



RULE-MAKING ORDER

(RCW 34.05.360)

CR-103 (7/22/01)

Agency: State Building Code Council

- Permanent Rule
- Emergency Rule
- Expedited Rule Making

(1) Date of adoption: November 21, 2003

(2) Purpose:

To amend Chapters 51-56 and 51-57 WAC to adopt and amend the 2003 Edition of the Uniform Plumbing Code published by the International Association of Plumbing and Mechanical Officials.

(3) Citation of existing rules affected by this order:

Repealed:
Amended:
Suspended:

(4) Statutory authority for adoption: RCW 19.27.031 and RCW 19.27.074

Other Authority:

PERMANENT RULE ONLY (Including Expedited Rule Making)

Adopted under notice filed as WSR 03-18-080 on 8-29-03 (date).

Describe any changes other than editing from proposed to adopted version: The last sentence of Section 501.0 was deleted. The proposed exception to Section 508.5 was not adopted. The proposed change to Section 608.5 was not adopted.

EMERGENCY RULE ONLY

Under RCW 34.05.350 the agency for good cause finds:

- (a) That immediate adoption, amendment, or repeal of a rule is necessary for the preservation of the public health, safety, or general welfare, and that observing the time requirements of notice and opportunity to comment upon adoption of a permanent rule would be contrary to the public interest.
- (b) That state or federal law or federal rule or a federal deadline for state receipt of federal funds requires immediate adoption of a rule.

Reasons for this finding:

(5.3) Any other findings required by other provisions of law as precondition to adoption or effectiveness of rule?:

- Yes
 - No
- If Yes, explain:

(6) Effective date of rule:

Permanent Rules

- 31 days after filing
- Other (specify) 7-1-04*

Emergency Rules

- Immediately
- Later (specify) _____

*If less than 31 days after filing, specific finding in 5.3 under RCW 34.05.380(3) is required

Name (Type or Print)

Stan Price

Signature

Stan Price for Stan Price

Title

Council Chair

Date

November 21, 2003

CODE REVISER USE ONLY

OFFICE OF THE
STATE CODE REVISOR

11/21/03

TIME 10:20 AM
PM

WSR 04-01-110

(COMPLETE REVERSE SIDE)

**Note: If any category is left blank, it will be calculated as zero.
No descriptive text.**

Count by whole WAC sections only, from the WAC number through the history note.
A section may be counted in more than one category.

The number of sections adopted in order to comply with:

Federal statute:	New	_____	Amended	_____	Repealed	_____
Federal rules or standards:	New	_____	Amended	_____	Repealed	_____
Recently enacted state statutes:	New	_____	Amended	_____	Repealed	_____

The number of sections adopted at the request of a nongovernmental entity:

New	_____	Amended	<u>1</u>	Repealed	_____
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The number of sections adopted in the agency's own initiative:

New	_____	Amended	_____	Repealed	_____
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The number of sections adopted in order to clarify, streamline, or reform agency procedures:

New	_____	Amended	<u>14</u>	Repealed	_____
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The number of sections adopted using:

Negotiated rule making:	New	_____	Amended	_____	Repealed	_____
Pilot rule making:	New	_____	Amended	_____	Repealed	_____
Other alternative rule making:	New	_____	Amended	<u>15</u>	Repealed	_____

Chapter 51-56 WAC

STATE BUILDING CODE ADOPTION AND AMENDMENT OF THE ((2000)) 2003
EDITION OF THE UNIFORM PLUMBING CODE

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01,
effective 7/1/02)

WAC 51-56-003 Uniform Plumbing Code. The ((2000)) 2003 edition of the Uniform Plumbing Code, published by the International Association of Plumbing and Mechanical Officials, is hereby adopted by reference with the following additions, deletions and exceptions: Provided that chapters ((117)) 12 and 15 of this code are not adopted. Provided further, that those requirements of the Uniform Plumbing Code relating to venting and combustion air of fuel fired appliances as found in chapter 5 and those portions of the code addressing building sewers are not adopted.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01,
effective 7/1/02)

WAC 51-56-007 Exceptions. The exceptions and amendments to the ((uniform)) model codes contained in the provisions of chapter 19.27 RCW shall apply in cases of conflict with any of the provisions of these rules.

Codes referenced which are not adopted through RCW 19.27.031 or chapter 19.27A RCW shall not apply unless specifically adopted by the authority having jurisdiction.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01,
effective 7/1/02)

WAC 51-56-008 Implementation. The Uniform Plumbing Code adopted by chapter 51-56 WAC shall become effective in all counties and cities of this state on July 1, ((2002)) 2004, unless local

government residential amendments have been approved by the state building code council.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-56-0100 Chapter 1--Administration.

101.4.1.4 Conflict Between Codes. Delete paragraph.

102.4 Appeals. All persons shall have the right to appeal a decision of the ((~~administrative~~)) authority having jurisdiction. The jurisdiction shall have a board of appeals to hear and rule on Plumbing Code appeals. Members of the board shall be appointed by the jurisdiction. Decisions by the board shall be reported to the jurisdiction and administered by the ((~~administrative~~)) authority having jurisdiction.

103.1.3 Certification. State rules and regulations concerning certification shall apply.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-56-0200 Chapter 2--Definitions.

205.0 Certified Backflow Assembly Tester - A person certified by the Washington state department of health under chapter 246-292 WAC to inspect (for correct installation and approval status) and test (for proper operation) approved backflow assemblies.

~~((208.0 Flammable Vapor or Fumes is the concentration of flammable constituents in air that exceeds 10 percent of its lower flammability limit (LFL).))~~

218.0 Plumbing System - Includes all potable water building supply and distribution pipes, all plumbing fixtures and traps, all drainage and vent pipe(s), and all building drains including their respective joints and connection, devices, receptors, and appurtenances within the property lines of the premises and shall include potable water piping, potable water treating or using equipment, medical gas and medical vacuum systems, and water heaters: Provided, That no certification shall be required for the installation of a plumbing system within the property lines and outside a building.

WAC 51-56-0300 Chapter 3--General regulations.

~~((301.1.1 Approvals. Unless otherwise provided for in this code, all materials, fixtures or devices used or entering into the construction of plumbing systems, or parts thereof, shall be submitted to the administrative authority for approval and shall conform to approved nationally recognized standards, and shall be free from defects. All pipe, fittings, traps, fixtures, material and devices used in a plumbing system shall be listed or labeled by a listing agency or shall be approved by the administrative authority.))~~

301.1.3 Standards. Standards listed or referred to in this chapter ~~((and Table 14-1))~~ or other chapters cover materials ~~((that))~~ which will conform to the requirements of this code, when used in accordance with the limitations imposed in this or other chapters thereof and their listing. Where a standard covers materials of various grades, weights, quality, or configurations, there may be only a portion of the listed standard which is applicable. Design and materials for special conditions or materials not provided for herein are allowed to be used ~~((only))~~ by special permission of the ~~((administrative))~~ authority having jurisdiction after the ~~((administrative))~~ authority having jurisdiction has been satisfied as to their adequacy in accordance with Section 301.2.

311.4 Except as hereinafter provided in Sections 908.0, 909.0, 910.0, and Appendix L, Section L 6.0, no vent pipe shall be used as a soil or waste pipe, nor shall any soil or waste pipe be used as a vent.

313.6 No water, soil, or waste pipe shall be installed or permitted outside of a building or in an exterior wall unless, where necessary, adequate provision is made to protect such pipe from freezing. All hot and cold water pipes installed outside the conditioned space shall be insulated to a minimum R-3.

313.7 All pipe penetrating floor/ceiling assemblies and fire-resistance rated walls or partitions shall be protected in accordance with the requirements of the building code.

~~((316.1.6 Solvent Cement Plastic Pipe Joints. Plastic pipe and fittings designed to be joined by solvent cementing shall comply with this code and the manufacturer's installation instructions.~~

~~ABS pipe and fittings shall be cleaned and then joined with listed solvent cement(s).~~

~~CPVC and PVC pipe and fittings shall be cleaned and joined with listed primer(s) and solvent cement(s).))~~

314.5.1 In Seismic Design Categories C, D, E and F hubless cast iron piping in sizes 5 inches and larger suspended in exposed locations over public or high traffic areas, pipe over 4 feet in length shall be provided with support on both sides of the

coupling.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-56-0400 Chapter 4--Plumbing fixtures and fixture fittings.

402.0 Water-Conserving Fixtures and Fittings.

402.1 The purpose of this section shall be to implement water conservation performance standards in accordance with RCW 19.27.170.

402.2 Application. This section shall apply to all new construction and all remodeling involving replacement of plumbing fixtures and fittings in all residential, hotel, motel, school, industrial, commercial use, or other occupancies determined by the council to use significant quantities of water. Plumbing fixtures, fittings and appurtenances shall conform to the standards specified in this section and shall be provided with an adequate supply of potable water to flush and keep the fixtures in a clean and sanitary condition without danger of backflow or cross-connection.

402.3 Water Efficiency Standards.

402.3.1 Standards for Vitreous China Plumbing Fixtures.

402.3.1.1 The following standards shall be adopted as plumbing materials, performance standards, and labeling standards for water closets and urinals. Water closets and urinals shall meet either the ANSI/ASME standards or the CSA standard.

ANSI/ASME A112.19.2M-1998	Vitreous China Plumbing Fixtures
ANSI/ASME A112.19.6- 1995	Hydraulic Requirements for Water Closets and Urinals
CSA B45	CSA Standards on Plumbing Fixtures

402.3.1.2 The maximum water use allowed in gallons per flush (gpf) or liters per flush (lpf) for any of the following water closets shall be the following:

Tank-type toilets	1.6 gpf/6.0 lpf
Flushometer-valve toilets	1.6 gpf/6.0 lpf
Flushometer-tank toilets	1.6 gpf/6.0 lpf
Electromechanical hydraulic toilets	1.6 gpf/6.0 lpf

EXCEPTIONS: 1. Water closets located in day care centers, intended for use by young children may have a maximum water use of 3.5 gallons per flush or 13.25 liters per flush.
2. Water closets with bed pan washers may have a maximum water use of 3.5 gallons per flush or 13.25 liters per flush.

3. Blow out bowls, as defined in ANSI/ASME A112.19.2M, Section 5.1.2.3 may have a maximum water use of 3.5 gallons per flush or 13.25 liters per flush.

402.3.1.3 The maximum water use allowed for any urinal shall be 1.0 gallons per flush or 3.78 liters per flush.

402.3.1.4 No urinal or water closet that operates on a continuous flow or continuous flush basis shall be permitted.

402.3.1.5 This section does not apply to fixtures installed before the effective date of this Section, that are removed and relocated to another room or area of the same building after the effective date of this Section.

402.3.2 Standards for Plumbing Fixture Fittings.

402.3.2.1 The following standards are adopted as plumbing material, performance requirements, and labeling standards for plumbing fixture fittings. Faucets, aerators, and shower heads shall meet either the ANSI/ASME standard or the CSA standard.

