2007/2008 PROPOSED CHANGES TO THE INTERNATIONAL PLUMBING/PRIVATE SEWAGE DISPOSAL CODE

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TENTATIVE ORDER OF DISCUSSION

2007/2008 PROPOSED CHANGES TO THE INTERNATIONAL PLUMBING/PRIVATE SEWAGE DISPOSAL CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does **not** necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair.

P = *International Plumbing Code*
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P1–07/08
IPC 202; IRC R202

Proponent: Pat Clark, Jefferson County, CO, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO)

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise definition as follows:

SECTION 202
GENERAL DEFINITIONS

HOT WATER. Water at a temperature greater than ~~or equal to~~ 110°F (43°C).

PART II – IRC-P

Revise definition as follows:

SECTION R202
GENERAL DEFINITIONS

HOT WATER. Water at a temperature greater than ~~or equal to~~ 110°F (43°C).

Reason: There needs to be a point where tempered water stops and hot water begins. Both definitions state that tempered and hot water are 110-degrees. This is very confusing to the enforcement community. Striking these three words provides the line of demarcation distinguishing the difference between hot and tempered water.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: The current definition of "Tempered Water" states that it has a range between 85 degrees F and 110 degrees F.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P2–07/08
202; IRC R202

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Delete definition without substitution:

SECTION 202
GENERAL DEFINITIONS

~~**BALL COCK.** See "Fill valve."~~

PART II – IRC

Delete definition without substitution:

SECTION R202
DEFINITIONS

~~**BALL COCK.** A valve that is used inside a gravity type water closet flush tank to control the supply of water into the tank. It may also be called a flush-tank fill valve or water control.~~

Reason: This is an antiquated term that has been replaced with the term fill valve. It is not referenced in the IPC therefore it need not be located in the IPC definition section.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P3–07/08
202

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

Revise definition as follows:

SECTION 202
GENERAL DEFINITIONS

~~**DEPTH OF WATER**~~ **TRAP SEAL.** The depth of ~~water~~ liquid that would have to be removed from a full trap before air could pass through the trap.

Reason: The term “depth of water seal” is not used in the code. The term “trap seal” is but here there is not a clear definition of what that means. This definition will provide a better understanding of what is meant by “trap seal”.

Since the IPC recognizes waterless technology in Section 419, the term water in section 1002.1 needs to be changed to liquid to reflect waterless trap seal technology.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P4–07/08
202 (New)

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Charlotte Pipe and Foundry (CP&F)

Add new definition as follows:

SECTION 202
GENERAL DEFINITIONS

CHEMICAL WASTE. An industrial or process liquid to be treated or disposed of that contains acids or other corrosive and non-corrosive chemical substances of any dilution.

Reason: There is a need for a clear definition of chemical waste in the code in order for appropriate materials to be used in these types of systems.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P5–07/08
303.1

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Charlotte Pipe and Foundry (CP&F)

Revise as follows:

303.1 Identification. Each length of pipe and each pipe fitting, trap, fixture, material and device utilized in a plumbing system shall bear the identification of the manufacturer. The manufacturer's identification shall be embossed, stamped or indelibly printed on the product. Where the product standard requires marking of weight or grade of the product,such marking shall be applied to the product. The required markings shall be applied by the product manufacturer. Field application of the required markings shall be prohibited.

Reason: This code change is needed to expand on the intent of the code regarding proper marking and identification in the field to assure that the end user knows who manufactured the product(s) used in the plumbing system. Issues such as field marking and additional requirements of referenced standards are not currently addressed in current language.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P6–07/08
702.7 (New)

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Charlotte Pipe and Foundry (CP&F)

Add new text as follows:

702.7 Cast iron soil pipe. Cast iron soil pipe and fittings shall be listed and tested to comply with the standards referenced in Table 702.3 and 702.4 and shall be marked with the country of origin and identification of the original manufacturer in addition to any markings required by the referenced standards.

