity of 15 or less.

Exception 4: In business occupancies with a total floor area of 1500 square feet or less, one toilet facility designed for use by no more than one person at a time, shall satisfy the requirement for serving customers and employees of both genders.

Exception 5: In a mercantile and storage occupancies with a total floor area of 3000 square feet or less, one toilet facility, designed for use by no more than one person at a time, shall satisfy the requirement for serving customers and employees of both genders.

413.3.1 Fixture separation. Where a water closet and urinal, or more than one water closet are required and located within the same room, each water closet shall occupy a separate compartment with a door and walls or by approved partitions between them to ensure privacy.

Exception: Separate compartment need not be provided if only one water closet is required by Table 413 and a privacy lock is installed on the restroom door.

413.4 Number of occupants of each gender. The required water closets, lavatories and showers or bathtubs shall be distributed equally between the genders based on the percentage of each gender anticipated in the occupant load. The occupant load shall be composed of 50 percent of each gender, unless statistical data approved by the code official indicates a different distribution of the genders.

413.5 Location of employee toilet facilities in occupancies other than assembly or mercantile. The required toilet facilities shall be located not more than one story above or below the employee's regular working area and the path of travel to such facilities shall not exceed a distance of 500 feet. Employee facilities shall be either separate facilities or public customer facilities.

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

413.5.1 Location of employee toilet facilities in mercantile and assembly occupancies. Employees shall be provided with toilet facilities in buildings and tenant spaces utilized as restaurants, nightclubs, places of public assembly and mercantile occupancies. The employee facilities shall be either separate facilities or public customer facilities.

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 500 feet and such central toilet facilities are located not more than one story above or below the tenant space.

413.6 Customer facilities. Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public use and utilized as restaurants, nightclubs, places of assembly, business and mercantile occupancies. Customer toilet facilities shall be located not more than one story above or below the space required to be provided with customer toilet facilities and the path of travel to such facilities shall not exceed a distance of 500 feet. In covered mall buildings, required facilities shall be based on total square footage, and facilities shall be 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.

413.6.1 Pay facilities. Required facilities shall be free of charge and designated by legible signs for each gender. Where pay facilities are installed, such facilities shall be in excess of the required minimum facilities.

413.7 Substitution for water closets. In each bathroom or toilet room, urinals shall not be substituted for more than 50 percent of the required water closets.

413.8 Required drinking fountains and location. Where water is served in restaurants, drinking fountains shall not be required. Drinking fountains shall not be located within the toilet facility.

413.9 Service sink location. Service sinks shall not be installed in toilet facilities.

413.10 Required floor drains. Floor drains or receptors shall be provided within a room containing a water heater, boiler, backflow preventer, furnace or equipment which generates liquid by-products during normal operations, but not more than ten feet from such units. In public coin operated laundries and in the central washing facilities of multiple family dwellings, the rooms containing the automatic clothes washers shall be provided with floor drains located to readily drain the entire floor area. Such drains shall have a minimum outlet cross-section of not less than 3 inches in diameter. When a water heater is located in an attic, attic-ceiling assembly, floor-ceiling assembly, floor-sub-floor assembly, or wood floor where damage may result from a leaking water heater, a water tight pan of corrosion resistant materials shall be installed beneath the water heater with a minimum 1 ¼ inch diameter drain to an approved location.

413.11 Fixtures requiring hot water. Hot water (minimum of 105 degrees, Fahrenheit) shall be provided to all plumbing fixtures and equipment used for bathing, washing, culinary purposes, cleaning, laundry or building maintenance.

TABLE 413
MINIMUM NUMBER OF PLUMBING FACILITIES ^(a,b,c)
(Refer to Sections 413.3 and 413.4)