ANSI/ASME A112.18.1M-1996 Plumbing Fixture
Fittings

CSA B125 Plumbing Fittings

402.3.2.2 The maximum water use allowed for any shower head is 2.5 gallons per minute or 9.5 liters per minute.

EXCEPTION: Emergency use showers shall be exempt from the maximum water usage rates.

402.3.2.3 The maximum water use allowed in gallons per minute (gpm) or liters per minute (lpm) for any of the following faucets and replacement aerators is the following:

Lavatory faucets	2.5 gpm/9.5 lpm
Kitchen faucets	2.5 gpm/9.5 lpm
Replacement aerators	2.5 gpm/9.5 lpm
Public lavatory faucets other than metering	0.5 gpm/1.9 lpm

402.4 Metering Valves. Lavatory faucets located in restrooms intended for use by the general public shall be equipped with a metering valve designed to close by spring or water pressure when left unattended (self-closing).

EXCEPTIONS: 1. Where designed and installed for use by persons with a disability.
2. Where installed in day care centers, for use primarily by children under 6 years of age.

402.5 Implementation.

402.5.1 The standards for water efficiency and labeling contained within Section 402.3 shall be in effect as of July 1, 1993, as provided in RCW 19.27.170 and amended July 1, 1998.

402.5.2 No individual, public or private corporation, firm, political subdivision, government agency, or other legal entity, may, for purposes of use in the state of Washington, distribute, sell, offer for sale, import, install, or approve for installation any plumbing fixtures or fittings unless the fixtures or fittings meet the standards as provided for in this Section.

Sections 402.6 through 402.9 are not adopted.

412.2 Location of Floor Drains. Floor drains shall be installed in the following areas:

412.2.1 Toilet rooms containing two (2) or more water closets or a combination of one (1) water closet and one (1) urinal, except in a dwelling unit. The floor shall slope toward the floor drains.

412.2.2 Laundry rooms in commercial buildings and common laundry facilities in multifamily dwelling buildings.

413.0 Minimum Number of Required Fixtures. For minimum number of plumbing fixtures required, see Building Code chapter 29 and Table ((29-A)) 2902.1.

Sections 413.1 through 413.7 and Table 4-1 are not adopted.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-56-0500 Chapter 5--Water heaters.

501.0 General. The regulations of this chapter shall govern the construction, location, and installation of fuel burning and other water heaters heating potable water. The minimum capacity for water heaters shall be in accordance with the first hour rating listed in Table 5-1. See the Mechanical Code for combustion air and installation of all vents and their connectors. All design, construction, and workmanship shall be in conformity with accepted engineering practices, manufacturer's installation instructions, and applicable standards and shall be of such character as to secure the results sought to be obtained by this Code. No water heater shall be hereinafter installed which does not comply in all respects with the type and model of each size thereof approved by the ((administrative)) authority having jurisdiction. A list of accepted gas equipment standards is included in Table 14-1.

((Water heaters used for space heating only are prohibited.))

TABLE 5-1^{1,3}

Number of Bathrooms	1 to 1.5			2 to 2.5				3 to 3.5			
	1	2	3	2	3	4	5	3	4	5	6
Number of Bedrooms											
First Hour Rating ² , Gallons	42	54	54	54	67	67	80	67	80	80	80

Notes: ¹The first hour rating is found on the "Energy Guide" label.
²Nonstorage and solar water heaters shall be sized to meet the appropriate first hour rating as shown in the table.
³For replacement water heaters, see Section 101.4.1.1.1.

((502-1)) **502.2 Chimney** - Delete definition.

((502-2)) **502.3 Chimney ((Connector)), Factory-Built** - Delete definition.

502.4 Chimney, Masonry - Delete definition.

~~502.5 ((Direct Vent Appliance))~~ Chimney, Metal - Delete definition.

~~502.7 ((Unusually Tight Construction))~~ Direct Vent Appliance - Delete definition.

~~502.8 ((Vent))~~ Flue Collar - Delete definition.

~~502.9 ((Vent Collar))~~ Gas Vent, Type B - Delete definition

502.10 Gas Vent, Type L - Delete definition.

502.11 Vent - Delete definition.

~~((502.10))~~ 502.12 Vent Connector - Delete definition.

~~((502.11))~~ 502.13 Venting System - Delete definition.

~~((502.12 Venting Systems-Types - Delete definition.))~~

504.1 Inspection of Chimneys or Vents. Delete paragraph.

~~((505.0 Gas-Fired Water Heater Approval Requirements.~~

~~505.1 Gas fired water heaters shall conform to approved recognized applicable standards or to other standards acceptable to the administrative authority. Each such water heater shall bear the label of an approved testing agency, certifying and attesting that such equipment has been tested and inspected and meets the requirements of applicable standards.~~

~~505.2 Except when reconditioned by the manufacturer or the manufacturer's approved agent in accordance with its original approval requirements and reinstalled at its original location, each reconditioned water heater shall be tested for safety and conformity to approved standards, and shall bear the label of an approved testing agency certifying and attesting that such equipment has been tested and inspected and meets the requirements of applicable standards. Such label shall also state clearly that the water heater has been reconditioned, and shall give the name and address of the reconditioner. Every person applying for a permit to install a used or reconditioned water heater shall clearly state on the application for permit that such equipment is used or reconditioned.~~

~~505.3 Gas storage-type water heaters shall be provided with, in addition to the primary temperature controls, an over-temperature safety protection device constructed, listed, and installed in accordance with nationally recognized applicable standards for such devices and a combination temperature and pressure relief valve.))~~

505.1 Prohibited Locations. Water heaters which depend on the combustion of fuel for heat shall not be installed in a room used or designed to be used for sleeping purposes, bathroom, clothes closets or in a closet or other confined space opening into a bath or bedroom.

EXCEPTIONS: 1. Direct vent water heaters.

2. Water heaters installed in a closet that has a weather-stripped solid door with an approved door closing device, and

designed exclusively for the water heater and where all air for combustion and ventilation is supplied from the outdoors.
3. Water heaters of the automatic storage type installed as a replacement in a bathroom, when specifically approved, properly vented and supplied with adequate combustion air.

Where not prohibited by other regulations, water heaters may be located under a stairway or landing.

506.2 All storage-type water heaters deriving heat from fuels or types of energy other than gas, shall be provided with, in addition to the primary temperature controls, an over-temperature safety protection device constructed, listed, and installed in accordance with nationally recognized applicable standards for such devices and a combination temperature and pressure relief valve.

507.0 Combustion Air. For issues relating to combustion air, see the Mechanical Code.

Sections 507.1 through ((507.5)) 507.10 are not adopted.

~~((509.0 Prohibited Locations. Water heaters which depend on the combustion of fuel for heat shall not be installed in a room used or designed to be used for sleeping purposes, bathroom, clothes closets or in a closet or other confined space opening into a bath or bedroom.~~

EXCEPTIONS: 1- Direct vent water heaters:

2- Water heaters installed in a closet that has a weather-stripped solid door with an approved door closing device, and designed exclusively for the water heater and where all air for combustion and ventilation is supplied from the outdoors:

3- Water heaters of the automatic storage type installed as a replacement in a bathroom, when specifically approved, properly vented and supplied with adequate combustion air:

~~Where not prohibited by other regulations, water heaters may be located under a stairway or landing.~~

EXCEPTION:))

Sections 508.6 through 508.9 are not adopted.

508.12 Delete entire section.

508.18 Venting of Flue Gases - Delete entire section.

Sections 508.20 through 508.24.5 are not adopted.

509.0 Access and Working Space.

509.1 Every water heater installation shall be accessible for inspection, repair, or replacement. The appliance space shall be provided with an opening or doorway of sufficient size to remove the water heater. In no case shall such opening or doorway be less than 24 inches in width. Such access shall be continuous and shall be one or any combination of the following means:

(1) By an opening or door, and passageway not less than 2 feet in width and large enough to permit removal of the water heater, but not less than 30 inches in height. Stairways and ramps leading to or part of such passageways shall comply with the building code.

(2) Every attic, roof, mezzanine, or platform more than 8 feet above the ground or floor level shall be made accessible by a stairway or ladder permanently fastened to the building. Such a ladder or stairway shall not be more than 18 feet in length between landings and not less than 14 inches in width. Such a ladder shall have rungs spaced not more than 14 inches center to center and not

less than 6 inches from the face of the wall. Each stile is to extend 30 inches above the surface to be reached, or as high as possible, if height is limited. Permanent ladders for water heater access need not be provided at parapets or walls less than 30 inches in height.

EXCEPTION: A portable ladder may be used for access for water heaters in attics on the single story portion of a Group R or U Occupancy.

(3) By a trap door or opening and passageway not less than 30 inches by 30 inches, but in no case smaller than the water heater. The passageway shall be continuous from the trap door or opening to the water heater. The trap door or opening shall be located not more than 20 feet from the water heater.

(4) Every passageway to an attic water heater shall have an unobstructed solid continuous flooring not less than 24 inches wide from the trap door or opening to the water heater. If the trap door or opening is more than 8 feet above the floor, a stairway or ladder permanently fastened to the building shall be provided. Such stairway or ladder shall lead directly to the edge of the trap door or opening and shall comply with the provisions of this section.

EXCEPTION: A portable ladder may be used for access for water heaters in attics on the single-story portion of a Group R or U Occupancy.

(5) By an unobstructed catwalk not less than 24 inches wide. Access to the catwalk shall be by ladder or stairs complying with the provisions of this section.

509.2 Attic and underfloor water heater locations shall be provided with an electric outlet and lighting fixture at or near the water heater. The lighting fixture shall be controlled by a switch located adjacent to the opening or trap door.

509.3 An unobstructed solidly floored working surface not less than 30 inches in depth and width shall be provided immediately in front of the firebox access opening. A door opening into such space shall not be considered an obstruction.

Sections 509.3.1 through 509.3.4 are not adopted.

Sections 510.1 through 511.2.25 are not adopted.

512.0 ((Venting of Water Heaters.)) **Direct Vent Equipment.** Delete entire section.

((513.0 Limitations. Delete entire section.

514.0 Vent Connectors. Delete entire section.

515.0 Location and Support of Venting System. Delete entire section.

516.0 Length Pitch and Clearance. Delete entire section.

517.0 Vent Termination. Delete entire section.

518.0 Area of Venting System. Delete entire section.

519.0 Multiple Appliance Venting. Delete entire section.

520.0 Existing Venting System. Delete entire section.

521.0 Draft Hoods. Delete entire section.

~~522.0 Gas Venting into Existing Masonry Chimneys. Delete entire section.~~

~~523.0 Chimney Connectors. Delete entire section.~~

~~524.0 Mechanical Draft Systems. Delete entire section.~~

~~525.0 Venting Through Ventilating Hoods and Exhaust Systems. Delete entire section.)~~

Chapter 5, Part II is not adopted.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-56-0600 Chapter 6--Water supply and distribution.