Reason: It is important for the end user to identify the country of origin and original manufacturer to verify certifications and listings as well as when problems or failure occur in the field. This is a health and safety issue and needs to be addressed in the code.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: Compliance to the standards is currently required by Section 702. Identification of the manufacturer is currently required by Section 303.1.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P7–07/08
305.1; IRC P2603.3

Proponent: Richard Grace, Fairfax County, representing Virginia Plumbing and Mechanical Inspectors Association

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PART I – IPC

Revise as follows:

305.1 Corrosion. Pipes passing through concrete or cinder walls and floors or other corrosive material shall be protected against external corrosion by a protective sheathing or wrapping or other means that will withstand any reaction from the lime and acid of concrete, cinder or other corrosive material. Sheathing or wrapping shall allow for movement including expansion and contraction of piping ~~to prevent any rubbing action~~. Minimum wall thickness of material thickness shall be 0.025 inch (0.64 mm).

PART II – IRC-P

Revise as follows:

P2603.3 Breakage and corrosion. Pipes passing through or under walls shall be protected from breakage. Pipes passing through concrete or cinder walls and floors, cold-formed steel framing or other corrosive material shall be protected against external corrosion by a protective sheathing or wrapping or other means that will withstand any reaction from lime and acid of concrete, cinder or other corrosive material. Sheathing or wrapping shall allow for movement including expansion and contraction of piping ~~to prevent any rubbing action~~. Minimum wall thickness of material shall be 0.025 inch (0.64 mm).

Reason: The new wording is meant to clarify the intent of the statement. Movement should not be limited to expansion and contraction. Movement may include internal forces within the piping system. The sheathing or wrapping must be protected during any movement of the piping system. The use of the term “prevent any rubbing action” is unnecessary and may be moved to the commentary.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P8–07/08
305.8, 504.7; IRC P2603.2.1, P2801.5

Proponent: Guy McMann, Jefferson County, CO, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO)

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

305.8 Protection against physical damage. In concealed locations where piping, other than cast-iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than 1.5 inches (38 mm) from the nearest edge of the member, the pipe shall be protected by steel shield plates. ~~Protective~~ Such shield plates

shall ~~be a minimum of 0.062 inch thick (1.6 mm) steel,~~ have a thickness of not less than 0.0575 inches (1.463 mm) (No. 16 Gage). Such plates shall cover the area of the pipe where the member is notched or bored, and shall extend a minimum of 2 inches (51 mm) above sole plates and below top plates.

504.7 Required pan. Where water heaters or hot water storage tanks are installed in locations where leakage of the tanks or connections will cause damage, the tank or water heater shall be installed in a galvanized steel pan having a ~~minimum~~ material thickness of not less than 0.236 inches (0.6010 mm) (No. 24 gage), or other pans approved for such use.

PART II – IRC-P

Revise as follows:

P2603.2.1 Protection against physical damage. In concealed locations, where piping, other than cast-iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than 1.5 inches (38 mm) from the nearest edge of the member, the pipe shall be protected by steel shield plates. ~~Protective~~ Such shield plates shall ~~be a minimum of 0.062 inch thick (1.6 mm) steel,~~ have a thickness of not less than 0.0575 inches (1.463 mm) (No. 16 Gage). Such plates shall cover the area of the pipe where the member is notched or bored, and shall extend a minimum of 2 inches (51 mm) above sole plates and below top plates.

P2801.5 Required pan. Where water heaters or hot water storage tanks are installed in locations where leakage of the tanks or connections will cause damage, the tank or water heater shall be installed in a galvanized steel pan having a ~~minimum~~ material thickness of not less than 0.236 inches (0.6010 mm) (No. 24 gage), or other pans approved for such use. Listed pans shall comply with CSA LC3.

Reason: These code changes are NOT lowering the minimum acceptable thickness requirements. These changes are editorial in nature to clarify how the code specifies sheet metal material thicknesses.