	OCCUPANCY ^(d)	WATER CLOSETS (Urinals: see 413.7)		LAVATORIES	BATHTUBS /SHOWERS	DRINKING FOUNTAINS ^(h, i)	Others ⁽ⁱ⁾
		MALE	FEMALE				
A S S E M B L Y	Theaters	1 per 125	1 per 65	1 per 200		1 per 1,000	1 service sink
	Nightclubs	1 per 40	1 per 75	1 per 75		1 per 500	1 service sink
	Restaurants	1 per 75	1 per 75	1 per 200		1 per 500	1 service sink
	Halls, Museums, etc.	1 per 125	1 per 65	1 per 200		1 per 1,000	1 service sink
	Coliseums, arenas	1 per 75	1 per 40	1 per 150		1 per 1,000	1 service sink
	Churches ^(d)	1 per 150	1 per 75	1 per 200		1 per 1,000	1 service sink
	Stadiums, pools, etc.	1 per 100	1 per 50	1 per 150		1 per 1,000	1 service sink
	Business (see Section 413.5)	1 per 25		1 per 40		1 per 100	1 service sink
	Educational	1 per 50		1 per 50		1 per 100	1 service sink
	Factory and industrial	1 per 100		1 per 100		1 per 1,000	1 service sink
	High hazard (see Section 413.5)	1 per 100		1 per 100	1 per 1,000	1 service sink	
I N S T I T U T I O N A L	Residential care	1 per 10		1 per 10	1 per 8	1 per 100	1 service sink
	Hospitals, ambulatory nursing, home patients ^(e,f)	1 per room ^(f)		1 per room	1 per 15	1 per 100	1 service sink per floor
	Day nursery, sanitarium, nonambulatory nursing home patients, etc. ^(f,g)	1 per 15		1 per 15	1 per 15 ^(g)	1 per 100	1 service sink
	Employees other than residential care	1 per 25		1 per 35		1 per 100	
	Visitors other than residential care	1 per 75		1 per 100		1 per 500	
	Prisons ^(e)	1 per cell		1 per cell	1 per 15	1 per 100	1 service sink
	Asylums, reformatories, etc. ^(e,f)	1 per 15		1 per 15	1 per 15	1 per 100	1 service sink
	Mercantile (Sections 413.5 & 413.5.1)	1 per 500		1 per 750		1 per 1,000	1 service sink
R E S I D E N T I A L	Hotels, motels	1 per guestroom		1 per guestroom	1 per guestroom		1 service sink
	Lodges	1 per 10		1 per 10	1 per 8	1 per 100	1 service sink
	Multiple family	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
	Dormitories	1 per 10		1 per 10	1 per 8		1 per 100
	One/Two family dwelling	1 per dwelling unit		1 per dwelling unit	1 per dwelling unit		1 kitchen sink and 1 automatic clothes washer connection per dwelling unit
	Storage (Section 413.5)	1 per 100		1 per 100			1 per 1,000

TABLE 413 Footnotes (Add new footnotes h., i, and j.)

- a. Refer to Sections 413.3 and 413.4
 - b. Refer to Section 408.7 for handicap requirements
 - c. The fixtures are based on one fixture being the minimum number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by the building code.
 - d. Fixtures located in adjacent buildings under the ownership or control of a church shall be made available during periods the church is occupied.
 - e. Toilet facilities for employees shall be separate from facilities for inmates or patients.
 - f. 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.
 - g. For day nurseries, a minimum of one bathtub shall be required.
 - h. Bar sinks may be substituted for drinking fountains with prior approval.
 - i. Service sink and drinking fountain are not required if separate facilities are not required for each gender.
 - j. Building categories not shown on this table shall be considered separately by the Administrative Authority.
- J. Section 602.2.** Delete the words “and maintained in accordance with this code.” from the last sentence.
- K. Section 603.4.4.1.** Add the following exception:
- Exception:** Group R, Division 3 Occupancies.
- L. Section 603.4.7.** Delete last sentence, and insert the following:
- In climates where freezing temperatures occur, a listed self-draining frost proof hose bib with an integral backflow preventer shall be used, except in Group R, Division 3 Occupancies.
- M. Section 603.4.17.** Delete the entire section, and insert the following:
- Faucets with hose-attached sprays shall vent to an atmosphere under back-siphonage conditions, except kitchen sink faucets in dwelling units, shall be provided with in-line single check valves or a spring loaded shut off valve.
- N. Section 603.4.18.** Delete entire section and subsections.
- O. Section 604.1.** After the last sentence, insert the following:
- The materials and installation of the building supply water pipe shall comply with the local water purveyor’s standards.
- P. Section 604.8.** At the end of first paragraph, insert the following:
- A number 18 gauge copper tracer wire or other approved conductor shall be installed on plastic building supply water pipe.
- Q. Section 605.2.** Add the following exception:
- Exception:** A full way valve is not required on a water heater replacement if a globe valve is installed on the building supply entry
- R. Section 609.1.** Delete the last two sentences, and insert:
- All water service and yard piping shall be a minimum of sixty (60) inches deep.
- S. Section 609.5.** Add the following exception:
- Exception:** Water heaters
- T. Section 609.9.** Delete entire section and subsections.
- U. Section 609.10.** Add the following exception:
- Exception:** R-3 Occupancies

- V. **Section 610.4.** Delete the first paragraph, and insert the following, and the exception:

Systems within the range of Table 6-5 shall be sized from that table or by the method set forth in Section 610.5.