603.0 Cross-Connection Control. Cross-connection control shall be provided in accordance with the provisions of this chapter. Devices or assemblies for protection of the public water system must be models approved by the department of health under WAC 246-290-490. The ((administrative)) authority having jurisdiction shall coordinate with the local water purveyor where applicable in all matters concerning cross-connection control within the property lines of the premises.

No person shall install any water operated equipment or mechanism, or use any water treating chemical or substance, if it is found that such equipment, mechanism, chemical or substance may cause pollution or contamination of the domestic water supply. Such equipment or mechanism may be permitted only when equipped with an approved backflow prevention device or assembly.

603.3.3 For devices and assemblies other than those regulated by the Washington department of health in conjunction with the local water purveyor for the protection of public water systems, the ((administrative)) authority having jurisdiction shall ensure that the premise owner or responsible person shall have the backflow prevention assembly tested by a Washington state department of health certified backflow assembly tester:

- (1) At the time of installation, repair or relocation; and
- (2) At least on an annual schedule thereafter, unless more frequent testing is required by the ((administrative)) authority having jurisdiction.

603.4.6.1 Potable water supplies to systems having no pumps or connections for pumping equipment, and no chemical injection or provisions for chemical injection, shall be protected from backflow by one of the following devices:

- (1) Atmospheric vacuum breaker.
- (2) Pressure vacuum breaker.
- (3) Reduced pressure backflow preventer.

(4) A double check valve may be allowed when approved by the water purveyor and the ((administrative)) authority having jurisdiction.

(5) A spill proof pressure vacuum breaker may be allowed when approved by the water purveyor and the ((administrative)) authority having jurisdiction.

603.4.11 Potable Water Make Up Connections to Steam or Hot Water Boilers shall be protected by an air gap or a reduced pressure principle backflow preventer.

603.4.13 Potable Water Supply to Carbonators shall be protected by a listed reduced pressure principle backflow preventer as approved by the ((administrative)) authority having jurisdiction for the specific use.

603.4.18.1 Except as provided under Sections 603.4.18.2 and 603.4.18.3, potable water supplies to fire protection systems that are normally under pressure, including but not limited to standpipes and automatic sprinkler systems, except in one or two family residential flow-through or combination sprinkler systems piped in materials approved for potable water distribution systems, shall be protected from back-pressure and back-siphonage by one of the following testable devices:

1. Double check valve assembly.
2. Double check detector assembly.
3. Reduced pressure backflow preventer.
4. Reduced pressure detector assembly.

Potable water supplies to fire protection systems that are not normally under pressure shall be protected from backflow and shall meet the requirements of the appropriate standard(s) referenced in Table 14-1.

604.1 Water distribution pipe, building supply water pipe and fittings shall be of brass, copper, cast iron, CPVC, galvanized malleable iron, galvanized wrought iron, galvanized steel, PEX or other approved materials. Except as provided in Section ((604.13)) **604.14**, asbestos-cement, ((CPVC,)) PE, PVC, ((or)) PEX-AL-PEX or PE-AL-PE water pipe ((materials)) manufactured to recognized standards may be used for cold water building supply distribution systems outside a building. ((CPVC,)) PEX-AL-PEX water pipe, tubing, and fittings, manufactured to recognized standards may be used for hot and cold water distribution systems within a building. Other products not listed in this section are acceptable for their intended use, provided that such materials or distribution systems are listed and approved in accordance with nationally recognized standards. All materials used in the water supply system, except valves and similar devices shall be of like material, except where otherwise approved by the ((administrative)) authority having jurisdiction.

((604.13)) **604.14** Plastic water service piping may terminate within a building, provided the connection to the potable water distribution system shall be made as near as is practical to the

point of entry and shall be accessible. Barbed insert fittings with hose clamps are prohibited as a transition fitting within the building.

608.5 Relief valves located inside a building shall be provided with a drain, not smaller than the relief valve outlet, of galvanized steel, hard drawn copper piping and fittings, CPVC, or listed relief valve drain tube with fittings which will not reduce the internal bore of the pipe or tubing (straight lengths as opposed to coils) and shall extend from the valve to the outside of the building with the end of the pipe not more than two (2) feet (610 mm) nor less than six (6) inches (152 mm) above the ground or the flood level of the area receiving the discharge and pointing downward. Such drains may terminate at other approved locations. No part of such drain pipe shall be trapped or subject to freezing. The terminal end of the drain pipe shall not be threaded.

EXCEPTION: Replacement water heating equipment shall only be required to provide a drain pointing downward from the relief valve to extend between two feet (610 mm) and six inches (152 mm) from the floor. No additional floor drain need be provided.

609.10.2 Mechanical Devices. When listed mechanical devices are used, the manufacturer's specifications as to location and method of installation shall be followed.

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

Listed parallel water distribution systems shall be installed in accordance with their listing.

NEW SECTION

WAC 51-56-1100 Chapter 11--Storm drainage.

1101.3 Material Uses. Rainwater piping placed within the interior of a building or run within a vent or shaft shall be of cast iron, galvanized steel, wrought iron, brass, copper, lead, Schedule 40 ABS DWV, Schedule 40 PVC DWV, or other approved materials, and changes in direction shall conform to the requirements of Section 706.0.

1101.12.0 Cleanouts.

1101.12.1 Cleanouts for building storm drains shall comply with the requirements of this section. Rain leaders and conductors connected to a building storm sewer shall have a cleanout installed at the base of the outside leader or outside conductor before it connects to the horizontal drain. Cleanouts shall be placed inside the building near the connection between the building drain and the building sewer or installed outside the building at the lower end of the building drain and extended to grade.

1101.12.2 Each cleanout shall be installed so that it opens to allow cleaning in the direction of flow of the soil or waste or at

right angles thereto, and except in the case of wye branch and end-of-line cleanouts, shall be installed vertically above the flow line of the pipe.

1101.12.3 Cleanouts installed under concrete or asphalt paving shall be made accessible by yard boxes, or extending flush with paving with approved materials and be adequately protected.

1101.12.4 Approved manholes may be installed in lieu of cleanouts when first approved by the authority having jurisdiction. The maximum distance between manholes shall not exceed three hundred (300) feet (91.4 m).

The inlet and outlet connections shall be made by the use of a flexible compression joint no closer than twelve (12) inches (305 mm) to, and not farther than three (3) feet (914 mm) from the manhole. No flexible compression joints shall be embedded in the manhole base.

1108.0 Controlled-Flow Roof Drainage. This section is not adopted.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-56-1300 Chapter 13--Health care facilities and medical gas and vacuum systems.

~~((1302 Medical Gas and Vacuum Piping Systems.~~

~~The installation of medical gas and vacuum piping systems shall be in accordance with the requirements of this chapter and/or the appropriate standards adopted by the administrative authority, for additional standards see Table 14-1. The administrative authority shall require evidence of the competency of the installers.))~~

Part II Medical Gas and Vacuum Systems

1309.0 Scope.

1309.1 The provisions herein shall apply to the design, installation, testing, and verification of medical gas, medical vacuum systems, and related permanent equipment (~~for safe use~~) in (~~patient care~~) hospitals, clinics, and other health care facilities.

1309.2 The purpose of this chapter is to provide minimum requirements for the design, installation, testing and verification of medical gas, medical vacuum systems, and related permanent equipment, from the central supply system to the station outlets or inlets.

~~((1310.0 Definitions.~~

~~**1310.1 Building Supply** — The pipe from the source of supply to a building or structure.~~

~~1310.2 Critical Care Area~~ - An area in a medical facility where special care is provided, including intensive care units, coronary care units, recovery rooms, and respiratory care units.

~~1310.3 Installer Performance Testing~~ - Testing conducted by the installer or representative prior to system verification using oil-free, dry nitrogen as stated in Chapter 14.

~~1310.4 Manifold~~ - A device for connecting outlets of one or more gas cylinders to the central piping system for that specific gas.

~~1310.5 Medical Air~~ - Compressed air used in a medical facility.

~~1310.6 Medical Gas~~ - Gases used in a medical facility, including oxygen, nitrous oxide, nitrogen, carbon dioxide, helium, medical air, and mixtures of these gases. Standards of purity apply.

~~1310.7 Medical Gas System~~ - A system consisting of a central supply system (manifold, bulk, or compressors), including control equipment and piping extending to station outlets in the facility where medical gases may be required.

~~1310.8 Medical Vacuum System~~ - A system consisting of central vacuum-producing equipment with vacuum switches and operating controls, shutoff valves, alarm warning systems, gauges, and a network of piping extending to and terminating with station inlets at locations where patient suction may be required. Includes surgical vacuum systems, waste anesthesia gas disposal (as scavenging systems), and bedside suction systems.

~~1310.9 Purge, Flow~~ - The removal of oxygen from a system by oil-free dry nitrogen during brazing.

~~1310.10 Purge, System~~ - The removal of nitrogen from a system with the medical gas required for that system.

~~1310.11 SCFM~~ - Standard cubic feet per minute, the unit measure for a volume of gas at standard conditions (68 degrees F (20 degrees C) and 1 atmosphere of pressure).

~~1310.12 Special Hazard Area~~ - An area, such as a kitchen or electrical switch gear room.

~~1310.13 Station Inlet~~ - An inlet in a vacuum piping system at which the user makes connections and disconnections.

~~1310.14 Station Outlet~~ - An outlet point in a medical gas piping system at which the user makes connections and disconnections.

~~1310.15 System Verification~~ - Testing conducted by a qualified party other than the installer or material vendor after the installer performance testing and prior to the medical gas system being put into service.

~~1310.16 Use Point~~ - A room or area within a room, where medical gases are dispensed to a patient for medical purposes.

~~1310.17 User Outlet~~ - See station outlet.

~~1310.18 Valve, Isolation - A valve which isolates one piece of equipment from another.~~

~~1310.19 Valve, Riser - A valve at the base of a vertical riser, which isolates that riser.~~

~~1310.20 Valve, Service - A valve serving horizontal piping extending from a riser to a station outlet or inlet.~~

~~1310.21 Valve, Source - A single valve at the source which controls a number of units that make up the total source.~~

~~1310.22 Valve, Zone - A valve which controls the gas or vacuum to a particular area.~~

~~1311.3 The administrative authority shall require evidence of the competency of the installers.~~

~~1311.4 Delete paragraph.~~

~~1313.0 System Installation and Installer Performance Testing.~~

~~1313.1 Medical gas and medical vacuum systems shall be designed and installed in accordance with the requirements of this chapter and the installation requirements of this code, specifically Chapter 14 of this code.~~

~~1313.2 A report of completion of the installer performance testing which includes the specific items in Chapter 14 shall be furnished to the administrative authority prior to system verification.~~

~~1314.0 System Verification.~~

~~1314.1 Prior to any medical gas system being placed in service, each and every system shall be verified as described in Chapter 14. This verification shall be accomplished by an independent third party verification agency which is approved by the administrative authority.~~

~~1314.2 A report which includes at least the specific items in Chapter 14 shall be furnished to the administrative authority prior to final acceptance of the system.~~

~~Sections 1315 through 1331 are not adopted.))~~ 1313.3 Minimum Station Outlets/Inlets. Station outlets and inlets for medical gas and medical vacuum systems shall be provided as listed in WAC 246-320-525.