While some code sections specify a decimal thickness for sheet steel, other sections specify a gage number. Gage numbers are required because trade workers use gage numbers for ordering materials, materials are marked with gage numbers and inspectors verify that the required gage has been used. No one in the field uses decimal thickness numbers.

However, due to the variety of gage numbering standards and the need for hard thickness numbers by designers, a decimal equivalent thickness for the gage number is also required. The decimal equivalent thickness serves as a backup to the gage number to avoid any confusion as to what thickness is required.

The SMACNA (Sheet Metal and Air conditioning Contractors' National Association) HVAC Duct Construction Manual, Table A.2 provides a published basis for the gage-to-minimum thickness equivalency for galvanized sheet steel. The decimal thickness indicated in these code changes is the minimum acceptable actual thickness for the indicated gage number as indicated in the table. Again, these code changes are not lowering the minimum thickness but just correctly reflecting what has been a long accepted practice.

Example: Where a minimum dimension 0.062 inches was indicated in the code, 16 gage material was used to meet this requirement since 16 gage has a nominal thickness of 0.0635 inches. However, the tolerance for 16 gage material allows the actual thickness to range from 0.0.575 to 0.0695 inches. The decimal thicknesses indicated in these code changes are just reflecting the actual minimum thicknesses that we have unknowingly been approving for decades.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P9–07/08
Table 308.5; IRC Table P2605.1

Proponent: Lawrence Suggars, South Salt Lake City, UT, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise table footnote as follows:

TABLE 308.5
PIPING SUPPORT

b. Midstory guide required for sizes 2 inches and smaller except where piping is enclosed in a wall cavity.

(Portions of table and footnotes not shown remain unchanged)

PART II – IRC-P

Revise table footnote as follows:

TABLE P2605.1
PIPING SUPPORT

b. Midstory guide required for sizes 2 inches and smaller except where piping is enclosed in a wall cavity.

(Portions of table and footnotes not shown remain unchanged)

Reason: A current discussion in our office is the midstory guide as found in the footnote stated above. It is my opinion that this language (though vague) would not apply to 2 inch or smaller piping located in a 8, 10, or even 12 foot 2X wall space or cavity. This wall design is typical framed construction. This added language will more cleanly identify the real need for the midstory guide. Also note that both the top and bottom plate penetrations will act as a guide.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P10–07/08
310.4

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Revise as follows:

310.4 Water closet compartment. Each water closet utilized by the public or employees shall occupy a separate compartment with walls or partitions and a door enclosing the fixtures to ensure privacy.

Exceptions:

1. Water closet compartments shall not be required in a single-occupant toilet room with a lockable door.
2. Toilet rooms located in day care and child-care facilities and containing two or more water closets shall be permitted to have one water closet without an enclosing compartment.
3. This provision is not applicable to toilet areas located within Group I-3 housing areas.

Reason: Occupants of an I-3 facility must be watched closely to assure that they do not harm others or themselves. This clarification is needed to assure supervision and sightlines needed for security in detention and correctional facilities is allowed to be maintained.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P11–07/08
310.5

Proponent: James Lathrop, Koffel Associates, Inc., representing Bobrick Washroom Equipment, Inc.

Revise as follows:

310.5 Urinal partitions. Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy. The construction of such walls or partitions shall incorporate ~~waterproof,~~ smooth, hard, readily cleanable and nonabsorbent finish surfaces. The materials used in the finish systems shall not be adversely affected by moisture. The walls or partitions shall begin at a height not more than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal a minimum of 18 inches (457 mm) or to a point not less than 6 inches (152 mm) beyond the outermost front lip of the urinal measured from the finished back wall surface, whichever is greater.

Exceptions:

1. Urinal partitions shall not be required in a single occupant or unisex toilet room with a lockable door.
2. Toilet rooms located in day care and child care facilities and containing two or more urinals shall be permitted to have one urinal without partitions.