Exception: R-3 Occupancies serving less than 41 WFU and less than 200 feet in total developed length shall be sized with a ¾" building supply pipe, a ¾" water distribution system and a ½" fixture branch to each individual fixture.

- W. **Section 610.8.** Add the following exception:

Exception: Meters and building supply pipes designed by the water purveyor.

- X. **Section 611.0.** Delete entire section and subsections.

- Y. **Table 7-3.** Delete "3 DFU" and insert "2 DFU" as the private drainage fixture unit (DFU Value) for "clothes washers, domestic standpipe."

- Z. **Section 703.1.** After the last sentence, insert the following:

The minimum size of a building drain serving all structures shall be 4" in diameter for the first 3 feet within the foundation walls.

- AA. **Section 706.1.** After the last sentence, insert the following:

Where sweep fittings are normally required, they may be substituted with ¼ bends on above grade installations.

- AB. **Section 710.1.** Delete entire section.

- AC. **Section 712.2.** Add the following exception:

Exception: Under slab portions of drainage and vent systems may be tested with a minimum 5 foot head.

- AD. **Chapter 7 Part II – Building Sewers.** Delete in its entirety.

- AE. **Section 807.4.** Add the following exception:

Exception: A dishwasher drain may discharge into a standpipe separately trapped and vented, located under the kitchen sink cabinet. The standpipe shall be a minimum of 1 ½" diameter piping, 15" in length and have a wye fitting at the top. A gooseneck fitting made from ½" piping shall terminate in the top of the wye so that the piping arrangement will effectively maintain a 1" air gap between the end of the ½" discharge pipe and the flood level of the side outlet of the wye. The flood level of the wye shall be located at least 1" above the bottom of the kitchen sink basin.

- AF. **Section 901.0.** Add the following exception:

Exception: Each building drain may have one unvented floor drain if both of the following requirements are met.

a. The unvented floor drain branch and trap must be 3" wide with a 2" inlet, unless a floor drain with an integral trap and cleanout is used.

b. The developed length from the building drain to the weir of the trap must be a minimum of 18 inches and cannot exceed 15 feet.

- AG. **Section 905.2.** Add the following exception:

Exception: Wet vented water closets.

AH. Section 906.1. Add the following exception:

Exception: A listed air admittance valve may be installed according to its listing on kitchen sinks; island fixtures; remotely located basement fixtures receiving the discharge from 1 and 2 fixture unit fixtures and each plumbing fixture of a basement bathroom located in an existing structure where no plumbing vent is provided.

AI. Section 908.0. Delete the word “Vertical” from the section title.

AJ. Section 908.1. Insert the word “Vertical” at the beginning of the first sentence to read:

“Vertical wet venting...”

AK. Section 908.2. Add the following exception:

Exception: Vertically stacked tees serving residential kitchen sinks/dishwasher drains.

AL. Section 908.4. Insert new section to read as follows:

908.4 Horizontal wet venting is limited to drainage piping receiving the discharge from one (1) and two (2) fixture unit fixtures that also serve as a vent. All wet vented fixtures shall be on the same floor level. Fixtures with a continuous vent discharging into the horizontal wet vent shall be on the same floor level as the wet vented fixtures. Horizontal wet vented sections shall be sized at a minimum of two inches (2”) in diameter and not to exceed a total flow of (4) four fixture units.

AM. Section 909.0. Add the following exception:

Exception: The foot vent may be omitted when the horizontal drain and vent piping requirements of Table 7-5 are increased one pipe size.

AN. Section: 1006.0. Delete the last sentence, and insert the following:

When subject to reverse flow of sewage or liquid waste such drains located in seldom accessed spaces such as a crawl space, shall be equipped with an approved backwater valve.

AO. Section 1014.8. After the last sentence, insert the following:

Grease interceptors shall be sized in accordance with Table H-1 when served by a private sewage disposal system and in accordance with Section 9.07 of the City of Colorado Springs *Waste Water Extension & Service Standards*, 2004 Edition, when served by a public sewer system.

AP. Sections 1101.1 through 1101.10. Delete entire sections.

AQ. Section 1102.5. Delete entire section and subsections.

AR. Section 1103.0. Delete entire section.

AS. Section 1104.3. Delete entire section.

AT. Section 1108.0. Delete entire section.

AU. Appendix D, Section D1. After the last sentence, insert the following:

A rainfall rate of 2.5 inches per hour or 0.026 GPM/sq. ft. shall be used in the design of all structures located in this jurisdiction.

AV. Appendix L, Section L 2.1. Delete the entire section, and insert the following:

Definition: Engineered Plumbing System

A system designed for a specific building project with drawings and specifications indicating plumbing materials to be installed, all as prepared by a design professional, registered in the state of Colorado.