1331.0 System Verification.

1331.1 Prior to any medical gas system being placed in service, each and every system shall be verified as described in section 1331.2.

1331.1.1 Verification tests shall be performed only after all tests required in section 1329.0, Installer Performed Tests, have been completed.

Testing shall be conducted by a party technically competent and experienced in the field of medical gas and vacuum pipeline

testing and meeting the requirements of ANSI/ASSE Standard 6030, Medical Gas Verifiers Professional Qualifications Standard.

Testing shall be performed by a party other than the installing contractor or material vendor.

When systems have been installed by in-house personnel, testing shall be permitted by personnel of that organization who meet the requirements of this section.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-56-1400 Chapter 14--Referenced standards.

**TABLE 14-1
Standards for Materials, Equipment, Joints and Connections**

Where more than one standard has been listed for the same material or method, the relevant portions of all such standards shall apply.

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
AHAM DW-1-92	Household Electric Dishwashers	Appliances	
AHAM DW-2PR-86	Plumbing Requirements for Household Dishwashers	Appliances	
AHAM FWD-1-83	Food Waste Disposers	Appliances	
AHAM HLW-2 PR-86	Plumbing Requirements for Home Laundry Equipment Appliances		
ANSI A13.1-81(R93)	Scheme for the Identification of Piping Systems Piping		
ANSI A21.10-93	Ductile-Iron and Gray-Iron Fittings, 3 in. Through 48 in. (75 mm Through 1200 mm), for Water and Other Liquids (same as AWWA C110)	Piping, Ferrous	
ANSI A21.11-90	Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings (same as AWWA C111)	Piping, Ferrous	
ANSI A21.51-91	Ductile-Iron Pipe, Centrifugally Cast, for Water (same as AWWA C151)	Piping, Ferrous	
ANSI A21.53-88	Ductile-Iron Compact Fittings, 3 in. Through 24 in. (76 mm Through 610 mm) and 54 in. Through 64 in. (1,400 mm Through 1,600 mm), for Water Service (same as AWWA C153)	Piping, Ferrous	
ANSI A40.3-93	Stainless steel	Piping, Ferrous	
ANSI A106.6-70	Vitrified Clay Pipe (now CSA A60.1M1976(C1992))	Piping, Nonmetallic	
ANSI A106.6-77	Silver brazing joints for wrought and cast bronze solder joint fittings	Joints	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
ANSI A112.14.1-75 (R90)	Backwater Valves	Valves	
ANSI A112.19.5-79	Trim for Water-Closet Bowls, Tanks and Urinals	Fixtures	
ANSI A112.21.2M-83	Roof Drains	DWV Components	
ANSI A118.10-93	Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations	Fixtures	
ANSI B2.1-90	Pipe Threads (Except Dryseal) (replaced by ASME B1.20.1-98)	Joints	
ANSI B125.1-84	Steel pipe (galvanized)	Piping, Ferrous	
ANSI B125.2-72	Steel pipe (galvanized)	Piping, Ferrous	
ANSI Z21.10.1a-94	Gas Water Heaters - Volume I - Storage Water Heaters with Input Ratings of 75,000 BTU per Hour or Less (22 kW)	Appliances	
ANSI Z21.10.1b-92	Gas Water Heaters - Volume I - Storage Water Heaters with Input Ratings of 75,000 BTU per Hour or Less (22 kW)	Appliances	
ANSI Z21.10.3-90	Gas Water Heaters - Volume III - Storage, with Input Ratings Above 75,000 Btu per Hour, Circulating and Instantaneous Water Heaters	Appliances	
ANSI Z21.10.3a-94	"	Appliances	
ANSI Z21.10.3b-92	"	Appliances	
ANSI Z21.12-90	Draft Hoods	Appliances	
ANSI Z21.13-91	Gas-Fired Low-Pressure Steam and Hot Water Boilers and Addenda	Appliances	
ANSI Z21.15-92	Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves	Valves	
ANSI Z21.22a-90	Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems	Valves	
ANSI Z21.24-93	Metal Connectors for Gas Appliances	Appliances	
ANSI Z21.41-89	Quick-Disconnect Devices for Use with Gas Fuel	Joints	
ANSI Z21.56-98	Gas Fired Pool Heaters	Swimming Pools and Spas	
ANSI Z21.69-1997 • CSA 6.16-M97	Connectors for Moveable Gas Appliances	Appliances	
ANSI Z21.70-81	Earthquake Actuated Automatic Gas Shutoff Systems (withdrawn from ANSI June, 1992)	Valves	
ANSI Z21.80-1997 • CSA 6.22-M97	Line Pressure Regulators	Fuel Gas	
ANSI Z21.81-1997 • CSA 6.25-M97	Cylinder Connection Devices	Fuel Gas	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
ANSI Z21.86●CSA 2.32-M98-	Vented Gas-Fired Space Heating Appliances	Appliances	
ANSI Z34.1-93-	Certification - Third Party Certification Programs for Products, Processes, and Services	Certification	
ANSI Z124.1-95-	Plastic Bathtub Units	Fixtures	
ANSI Z124.2-95-	Plastic Shower Receptors and Shower Stalls	Fixtures	
ANSI Z124.3-95-	Plastic Lavatories	Fixtures	
ANSI Z124.4-96-	Plastic Water Closet Bowls and Tanks	Fixtures	
ANSI Z124.5-97-	Plastic Toilet (Water Closet) Seats	Fixtures	
ANSI Z124.6-97-	Plastic Sinks	Fixtures	
ANSI Z124.7-97-	Prefabricated Plastic Spa Shells	Fixtures	
ANSI Z124.8-90-	Plastic Bathtub Liners	Fixtures	
ANSI Z124.9-94-	Plastic Urinal Fixtures (Note 1)	Fixtures	
ANSI Z223.1-99	National Fuel Gas Code	Fuel Gas	
ARI 1010-84	Drinking Fountains and Self-Contained, Mechanically-Refrigerated Drinking Water Coolers	Appliances	
ASHRAE 90.1-89	Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings	Miscellaneous	
ASME A112.1.2-96	Air Gaps in Plumbing Systems	Piping	
ASME A112.3.1-93	Stainless Steel Drainage Systems for Sanitary Storm and Chemical Application, Above and Below Ground (Note 1)	Piping, Ferrous	X
ASME A112.4.1-93	Water Heater Relief Valve Drain Tubes	Appliances	
ASME A112.6.1M-97	Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use	Fixtures	
ASME A112.18.1M-96	Plumbing Fixture Fittings	Valves	
ASME A112.18.6-99	Flexible Water Connectors	Piping	
ASME A112.18.3-96	Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings (Note 8)	Valves	
ASME A112.19.1M-94	Enameled Cast Iron Plumbing Fixtures (Supplement 1-1998)	Fixtures	
ASME A112.19.2M-98	Vitreous China Plumbing Fixtures	Fixtures	
ASME A112.19.3M-87	Stainless Steel Plumbing Fixtures (Designed for Residential Use)	Fixtures	
ASME A112.19.4M-94	Porcelain Enameled Formed Steel Plumbing Fixtures (Supplement 1-1998)	Fixtures	
ASME A112.19.6-95	Hydraulic Performance Requirements for Water Closets and Urinals	Fixtures	
ASME A112.19.7M-95	Whirlpool Bathtub Appliances	Fixtures	
ASME A112.19.8M-87	Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Whirlpool Bathtub Appliances	Swimming Pools and Spas	
ASME A112.19.9M-91	Nonvitreous Ceramic Plumbing Fixtures	Fixtures	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
ASME A112.21.1M-91	Floor Drains (Note 1)	DWV Components	
ASME A112.21.3M-85	Hydrants for Utility and Maintenance Use (Note 1)	Valves	
ASME A112.26.1M-84	Water Hammer Arresters	Piping	
ASME A112.36.2M-91	Cleanouts (Note 1)	DWV Components	
ASME B1.20.1-83 (R1992)	Pipe Threads, General Purpose (Inch)	Joints	
ASME B1.20.3-76 (R82/91/98)	Dryseal Pipe Threads, Inch	Joints	
ASME B16.1-89	Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800	Piping, Ferrous	
ASME B16.3-92	Malleable-Iron Threaded Fittings	Piping, Ferrous	
ASME B16.4-92	Gray Iron Threaded Fittings (includes Revision Services)	Piping, Ferrous	
ASME B16.5-88	Pipe Flanges and Flanged Fittings	Joints	
ASME B16.12-91	Iron Threaded Drainage Fittings (Note 1)	Piping, Ferrous	
ASME B16.15-85 (R1994)	Cast Bronze Threaded Fittings, Classes 125 and 250	Piping, Copper Alloy	
ASME B16.18-84	Cast Copper Alloy Solder Joint Pressure Fittings (Note 1)	Piping, Copper Alloy	
ASME B16.21-92	Nonmetallic Flat Gaskets for Pipe Flanges	Joints	
ASME B16.22-95	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings Alloy	Piping, Copper	
ASME B16.23-92	Cast Copper Alloy Solder Joint Drainage Fittings - DWV Alloy	Piping, Copper	
ASME B16.24-91	Cast Copper Alloy Pipe Flanges and Flanged Fittings Alloy	Piping, Copper	
ASME B16.26-88	Cast copper alloy fittings for flared copper tubes Alloy	Piping, Copper	
ASME B16.29-86	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings-DWV Alloy (Note 1)	Piping, Copper	
ASME B16.32-92	Cast Copper Alloy Solder Joint Fittings for Solvent Drainage Systems Alloy	Piping, Copper	
ASME B16.33-90	Manually Operated Metallic Gas Valves for Use in Gas Piping Systems up to 125 psig.	Valves	
ASME B16.34-88	Valves - Flanged, Threaded and Welding End	Valves	
ASME B16.38-85	Large Metallic Valves for Gas Distribution (Manually Operated, NPS 2-1/2 to 12, 125 psig Maximum)	Valves	
ASME B16.39-86	Pipe Unions, Malleable Iron Threaded (Includes Revision (R1994) Services)	Piping, Ferrous	
ASME B16.47-90	Large Diameter Steel Flanges	Piping, Ferrous	
ASME B36.10M-85	Welded and Seamless Wrought Steel Pipe	Piping, Ferrous	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
ASME Section IX	Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators	Certification	
ASSE 1001-90	Pipe Applied Atmospheric-Type Vacuum Breakers	Backflow Protection	
ASSE 1002-86	Water Closet Flush Tank Ballcocks	Backflow Protection	
ASSE 1003-95	Water Pressure Reducing Valves for Domestic Water Supply Systems	Valves	
ASSE 1004-90	Backflow Prevention Requirements for Commercial Dishwashing Machines	Backflow Protection	
ASSE 1006-89	Residential Use Dishwashers	Appliances	
ASSE 1007-92	Home Laundry Equipment	Appliances	
ASSE 1008-89	Household Food Waste Disposer Units	Appliances	
ASSE 1009-90	Commercial Food Waste Grinder Units	Appliances	
ASSE 1010-98	Performance Requirements for Water Hammer Arrestors	Piping	
ASSE 1011-95	Hose-Connection Vacuum Breakers	Backflow Protection	
ASSE 1013-93	Reduced Pressure Principle Backflow Preventers	Backflow Protection	
ASSE 1014-90	Hand-Held Showers	Fixtures	
ASSE 1015-93	Double Check Backflow Prevention Assembly	Backflow Protection	
ASSE 1016-96	Individual, Thermostatic Pressure Balancing and Thermostatic Control Valves for Individual Fixtures	Valves	
ASSE 1017-86	Thermostatic Mixing Valves, Self-Actuated for Primary Domestic Use	Valves	
ASSE 1018-86	Trap-Seal Primer Valves (water supply fed)	Valves	
ASSE 1019-95	Performance Requirements for Vacuum Breaker Wall Hydrant, Freeze Resistant Automatic Draining Type	Backflow Protection	
ASSE 1020-90	Pressure Vacuum Breaker Assembly	Backflow Protection	
ASSE 1021-77	Dishwasher Air Gaps for Domestic Dishwasher Applications	Backflow Protection	
ASSE 1023-79	Hot Water Dispensers Household Storage Type-Electrical	Appliances	
ASSE 1025-78	Diverters for Plumbing Faucets with Hose Spray, Anti-Siphon Type, Residential Applications	Valves	
ASSE 1028-81	Automatic Flow Controllers	Valves	
ASSE 1032-80	Dual Check Valve Type Backflow Preventers for Carbonated Beverage Dispensers - Post Mix Types	Backflow Protection	X
ASSE 1034-81	Fixed Flow Restrictors	Piping	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
ASSE 1035-95	Laboratory Faucet Backflow Preventer	Backflow Protection	
ASSE 1037-90	Pressurized Flushing Devices (Flushometers) for Plumbing Fixtures	Backflow Protection	
ASSE 1052-94	Hose Connection Backflow Preventers	Backflow Protection	
ASSE 1055-97	Chemical Dispensing Systems	Backflow Protection	
ASSE 1056-95	Back Siphonage Backflow Vacuum Breakers	Backflow Protection	
ASSE 1062-97	Temperature Actuated, Flow Reduction Valves for Individual Fixture Fittings	Valves	
ASSE 1066-97	Individual Pressure Balancing In-Line Valves for Individual Fixture Fittings (Note 9)	Valves	
ASSE 6000-98	Medical Gas Systems Installers, Inspectors and Verifiers	Certification	
ASTM A 47-90 (R95)	Ferritic Malleable Iron Castings	Piping, Ferrous	
ASTM A 53-96 (97)	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded, and Seamless	Piping, Ferrous	
ASTM A 74-98	Cast Iron Soil Pipe and Fittings (Note 1)	Piping, Ferrous	