Reason: The intent of this change is to coordinate 310.5 of the IPC with 1210.2 of the IBC. The term deleted in this proposal is not in 1210.2 and the term and phrase added to 310.5 are in 1210.2 of the IBC. The IBC talks about a system that is not adversely affected by moisture where the IPC talks about "waterproof." Although "not adversely affected by moisture" is not an overly precise term, it is more realistic than "waterproof." Numerous common products on the market today could arguably not be considered "waterproof."

Following is 1210.2 of the IBC without the exceptions.

1210.2 Walls. Walls within 2 feet (610 mm) of urinals and water closets shall have a smooth, hard, nonabsorbent surface, to a height of 4 feet (1219 mm) above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by moisture.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P12–07/08
312.4

Proponent: Richard Grace, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors Association

Revise as follows:

312.4 Drainage and vent final test. The final test of the completed drainage and vent systems shall be visual and in sufficient detail to determine compliance with the provisions of this code ~~except that the plumbing shall be subjected to a smoke test where necessary for cause~~. Where ~~the~~ a smoke test is utilized, it shall be made by filling all traps with

water and then introducing into the entire system a pungent, thick smoke produced by one or more smoke machines. When the smoke appears at stack openings on the roof, the stack openings shall be closed and a pressure equivalent to a 1-inch water column (248.8 Pa) shall be held for a test period of not less than 15 minutes.

Reason: The text that is being stricken is superfluous. The code official already has the authority to require a smoke test or any other test necessary to test materials and installations through Section 105.3. The current language suggests that a smoke test is the only test available to the code official.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P13–07/08
IPC 312.9 (New), 417.5.2; IRC P2503.6 (New), P2709.2

Proponent: Pat Clark, Jefferson County, CO, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO)

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Add new text as follows:

312.9 Shower liner test. Where shower floors and receptors are made water tight by the application of materials required by Section 417.5.2, the completed liner installation shall be tested. The pipe from the shower drain shall be plugged water tight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches measured at the threshold. Where a threshold of at least 2 inches high does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches deep measured at the threshold. The water shall be retained for a test period of not less than 15 minutes and there shall not be evidence of leakage.

(Renumber subsequent section)

2. Revise as follows:

417.5.2 Shower lining. Floors under shower compartments, except where prefabricated receptors have been provided, shall be lined and made water tight utilizing material complying with Sections 417.5.2.1 through 417.5.2.4. Such liners shall turn up on all sides at least 2 inches (51 mm) above the finished threshold level. Liners shall be recessed and fastened to an approved backing so as not to occupy the space required for wall covering, and shall not be nailed or perforated at any point less than 1 inch (25 mm) above the finished threshold. Liners shall be pitched one-fourth unit vertical in 12 units horizontal (2-percent slope) and shall be sloped toward the fixture drains and be securely fastened to the waste outlet at the seepage entrance, making a water-tight joint between the liner and the outlet. The completed liner shall be tested in accordance with Section 312.9.

Exception: Floor surfaces under shower heads provided for rinsing laid directly on the ground are not required to comply with this section.

PART II – IRC-P

1. Add new text as follows:

P2503.6 Shower liner test. Where shower floors and receptors are made water tight by the application of materials required by Section P2709.2, the completed liner installation shall be tested. The pipe from the shower drain shall be plugged water tight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches measured at the threshold. Where a threshold of at least 2 inches high does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches deep measured at the threshold. The water shall be retained for a test period of not less than 15 minutes and there shall not be evidence of leakage.

2. Revise as follows:

P2709.2 Lining required. The adjoining walls and floor framing enclosing on-site built-up shower receptors shall be lined with sheet lead, copper or a plastic liner material that complies with ASTM D 4068 or ASTM D 4551. The lining material shall extend not less than 3 inches (76 mm) beyond or around the rough jambs and not less than 3 inches (76 mm) above finished thresholds. Hot mopping shall be permitted in accordance with Section P2709.2.3. The completed liner shall be tested in accordance with Section P2503.6.

Reason: The installation of shower linings involves making water tight joints:

- Between the lining and the shower drain.
- Between adjacent sections of lining material.
- At threshold corner areas.
- At the shower corners.