ASTM A 120-84 [D]	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, (Galvanized) Welded, and Seamless for Ordinary Uses (replaced by A 53)	Piping, Ferrous	
ASTM A 126-95	Gray Iron Castings for Valves, Flanges, and Pipe Fittings	Piping, Ferrous	
ASTM A 197-87 (R-92)	Cupola Malleable Iron [Metric]	Piping, Ferrous	
ASTM A 312-93	Seamless and Welded Austenitic Stainless Steel Pipes	Piping, Ferrous	
ASTM A 377-95	Ductile Iron Pressure Pipe	Piping, Ferrous	
ASTM A 518-92 ^{tr}	Corrosion-Resistant High-Silicon Iron Castings [Metric]	Piping, Ferrous	
ASTM A 536-84(R-93)	Ductile Iron Castings	Piping, Ferrous	
ASTM A 653-96	Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process	Piping, Ferrous	
ASTM A 733-93	Welded and Seamless Carbon Steel and Austenitic Stainless Steel Pipe Nipples	Piping, Ferrous	
ASTM A 861-94 ^{tr}	High-Silicon Iron Pipe and Fittings (Note 1)	Piping, Ferrous	
ASTM B 29-92	Pig Lead	Joints	
ASTM B 32-96	Solder Metal (Note 4)	Joints	
ASTM B 42-96	Seamless Copper Pipe, Standards Sizes	Piping, Copper Alloy	
ASTM B 43-96	Seamless Red Brass Pipe, Standards Sizes	Piping, Copper Alloy	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
ASTM B 75-95a	Seamless Copper Tube	Piping, Copper Alloy	
ASTM B 88-96	Seamless Copper Water Tube	Piping, Copper Alloy	
ASTM B 135-96	Seamless Brass Tube	Piping, Copper Alloy	
ASTM B 152-97	Copper Sheet, Strip, Plate, and Rolled Bar	Miscellaneous	
ASTM B 251-97	General Requirements for Wrought Seamless Copper-Copper-Alloy Tube	Piping, Copper Alloy	
ASTM B 280-95a	Seamless Copper Tube for Air Conditioning and Refrigeration Field Service	Piping, Copper Alloy	
ASTM B 302-97	Threadless Copper Pipe	Piping, Copper Alloy	
ASTM B 306-96	Copper Drainage Tube (DWV)	Piping, Copper Alloy	
ASTM B 370-92 [†]	Copper Sheet and Strip for Building Construction	Miscellaneous	
ASTM B 447-97	Welded Copper Tube	Piping, Copper Alloy	
ASTM B 584-96	Copper Alloy Sand Casting for General Applications (Note 5)	Piping, Copper Alloy	
ASTM B 587-96	Welded Brass Tube	Piping, Copper Alloy	
ASTM B 641-93	Seamless and Welded Copper Distribution Tube (Type D)	Piping, Copper Alloy	
ASTM B 642-88 [D]	Welded Copper Alloy UNS C21000 Water Tube (discontinued 1994)	Piping, Copper Alloy	
ASTM B 687-96	Brass, Copper, and Chromium-Plated Pipe Nipples	Piping, Copper Alloy	
ASTM B 716-93 [D]	Welded Copper Water Tube (discontinued 1994)	Piping, Copper Alloy	
ASTM B 813-93	Liquid and Paste Fluxes for Soldering Applications of Copper and Copper-Alloy Tube	Joints	
ASTM B 819-95	Seamless Copper Tube for Medical Gas Systems	Piping, Copper Alloy	
ASTM B 828-92 [†]	Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings	Joints	
ASTM C 14-95	Concrete Sewer, Storm Drain and Culvert Pipe	Piping, Nonmetallic	
ASTM C 296-93	Asbestos-Cement Pressure Pipe	Piping, Nonmetallic	
ASTM C 412-94	Concrete Drain Tile	Piping, Nonmetallic	
ASTM C 425-96	Compression Joints for Vitrified Clay Pipe and Fittings	Joints	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPE
ASTM C 428-92	Asbestos-Cement Nonpressure Sewer Pipe (Notes 6 & 7)	Piping, Nonmetallic	
ASTM C 443-94	Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets	Joints	
ASTM C 478-96	Precast Reinforced Concrete Manholes Sections	Miscellaneous	
ASTM C 564-95a	Rubber Gaskets for Cast Iron Soil Pipe and Fittings (Note 1)	Joints	
ASTM C 700-96	Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated	Piping, Nonmetallic	
ASTM C 1053-90 (R95)	Borosilicate Glass Pipe and Fittings for Drain, Waste and Vent (DWV) Applications (Note 1)	Piping, Nonmetallic	
ASTM C 1173-95	Flexible Transition Couplings for Underground Piping Systems	Joints	
ASTM C 1277-94	Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings	Piping, Ferrous	
ASTM D 396-97	Specification for Fuel Oil	Miscellaneous	
ASTM D 1527-96a	Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe Sch. 40 and 80	Piping, Plastic	
ASTM D 1785-96a ^{af}	Poly (Vinyl Chloride) (PVC) Plastic Pipe Sch. 40, 80 and 120	Piping, Plastic	
ASTM D 1869-95	Rubber O-rings for Asbestos-Cement Pipe	Joints	
ASTM D 2104-95	Polyethylene (PE) Plastic Pipe, Sch. 40	Piping, Plastic	
ASTM D 2146-82 [D]	Polypropylene Plastic Molding and Extrusion Materials (replaced by ASTM D 4101)	Piping, Plastic	
ASTM D 2235-96a	Solvent cement for Acrylonitrile-Butadiene-Styrene (ABS) plastic pipe and fittings	Joints	
ASTM D 2239-96a	Polyethylene (PE) Plastic Pipe, (SDR-PR) Based on Controlled Inside Diameter	Piping, Plastic	
ASTM D 2241-96a	Poly(Vinyl Chloride) (PVC) Pressure-Rated pipe (SDR Series)	Piping, Plastic	
ASTM D 2282-96a	Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR)	Piping, Plastic	
ASTM D 2321-89 (R95)	Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications	Piping, Plastic	
ASTM D 2447-95	Polyethylene (PE) Plastic Pipe, Sch. 40 and 80 Based on Controlled Outside Diameter	Piping, Plastic	
ASTM D 2464-96a	Threaded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Sch. 80 (Note 1)	Piping, Plastic	
ASTM D 2465-73 [D]	Threaded Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe Fittings, Schedule 80 (discontinued 1986)	Piping, Plastic	
ASTM D 2466-96a	Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Sch. 40 (Note 1)	Piping, Plastic	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
ASTM D 2467-96a	Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Sch. 80 (Note 1)	Piping, Plastic	
ASTM D 2468-96a	Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe Fittings (Sch. 40)	Piping, Plastic	
ASTM D 2469-76[D]	Socket-Type Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe Fittings, Schedule 80 (discontinued 1986)	Piping, Plastic	
ASTM D 2513-96a	Thermoplastic Gas Pressure Pipe Tubing, and Fittings (Note 1)	Piping, Plastic	
ASTM D 2564-96a	Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems	Joints	
ASTM D 2609-96a	Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe (Note 1)	Piping, Plastic	
ASTM D 2657-96	Practice for Heating Fusion Joining of Polyolefin Pipe and Fittings	Joints	
ASTM D 2661-96	Acrylonitrile-Butadiene-Styrene (ABS) Sch. 40 Plastic Drain, Waste and Vent Pipe and Fittings (Note 1)	Piping, Plastic	
ASTM D 2665-97a	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste and Vent Pipe and Fittings	Piping, Plastic	
ASTM D 2672-96a	Joints for IPS PVC Pipe Using Solvent Cement	Joints	
ASTM D 2680-95a	Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Composite Sewer Piping	Piping, Plastic	
ASTM D 2729-96	Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings (Note 1)	Piping, Plastic	
ASTM D 2737-96a	Polyethylene (PE) Plastic Tubing	Piping, Plastic	
ASTM D 2740-89 c1 [D]	Poly (Vinyl Chloride) (PVC) Plastic Tubing (discontinued 1991)	Piping, Plastic	
ASTM D 2751-96	Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings (Note 1)	Piping, Plastic	
ASTM D 2846-96a	Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems	Piping, Plastic	
ASTM D 2855-96	Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings	Joints	
ASTM D 2996-95	Filament-Wound Fiberglass (Glass-Fiber-Reinforced-Thermosetting Resin) pipe	Piping, Plastic	
ASTM D 3033-85 [D]	Type PSP Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings (discontinued 1989)	Piping, Plastic	
ASTM D 3034-96	Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings	Piping, Plastic	
ASTM D 3036-73[D]	Poly (Vinyl Chloride) (PVC) Plastic Line Couplings (discontinued 1986)	Piping, Plastic	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
ASTM D 3065-94	Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings	Piping, Plastic	
ASTM D 3122-95	Solvent Cements for Styrene-Rubber (SR) Plastic Pipe and Fittings	Joints	
ASTM D 3139-96a	Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals	Joints	
ASTM D 3140-90	Flaring Polyolefin Pipe and Tubing	Joints	
ASTM D 3212-96a	Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals	Joints	
ASTM D 3298-81 [D]	Perforated Styrene-Rubber (SR) Plastic Drain Pipe (discontinued 1989)	Piping, Plastic	
ASTM D 3311-94	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns (Note 1)	Piping, Plastic	
ASTM D 3965-94	Rigid Acrylonitrile-Butadiene-Styrene (ABS) Compounds for Pipe and Fittings	Piping, Plastic	
ASTM D 4068-96 c1	Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane	Fixtures	
ASTM D 4101-96a	Propylene Plastic Injection and Extrusion Materials	Miscellaneous	
ASTM D 4551-96	Poly(Vinyl Chloride) (PVC) Plastic Flexible Concealed Water-Containment Membrane	Fixtures	
ASTM E 84-97a	Standard Test Method for Surface Burning Characteristics of Building Materials	Miscellaneous	
ASTM E 119-97	Standard Test Method for Fire Tests of Building Construction and Materials	Miscellaneous	
ASTM E 814-94b	Standard Test Method for Fire Tests of Through-Penetration Fire Stops	Miscellaneous	
ASTM F 402-93	Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings	Joints	
ASTM F 405-96	Corrugated polyethylene (PE) Tubing and Fittings	Piping, Plastic	
ASTM F 409-96a	Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings (Note 1)	Piping, Plastic	
ASTM F 437-96a	Threaded Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Sch. 80	Piping, Plastic	
ASTM F 438-96a	Socket-Type Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Sch. 40	Piping, Plastic	
ASTM F 439-96b	Socket-Type Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Sch. 80	Piping, Plastic	
ASTM F 441-96b	Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Sch. 40 and 80	Piping, Plastic	
ASTM F 442-96b	Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)	Piping, Plastic	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPE
ASTM F 443-77 e1 [D]	Bell-End Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe, Schedule 40 (discontinued 1987)	Piping, Plastic	
ASTM F 480-95	Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR) Schedule 40 and Schedule 80	Piping, Plastic	
ASTM F 493-97	Solvent Cements for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings	Joints	
ASTM F 628-96	Acrylonitrile-Butadiene-Styrene (ABS) Sch. 40 Plastic Drain, Waste and Vent Pipe with a Foam Core (Notes 1 & 3)	Piping, Plastic	
ASTM F 656-96a	Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings	Joints	
ASTM F 667-95	Large Diameter Corrugated Polyethylene Tubing and Fittings	Piping, Plastic	
ASTM F 789-95a	Type PS-46 and type PS-115 Poly(Vinyl Chloride) (PVC) Plastic Gravity Flow Sewer Pipe and Fittings (Note 1)	Piping, Plastic	
ASTM F 794-95a	Poly(Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter	Piping, Plastic	
ASTM F 810-93	Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields	Piping, Plastic	
ASTM F 845-95	Plastic Insert Fittings For Polybutylene (PB) Tubing	Piping, Plastic	X
ASTM F 876-97	Crosslinked Polyethylene (PEX) Tubing	Piping, Plastic	
ASTM F 877-96a	Crosslinked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems	Piping, Plastic	
ASTM F 891-96	Coextruded Poly(Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core	Piping, Plastic	
ASTM F 949-96a	Poly(Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings	Piping, Plastic	
ASTM F 1216-93	Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube	Piping, Plastic	
ASTM F 1281-98	Crosslinked Polyethylene/ Aluminum/ Crosslinked Polyethylene (PEX-Al-PEX) Pressure Pipe	Piping, Plastic	X
ASTM F 1282-98	Polyethylene/ Aluminum/ Polyethylene (PE-Al-PE) Composite Pressure Pipe	Piping, Plastic	X
ASTM F 1412-96	Polyolefin Pipe and Fittings for Corrosive Waste Drainage Systems	Piping, Plastic	
ASTM F 1673-95	Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems	Piping, Plastic	

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ASTM F 1743-96	Rehabilitation of Existing Pipelines and Conduits by Pulled-In-Place Installation of Cured-In-Place Thermosetting Resin Pipe (CIPP)	Piping, Plastic	
ASTM F 1807-97	Metal Insert Fittings w/ Copper Crimp Ring for SDR 9 Crosslinked Polyethylene (PEX) tubing	Piping, Plastic	
ASTM F 1866-98	Poly (Vinyl Chloride) PVC Schedule 40 Drainage and DWV Fabricated Fittings	Piping, Plastic	
ASTM F 1960-99	Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing	Piping, Plastic	
ASTM F 1961-99	Metal Cold Flare Compression Fittings with Disk Springs for Cross Linked Polyethylene (PEX) Tubing	Piping, Plastic	
ASTM F 1974-99	Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Composite Pressure Pipe	Piping, Plastic	
AWS A5.8-92	Filler Metals for Brazing and Braze Welding Joints AWS B2.2-91 Brazing Procedure and Performance Qualification	Certification	
AWS B2.2-91	Brazing Procedure and Performance Qualification	Certification	
AWWA C110	Ductile-Iron and Gray-Iron Fittings, 3 in. Through 48 in. (75 mm Through 1200 mm), for Water and Other Liquids (same as ANSI A21.10-93)	Piping, Ferrous	
AWWA C111	Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings (same as ANSI A21.11-90)	Piping, Ferrous	
AWWA C151	Ductile-Iron Pipe, Centrifugally Cast, for Water (same as ANSI A21.51-91)	Piping, Ferrous	
AWWA C153	Ductile-Iron Compact Fittings, 3 in. Through 24 in. (76 mm Through 610 mm) and 54 in. Through 64 in. (1,400 mm Through 1,600 mm), for Water Service (same as ANSI A21.53-88)	Piping, Ferrous	
AWWA C203-91	Coal-Tar Protective Coatings and Linings for Steel Water Pipelines - Enamelled and Tape - Hot Applied Piping AWWA C213-96 Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines	Piping, Ferrous	
AWWA C213-96	Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines	Piping, Ferrous	
AWWA C215-94	Extruded Polyolefin Coatings for the Exterior of Steel Water Pipelines	Piping, Ferrous	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
AWWA C400-93	Asbestos-Cement Distribution Pipe, 4 in. Through 16 in. (100 mm Through 400 mm) for Water Distribution Systems	Piping, Nonmetallic	
AWWA C500-93	Metal-Seated Gate Valves for Water Supply Service	Valves	
AWWA C504-88	Rubber-Seated Butterfly Valves	Valves	
AWWA C507-91	Ball Valves, 6 in. Through 48 in. (152 mm Through 1200 mm)	Valves	
AWWA C510-92	Double Check Valve Backflow-Prevention Assembly	Backflow Protection	
AWWA C511-92	Reduced-Pressure Principle Backflow-Prevention Assemblies	Backflow Protection	
AWWA C606-87	Grooved and Shouldered Joints	Joints	
AWWA C900-89	Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. Through 12 in., for Water Distribution	Piping, Plastic	
AWWA C901-88	Polyethylene (PE) Pressure Pipe and Tubing, 1/2 in. (13 mm) Through 3 in. (76 mm), for Water	Piping, Plastic	
AWWA C902-88	Polybutylene (PB) Pipe, Tubing, and Fittings, 1/2 in. Through 3 in., for Water	Piping, Plastic	✘
CABO A117.1-92	Specifications to Make Buildings and Facilities Accessible and Usable	Miscellaneous	
CISPI 301-97	Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications (Note 1)	Piping, Ferrous	
CISPI HSN-85	Neoprene Rubber Gaskets for Hub and Spigot Cast Iron Soil Pipe and Fittings	Joints	
CISPI 310-97	Couplings for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications	Joints	
FS A-A-51145C	Flux, Soldering, Nonelectronic, Paste and Liquid	Joints	
FS K65-59-71	Acrylonitrile-Butadiene-Styrene (ABS) sewer pipe and fittings	Piping, Plastic	
FS M265-811	Acrylonitrile-Butadiene-Styrene (ABS) Sch. 40 plastic drain, waste and vent pipe and fittings	Piping, Plastic	
FS O-F-499D-85	Flux brazing	Joints	
FS O-F-506C-72 (D)	Flux, soldering	Joints	
FS OO-L-201 F-70	Shower pans-sheet lead, grade B, 4 lb. min.	Miscellaneous	
FS QQ-R-571C-69 [D]	Copper and nickel alloys (rods)	Miscellaneous	
FS TT-S-1732-71	Seal compound pipe joint and thread	Joints	
FS WW-P-325B-76	Lead pipe and bends	Piping	
FS WW-P-521F-77	Copper alloy (bronze) unions	Piping, Copper Alloy	
FS WW-P-541-E-Gen-1980	Plumbing fixtures, general specification	Fixtures	