Unless the completed liner installation is water tested, there no way to assure that the shower floor or receptor "is made water tite" as is required by Section 417.5.2. Leaks from poorly constructed leaky liners go unnoticed for long periods of time resulting in significant structural damage and the development of mold in concealed locations. The repair process is costly as it typically involves the complete removal of finished surfaces of shower floor, mold remediation, structural repair, replacement of shower floor finish materials and in most cases, repair/refinishing of the water-damaged ceiling below. Since this problem typically shows up within the first 5 years of occupancy, the building owner is perplexed as to why he has incurred such a significant repair expense for a "new" building.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P14–07/08
402.5 (New), 402.5.1 (New), Chapter 13 (New)

Proponent: Julius Ballanco, PE, JB Engineering and Code Consulting, P.C., representing McGuire Manufacturing Co., Inc.

1. Add new text as follows:

402.5 Pipe and trap covers. Materials used for pipe coverings and trap coverings under accessible sinks or lavatories shall be classified “HB” when tested to ASTM D635. Such materials shall have a zero bacterial and fungus growth when tested to ASTM G21.

402.5.1. Covers for accessible fixtures. Pipe coverings and trap coverings for accessible plumbing fixtures shall be permanently installed. Such coverings shall not be readily removable.

2. Add standards to Chapter 13 as follows:

ASTM

D635-06	Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position
G21-96 (2002)	Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi

Reason: The code is currently silent on the material requirements for pipe coverings and trap covering used on accessible plumbing fixtures. The testing protocol used to evaluate the material are ASTM D635, G21, and G22. These standards are common in the industry for evaluating the material.

ASTM D635 is a linear burn test used to evaluate sheet plastic. Since the covering are made with sheet plastic, this is the proper standard for testing the linear burn rate. An “HB” rating indicates that the specimen has no visible flame after the ignition source is removed. It also indicates that the burn rate does not exceed 40 mm per minute under worst case condition.

ASTM G21 is a fungi test for polymeric materials. Since the covering are located in a toilet room and bathroom environment, it important for sanitation purposes that they do not support the growth of fungi or bacteria.

Section P402.5.1 will require the pipe coverings to be installed such that building occupants cannot remove the coverings, nor that the covering will fall off when someone comes in contact with the covering. The purpose of the covering is to protect the user of the fixture. Hence, the covering must be permanently attached such that they will always be present to protect the user.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standards proposed for inclusion in the code, ASTM D635 and G21, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P15–07/08
Table 403.1 (IBC [P] Table 2902.1)

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Revise table as follows:

TABLE 403.1 ((Table [P] 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

No.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS	LAVATORIES	BATHTUBS/ SHOWERS
5	Institutional	I-4	Adult day care and child care	1 per 15	1 per 15	1

(Portions of table and footnotes not shown remain unchanged)

Reason: At least one bathtub or shower should be provided to ensure sanitary conditions in this use group. Such facilities are commonly needed to bath clients that have soiled themselves.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P16–07/08
Table 403.1 (IBC [P] Table 2902.1)

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Revise table as follows:

TABLE 403.1 (IBC [P] Table 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSET (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/SHOWERS	DRINKING FOUNTAIN[e] (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
5	Institutional	I-3	Prisons[b]	1 per cell		1 per cell		1 per 15	1 per 100	1 service sink
			Reformatories, detention centers and correctional centers[b]	1 per 15		1 per 15		1 per 15	1 per 100	1 service sink
			Employees[b]	1 per 25		1 per 35		-----	1 per 100	-----
		I-4	Adult day care and child care	1 per 15		1 per 15		------	1 per 100	1 service sink

(Portions of table and footnotes not shown remain unchanged)

Reason: This change brings consistency with I-2 in Table 403.1 for employees in I-3 use group.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P17–07/08
Table 403.1 (IBC [P] Table 2902.1)

Proponent: Don Davies, Salt Lake City Corp., representing Utah Chapter ICC

Revise table by adding footnote e to every entry in the "Drinking Fountain" column:

TABLE 403.1 (Supp) (IBC TABLE [P] 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSET (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/SHOWERS	DRINKING FOUNTAIN[e] (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			

(Portions of table not shown remain unchanged)

a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by the *International Building Code*.
b. Toilet facilities for employees shall be separate from facilities for inmates or patients.
c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units shall be permitted where such room is provided with direct access from each patient room and with provisions for privacy.
d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
e. Drinking fountains are not required for occupant loads fewer than 50.

Reason: Now that two drinking fountains are required in I.B.C. Section 1109.5.1 for high and low spouts the requirement for drinking fountains becomes excessive for smaller spaces. There is currently no lower limit for the requirement for drinking fountains in the code. The requirement for two restrooms starts at 15 occupants and for retail sales starts at 50 occupants and yet there is no lower limit for drinking fountains. Typically smaller offices provide bottled water or an ice and water dispenser on the refrigerator. Because there is no lower limit we feel that this requirement is ignored or overlooked in smaller occupant load areas anyway and because of that they may be overlooked altogether even in larger spaces. By requiring a reasonable lower limit we feel that this requirement will be more often enforced overall.

Cost Impact: The code change proposal will not increase the cost of construction. This proposal actually reduces the cost of construction by eliminating the requirement for drinking fountains in smaller buildings and spaces.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P18–07/08
Table 403.1 (IBC [P] Table 2902.1)

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Revise as follows:

TABLE 403.1 (IBC [P] Table 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES	
				MALE	FEMALE	MALE	FEMALE
1	Assembly (see Sections 403.2, 403.4 and 403.4.1)	A-1[d]	Theaters and other buildings for the performing arts and motion pictures	1 per 125	1 per 65	1 per 200	
		A-2[d]	Nightclubs, bars, taverns, dance halls and buildings for similar purposes	1 per 40	1 per 40	1 per 75	
			Restaurants, banquet halls and food courts	1 per ~~75~~ 25 for the first 25 and 1 per 75 for the remainder exceeding 25	1 per ~~75~~ 25 for the first 25 and 1 per 75 for the remainder exceeding 25	1 per ~~200~~ 40 for the first 40 and 1 per 200 for the remainder exceeding 40	

(Portions of table and footnotes not shown remain unchanged)

Reason: The purpose of the change is to substitute revised material for current provisions of the code. The American Restroom Association (ARA) is often questioned by the public and by reporters doing stories about the problems people face finding proper toilet facilities when away from home. One of the problems relates to having to wait too long for a restaurant toilet to free. To the degree that respondent recall details and also based on informal observation by ARA advocates, when more then 50 people are in a restaurant one will begin to see occasional toilet queuing when only 1 single occupant per sex toilet is available. Above 100, multiple person lines will appear. This problem is addressed in the UPC [2], which requires between 2 & 3 WC per sex between 15 - 150. The IPC [1] requires only 1 WC per sex for A-2 restaurant occupancies between 16-150. This problem is particularly onerous in venues where people handle food. While those with an urgent need to void bowel or bladder will queue, those needing to wash their hands before eating may defer.

The low IPC A-2 minimum is made worse by the typical no-stall implementation of a single WC toilet. Unlike multi-stalled toilets, single WC toilets are typically user locked and the WC is not available to the next patron until the toilet door is unlocked. While studies such as the APSE Cohen reports [3,4] have shown that the average user typically needs less then 2 minutes to use a WC, there appears to be no studies of the impact of single WC, user lockable toilets. Information is available, however, via the logs generated by automated public toilets (APT). Every American municipality, that has installed single occupant APT's has found that for legitimate reasons (wheel chair, express breast milk, change ostomy bag, absorbent pads or a child's diaper) user occasionally have a legitimate need to be in the toilet for at least 15 minutes and one city now allows more then 20 minutes before a misuse alarm sounds. This same 'occasional long use' problem occurs in buildings with user lockable toilets and the problem is exacerbated because these lockable toilets also facilitate activities not related to sanitation.