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FS-WW-U-516A-74(b)	Copper alloy (bronze) unions	Piping, Copper Alloy	
FS-WW-V-54d	Valve, Gate, Bronze (125, 150 and 200 Pound, Screwed Flange, Solder-End, for Land Use)	Valves	
FS-WW-V-58b	Valves, Gate, Cast Iron, 125 and 250-Pound, Screwed and Flanged (for Land Use)	Valves	
IAPMO-IS-1-91-e1	Nonmetallic Building Sewers	Piping, Nonmetallic	
IAPMO-IS-2-90	Tile-Lined Roman Bathtubs	Fixtures	
IAPMO-IS-3-93-e1	Copper Plumbing Tube, Pipe and Fittings	Piping, Copper Alloy	
IAPMO-IS-4-96	Tile-Lined Shower Receptors (and Replacements)	Fixtures	
IAPMO-IS-5-92-e1	ABS Building Drain, Waste, and Vent Pipe and Fittings	Piping, Plastic	
IAPMO-IS-6-95	Hubless Cast Iron Sanitary and Rainwater Systems	Piping, Ferrous	
IAPMO-IS-7-90-e1	Polyethylene (PE) cold Water Building Supply	Piping, Plastic	
IAPMO-IS-8-95-e1	PVC Cold Water Building Supply and Yard Piping	Piping, Plastic	
IAPMO-IS-9-95-e1	PVC Building Drain, Waste and Vent Pipe Fittings	Piping, Plastic	
IAPMO-IS-11-87-e1	ABS Sewer Pipe and Fittings	Piping, Plastic	
IAPMO-IS-12-93-e1	Polyethylene (PE) for Gas Yard Piping	Piping, Plastic	
IAPMO-IS-13-91-e1	Protectively Coated	Pipe Piping	
IAPMO-IS-15-82	Asbestos Cement Pressure Pipe for Water Service and Yard Piping	Piping, Nonmetallic	
IAPMO-IS-16-84	Low Pressure Air Test for Building Sewers	Piping	
IAPMO-IS-18-85-e1	Extra Strength Vitrified Clay Pipe in Building Drains	Piping, Nonmetallic	
IAPMO-IS-20-98	CPVC Solvent Cemented Hot and Cold Water Distribution Systems	Piping, Plastic	
IAPMO-IS-21-89-e1	Welded Copper and Copper Alloy Water Tube	Piping, Copper Alloy	
IAPMO-IS-26-99	Trenchless Polyethylene (PE) Pipe for Sewer Laterals	Piping, Plastic	
IAPMO-PS-1-99	Prefabricated Septic Tanks	DWV Components	
IAPMO-PS-2-89	Cast Brass and Tubing P-Traps	Piping, Copper Alloy	
IAPMO-PS-4-99	Drains for Prefabricated and Precast Showers	Fixtures	
IAPMO-PS-7-84	Tubing Trap Wall Adapters	DWV Components	

(Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
IAPMO PS 9-84	Diversion Tees and Twin Waste Elbows	DWV Components	
IAPMO PS 13-89	Testing and Rating Procedure for Grease Traps (Note 2)	DWV Components	
IAPMO PS 14-99	Flexible Metallic Water Connectors	Piping	
IAPMO PS 16-97	Subdrains for Built-Up Shower Pans	Fixtures	
IAPMO PS 23-89	Dishwasher Drain Airgaps	Backflow Protection	
IAPMO PS 25-84	Fittings for Joining Polyethylene Pipe for Water Service and Yard Piping	Joints	
IAPMO PS 31-95	Backflow Prevention Assemblies	Backflow Protection	
IAPMO PS 34-96	Polyethylene Encasement Sleeve for Potable Water Pipe and Tubing	Piping	
IAPMO PS 36-90	Lead-Free Sealing Compounds for Threaded Joints	Joints	
IAPMO PS 37-90	Black Plastic PVC or PE Pressure-Sensitive Corrosion Preventive Tape	Piping	
IAPMO PS 38-99	ABS and PVC Backwater Valves	DWV Components	
IAPMO PS 39-91	Testing Mechanical Fittings Composed of Multiple Components For Various Fitting Configuration For Use With Thermoplastic Gas Pressure Pipe	Fuel Gas	
IAPMO PS 40-91	Anodeless Transition Riser for Use with Polyethylene and PVC Gas Yard Piping	Fuel Gas	
IAPMO PS 41-99	Copper and Other Metallic Roof/Deck/Balcony Drains	DWV Components	
IAPMO PS 42-96	Pipe Alignment and Secondary Support Systems	Piping	
IAPMO PS 43-91	Cushioned Bathtubs And Whirlpool Bathtub Appliances	Fixtures	
IAPMO PS 44-92	Shielded Transition Couplings for Use with Dissimilar DWV Pipe and Fittings Above Ground	Joints	
IAPMO PS 45-91	Bathtub Three-Way Diverter Valves with Backflow Protection	Valves	
IAPMO PS 47-99	Plastic Roof Drains	DWV Components	
IAPMO PS 48-92	Material Safety Data Verification For Plumbing Products	Miscellaneous	
IAPMO PS 49-92	Backflow Prevention Requirements for Fixture Fittings with Hose Connected Singular Moveable Outlets	Backflow Protection	
IAPMO PS 50-92	Dual Flush Devices For Water Closets	Fixtures	
IAPMO PS 51-98	Plastic and Metallic Expansion Joints	Joints	
IAPMO PS 52-99	Sumps and Sewage Ejector Tanks	DWV Components	

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IAPMO PS 53-92	Grooved Mechanical Pipe Couplings and Grooved End Fittings	Joints	
IAPMO PS 54-99	Metallic and Plastic Utility Boxes	Miscellaneous	
IAPMO PS 55-92	Bathwaste Strainer Drains	Fixtures	
IAPMO PS 57-92	PVC Hydraulically Actuated Diaphragm Type Water Control Valves	Valves	
IAPMO PS 58-92	Supports for Off-the-Floor Plumbing Fixtures With or Without Concealed Tanks	Fixtures	
IAPMO PS 59-92	Septic Effluent and Waste Water Diverter Valves	DWV Components	
IAPMO PS 60-96	Sewage Holding Tank Containing Sewage Ejector Pump for Direct Mounted Water Closet	DWV Components	
IAPMO PS 61-92	Fabricated Stainless Steel Security Water Closets	Fixtures	
IAPMO PS 62-93	Enameled Cast Iron Sanitary Floor Sinks	Fixtures	
IAPMO PS 63-99	Plastic Leaching Chambers	DWV Components	
IAPMO PS 64-98	Pipe Flashings	Piping	
IAPMO PS 65-93	Airgap Units for Water Conditioning Equipment Installation	Backflow Protection	
IAPMO PS 66-93	Dielectric Waterway Fittings	Piping	
IAPMO PS 67-93	Early-Closure Replacement Flappers or Early-Closure Replacement Flapper With Mechanical Assemblies	Fixtures	
IAPMO PS 69-98	Plastic Bathwaste and Overflow Assemblies	Piping, Plastic	
IAPMO PS 70-93	Bathtub/Whirlpool Bathtubs with Pressure Sealed Doors	Fixtures	
IAPMO PS 71-93	Electronic Controlled Showers	Fixtures	
IAPMO PS 72-93	Valves with Atmospheric Vacuum Breakers	Valves	
IAPMO PS 73-93	Dental Vacuum Pumps	Miscellaneous	
IAPMO PS 74-99	Reinforced Flexible Water Connectors	Piping	
IAPMO PS 76-95	Ballcock or Flushometer Valve Tailpiece Trap Primers and Trap Primer Receivers/Adapters	DWV Components	
IAPMO PS 77-99	Electrohydraulic Water Closets	Fixtures	
IAPMO PS 78-95	Dual Flush for Electrohydraulic and Gravity 6 Liter (1.6 Gallons) Water Closet	Fixtures	
IAPMO PS 79-95	Multiport Electronic Trap Primer	DWV Components	
IAPMO PS 80-95	Grease Interceptors and Clarifiers	DWV Components	
IAPMO PS 81-95	Precast Concrete Seepage Pit Liners and Covers	DWV Components	
IAPMO PS 82-95	Fiberglass (Glass Fiber Reinforced Thermosetting Resin) Fittings	Piping, Plastic	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
IAPMO PS 83-95	Epoxy Coated Cast-Iron Sanitary Floor Sinks	Fixtures	
IAPMO PS 84-95	PVC Plastic Sanitary Floor Sinks	Fixtures	
IAPMO PS 85-95	Tools for Mechanically Formed Tee Connections in Copper Tubing	Piping	
IAPMO PS 86-95	Rainwater Diverter Valve for Nonroofed Area Slabs	DWV Components	
IAPMO PS 87-95	Diverter and Shut-Off Valves for Pool/Spas	Valves	
IAPMO PS 88-95	Pre-Pressurized Potable Water Tanks	Miscellaneous	
IAPMO PS 89-95	Soaking and Hydrotherapy (Whirlpool) Bathtubs with Hydraulic Seatlift	Fixtures	
IAPMO PS 90-95	Elastomeric Test Caps/Cleanout Caps	DWV Components	
IAPMO PS 91-95	Plastic Stabilizers for Use with Plastic Closet Bends	Piping, Plastic	
IAPMO PS 92-95	Heat Exchangers	Miscellaneous	
IAPMO PS 93-99	Water Closet Seats with Spray	Fixtures	
IAPMO PS 94-96	P-Trap, Supply Stop and Riser Insulated Protector	Miscellaneous	
IAPMO PS 95-98	Drain, Waste, and Vent Hangers and Plastic Pipe Support Hooks	Piping	
IAPMO PS 96-96	Passive Direct Solar Water Heaters	Miscellaneous	
IAPMO PS 97-97	Mechanical Cast Iron Closet Flanges	Piping, Ferrous	
IAPMO PS 98-96	Prefabricated Fiberglass Church Baptistries	Fixtures	
IAPMO PS 99-96	Terrazzo Plumbing Fixtures	Fixtures	
IAPMO PS 100-96	Porous Filter Protector for Sub-Drain Weep Holes	DWV Components	
IAPMO PS 101-97	Suction Relief Valves	Valves	
IAPMO PS 102-97	Short Pattern Fixture Trap	DWV Components	
IAPMO PS 103-97	Water Heater Stands With or Without Pans	Appliances	
IAPMO PS 104-97	Pressure Relief Connection for Dispensing Equipment	Valves	
IAPMO PS 105-97	Polyethylene Distribution Boxes	DWV Components	
IAPMO PS 106-98	Pre-Fabricated, Tileable Shower Receptors	Fixtures	
IAPMO PS 107-98	Aramid Reinforced Rubber Hose for Use in Nonpotable Water Radiant Heating and Snowmelting	Piping, Plastic	X
IAPMO PS 108-98	Grease Fire Suppression Systems	Appliances	
IAPMO PS 109-96	Rigid Unshielded Mechanical Couplings for Use with Plain End Drain, Waste, and Vent (DWV) Pipe and Plain End Sewer Pipe	Joints	
IAPMO PS 110-99	PVC Cold Water Compression Fittings	Fittings	
IAPMO PS 111-99	PVC Cold Water Gripper Fittings	Fittings	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
IAPMO PS 112-99	PVC Plastic Valves for Cold Water Distribution Systems Outside a Building and CPVC Plastic Valves for Hot and Cold Water Distribution Systems	Valves	
IAPMO PS 113-99	Hydraulically Powered Household Food Waster Grinders	Appliances	
IAPMO PS 114-99	Remote, Floor Box Industrial Water Supply, Air Supply, Drainage	Miscellaneous	
IAPMO PS 115-99	Hot Water Demand or Automatic Activated Hot Water Pumping Systems	Miscellaneous	
IAPMO PS 116-99	Hot Water Circulating Devices Which Do Not Use a Pump	Miscellaneous	
IAPMO SPS 3-93	Skimmers (Spas, Hot Tubs and Swimming Pools)	Swimming Pools and Spas	
IAPMO SPS 4-89	Special Use Suction Fittings for Swimming Pools, Spas and Hot Tubs (For Suction Side Automatic Swimming Pool Cleaners)	Swimming Pools and Spas	
IAS LC 1-97	Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST) (same as CSA 6.26-M97)	Fuel Gas	X
MIL-F-1183 H-83 [D]	Fittings, Pipe, Cast Bronze, Silver-Brazing	Piping, Copper Alloy	
MIL-F-18180C1	Flanges and Flanged Fittings, Pipe, Steel (150, 300, 400, 600, 900, 1500, and 2500 pounds)	Piping, Ferrous	
MIL-P-17552	Pumps, Centrifugal, Water, Horizontal; General Service; and Pumps, Centrifugal Water, Horizontal, Boiler-Feed; Electric Motor or Steam Driven	Pumps	
MIL-P-21214B-92	Vertical sump pumps	Pumps	
SSPMA-85			
MIL-P-21251C	Pumping Units, Sewage, Duplex, Automatic, Wet-Pit-Type	Pumps	
MIL-P-22561-82(D)	Glass (standard cancelled per Department of Defense)	Miscellaneous	
MIL-V-29193-80(D)	Pressurized flushing devices	Fixtures	
MIL-P-52407	Pump, Centrifugal, Electric-Motor-Driven, Shallow (A)-1976 (D) Well (for Water)	Pumps	
MIL-P-62156	Submersible, axial flow, electric motor driven	Pumps	
MIL-P-B-81 (D)	(1)-1983 (D)		
SSPMA-85	Sewage pumps	Pumps	
MSS SP-25-93	Standard Marking System for Valves; Fittings, Flanges and Unions	Piping	
MSS SP-42-90 (R95)	Class 150 Corrosion Resistant Gate, Globe, Angle and Check Valves with Flanged and Butt Weld Ends	Piping, Ferrous	
MSS SP-44-91	Steel Pipeline Flanges	Piping, Ferrous	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
MSS-SP-58-93	Pipe Hangers And Supports—Materials; Design and Manufacture	Piping	
MSS-SP-67-90	Butterfly Valves	Valves	
MSS-SP-70-90	Cast Iron Gate Valves, Flanged and Threaded Ends	Valves	
MSS-SP-71-90	Cast Iron Swing Check Valves, Flanged and Threaded Ends	Valves	
MSS-SP-72-92	Ball Valves with Flanged or Butt-Welding Ends for General Service	Valves	
MSS-SP-73-91	Brazing Joints for Wrought and Cast Copper Alloy Solder Joint Pressure Fittings	Joints	
MSS-SP-78-87 (R92)	Cast Iron Plug Valves, Flanged and Threaded Ends	Valves	
MSS-SP-80-87	Bronze Gate, Globe, Angle and Check Valves	Valves	
MSS-SP-83-87	Steel Pipe Unions Socket-Welding and Threaded	Piping, Ferrous	
MSS-SP-84 [D]	Steel Valves—Socket-Welding Ends and Threaded Ends (discontinued)	Valves	
NFPA 13R-1996	Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height	Miscellaneous	
NFPA 13D-1996	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes	Miscellaneous	
NFPA 31-97	Installation of Oil-Burning Equipment	Miscellaneous	
NFPA 54-96	National Fuel Gas Code	Fuel Gas	
NFPA 58-98	Storage and Handling of Liquefied Petroleum Gases	Fuel Gas	
NFPA 99-99 (Ch. 2 & 4)	Medical Gas Systems	Piping	
NFPA 99-99 (Ch. 2 & 4)	Gas and Vacuum Systems	Piping	
NFPA 211-96	Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances	Miscellaneous	
NFPA 8501-97	Single Burner Boiler Operation	Appliances	
NSF 3-96	Commercial Spray-Type Dishwashing and Glasswashing Machines	Appliances	
NSF 12-93	Automatic Ice Making Equipment	Appliances	
NSF 14-98	Plastic Piping Components and Related Materials	Piping, Plastic	
NSF 18-96	Manual Food and Beverage Dispensing Equipment	Appliances	
NSF 24-96	Plumbing System Components for Manufactured Homes and Recreational Vehicles	Miscellaneous	
NSF 29-93	Chemical Feeders for Commercial Dishwashers	Appliances	

((Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
NSF 40-99	Residential Wastewater Treatment Systems	DWV Components	
NSF 41-98	Nonliquid Saturated Treatment Systems	DWV Components	
NSF 42-98	Drinking Water Treatment Units - Aesthetic Effects	Appliances	
NSF 44-98	Cation Exchange Water Softeners	Appliances	
NSF 46-97	Evaluation of Components and Devices Used in Wastewater Treatment Systems	DWV Components	
NSF 53-98	Drinking Water Treatment Units - Health Effects	Appliances	
NSF 58-98	Reverse Osmosis Drinking Water Treatment Systems	Appliances	
NSF 61-98	Drinking Water System Components - Health Effects	Miscellaneous	
NSF 62-97	Water Distillation Systems	Appliances	
NSPI 1-1991	Public Swimming Pools	Swimming Pools and Spas	
PDI G-101-85	Testing and Rating Procedure for Grease Interceptors with Appendix of Sizing and Installation Data	DWV Components	
PDI WH 201-92	Water Hammer Arresters	Piping	
SAE J1670-93	Type "F" Clamps for Plumbing Applications	Joints	
SAMA LF6a	Medical Care Facility Brassware	Miscellaneous	
UL 80-96	Steel Inside Tanks for Oil-Burner Fuel	Miscellaneous	
UL 103-95	Factory-Built Chimneys for Residential Type and Building Heating Appliances	Miscellaneous	
UL 125-97	Valves for Anhydrous Ammonia and LP-Gas (Other than Safety Relief)	Valves	
UL 132-97	Safety Relief Valves for Anhydrous Ammonia and LP-Gas	Valves	
UL 144-99	LP-Gas Regulators	Valves	
UL 174-96	Household Electric Storage Tank Water Heaters	Appliances	
UL 343-97	Pumps for Oil-Burning Appliances	Pumps	
UL 352-97	Constant-Level Oil Valves	Valves	
UL 378-93	Draft Equipment	Miscellaneous	
UL 399-93	Drinking Water Coolers	Appliances	
UL 430-94	Waste Disposers	Appliances	
UL 441-96	Gas Vents	Miscellaneous	
UL 443-95	Steel Auxiliary Tanks for Oil-Burner Fuel	Miscellaneous	
UL 499-97	Electrical Heating Appliances	Appliances	
UL 563-95	Ice Makers	Appliances	
UL 569-95	Pigtails and Flexible Hose Connectors for LP-Gas	Fuel Gas	

(Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
UL 723-96	Test for Surface Burning Characteristics of Building Materials	Miscellaneous	
UL 726-95	Oil-Fired Boiler Assemblies	Appliances	
UL 732-95	Oil-Fired Storage Tank Water Heaters	Appliances	
UL 749-97	Household Dishwashers	Appliances	
UL 778-96	Motor-Operated Water Pumps	Pumps	
UL 834-95	Heating, Water Supply, and Power Boilers - Electric	Appliances	
UL 921-96	Commercial Electric Dishwashers	Appliances	
UL 1453-95	Electric Booster and Commercial Storage Tank Water Heaters	Appliances	
WAC 246-290-490	Washington State Department of Health Cross-Connection Control Requirements	Backflow Protection	
WQA S-100-95	Household, Commercial and Portable Exchange Water Softeners (replaced by NSF 44-98)	Appliances	
WQA S-200-93	Household and Commercial Water Filters	Appliances	
WQA S-300-91	Point-of-Use Low-Pressure Reverse Osmosis Drinking Water Systems	Appliances	
3-GP-28	Fuel Oil, Canadian Government Specification Board	Miscellaneous	

- Footnotes:
1. Although this standard is referenced in Table 14-1, some of the pipe, tubing, fittings, valves, or fixtures included in the standard are not acceptable for use under the provisions of the Uniform Plumbing Code.
 2. PDI Standard G101 by reference.
 3. Additional Requirements for Inner and Outer Layers.
 4. See Section 316.1.3 for restriction.
 5. Alloy C85200 for cleanout plugs.
 6. Limited to domestic sewage.
 7. Type II only.
 8. Fixture fittings with hose connected singular moveable outlets shall have two check valves and an atmospheric vacuum breaker.
 9. ASSE 1066 is not intended to limit the maximum outlet temperature at point of use.
 10. See section 315.0 for Trenching, Excavation, and Backfilling requirements when installing building drains and sewers. Engineers may wish to consult ASTM D2321 when preparing plans and specifications for sewer mains or specific projects:))

Add the following standard to those listed in Table 14-1:

Standard Number	Standard Title	Application	Indicate if Not Approved in the UPC
<u>WAC 246-290-490</u>	<u>Washington State Department of Health Cross-connection Control Requirements</u>	<u>Backflow Protection</u>	

REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 51-56-201300

Appendix M--Storm drainage.

Chapter 51-57 WAC

STATE BUILDING CODE ADOPTION AND AMENDMENT OF APPENDIX A, B AND APPENDIX I OF THE ((2000)) 2003 EDITION OF THE UNIFORM PLUMBING CODE

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-57-003 Uniform Plumbing Code Standards. The ((2000)) 2003 edition of the Uniform Plumbing Code Standards (Appendixes A, B and I), published by the International Association of Plumbing and Mechanical Officials are hereby adopted by reference.

AMENDATORY SECTION (Amending WSR 02-01-114, filed 12/18/01, effective 7/1/02)

WAC 51-57-008 Implementation. The Uniform Plumbing Code Standards adopted by chapter 19.27 RCW shall become effective in all counties and cities of this state on July 1, ((2002)) 2004, unless local government residential amendments have been approved by the state building code council.

NEW SECTION

WAC 51-57-202000 Installation standard 20-200--CPVC solvent cemented hot and cold water distribution systems.

301.1.1 Materials. Materials shall comply with the following:

Materials	ASTM Std
Raw Material - CPVC 23447-B	D1784-95
IPS pipe Sch 40 (1/2 in., 3/4 in., and 1 in.)	F 441-89 ^{e1}

Materials	ASTM Std
Sch 80 (1/2 in. - 2 in.)	F 441-94
Tubing SDR 11 (1/2 in. - 2 in.)	D2846-93
Fittings Sch 40 (1/2 in., 3/4 in., and 1 in.)	F 438-93
Sch 80 (1/2 in. - 2 in.)	F 439-93a
Tube Fittings (1/2 in. - 2 in.)	D2846-93

Primer. Listed primers shall be used that are compatible with the type of listed CPVC cement and pipe used. The primer shall be a true solvent for CPVC, containing no slow-drying ingredient. Cleaners shall not be allowed to be used as a substitute or equivalent for a listed primer.

EXCEPTION: Listed solvent cements that do not require the use of primer shall be permitted for use with CPVC pipe and fittings, manufactured in accordance with ASTM D2845 (1/2 in. - 2 in.).