(The following tables are unofficial interpretations and are not intended for inclusion in the code.

Table 403.1 (A-2) Restaurants, Banquet Halls & Food Courts
(Current Requirements)
Occupant Load - (50% Male / 50% Female)

Total Occupants	Water Closets Per Sex @ 1 per 75	Total Occupants	Lavatories Per Sex @ 1 per 200
50[a] - 150	1	50[a] - 400	1
151 – 300	2	401 - 800	2
301 – 450	3	801 – 1,200	3
451 – 600	4	-	-
601 – 750	5	-	-
751 – 900	6	-	-
901 – 1,050	7	-	-

[a] Assembly less than 50 classified as Business (See IBC Section 303.1)

Table 403.1 (A-2) Restaurants, Banquet Halls & Food Courts **(Proposed Change)** Occupant Load - (50% Male / 50 % Female)			
Total Occupants	**Water Closets Per Sex** @ 1 per 25 for the first 25 and 1 per 75 for the remainder exceeding 25	**Total Occupants**	**Lavatories Per Sex** @ 1 per 40 for the first 40 and 1 per 200 for the remainder exceeding 40
50[a]	1	50[a] - 240	1
51 – 200	2	241 - 640	2
201 – 350	3	641 – 1,040	3
351 – 500	4	-	-
501 – 650	5	-	-
651 – 800	6	-	-
801 – 950	7	-	-
951 – 1,100	8	-	-

Bibliography:
2006 International Plumbing Code Table 403.1 for Occupancy A-2
2006 Uniform Plumbing Code Table 4.1
ASPE report 95-01 Cohen 'Queuing theory approach to plumbing design research'
ASPE report 92-02 Cohen 'Plumbing fixture requirements for office buildings research report'

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P19–07/08
403.4.1 (New)

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Add new text as follows:

403.4.1 Door locking. Doors in the path of travel to required public and employee toilet facilities shall not be lockable. Entrance doors to required public and employee toilet facilities shall not be lockable from the ingress side. Where a toilet room contains more than one water closet or contains a urinal substituted for a required water closet, the door for such room shall not be lockable from either side.

Exception: Doors required by or permitted by the *International Building Code* to be lockable from the ingress side.

Reason: The change is submitted as clarification of the code. In modern society access to public restroom facilities is a basic human need. Many requirements of the International Plumbing Code are driven by this human necessity. Access to required public and employee toilet facilities should not be restricted in any way. It's becoming common practice to secure public restroom doors on the outside, thus limiting access to only those individuals deemed eligible to use them. This practice is clearly in conflict with the intent of the code. IPC Section 403.2 specifically states that "Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization."

It's not enough to simply provide the minimum number of required toilet facilities in a building. Unrestricted access to the facilities must also be provided. The practice of externally locking restroom doors has resulted in a steadily increasing number of public toilet facilities becoming unavailable to the public for which they were designed. Keys, keycards and key codes are common tools used to restrict public access to restrooms. Keys, are typically maintained by employees and are kept in out of sight locations. Cards are issued to employees but the public is not provided with a card when they enter the building. In the case of key codes, any person not knowing the code will not be able to access the facilities. Another relevant issue is accessibility. Any restroom door hardware that requires "tight grasping, pinching, or twisting of the wrist" for its operation is clearly prohibited by 2003 ICC/ANSI A117.1 Section 304.

From the employee and property owner's perspective, an externally locked restroom door has the advantage of restricting access to individuals considered a security risk. Less usage also results in less maintenance cost. If building owners wish to provide security in their buildings, the entrance to the restroom door is not the appropriate place to do it. Once an individual is granted access to the building they must also be provided with unrestricted access to the required public toilet facilities. Maintenance of public restroom facilities is a condition of the buildings certificate of occupancy.

The change will not increase the cost of construction. Installation costs, associated with operable parts on restroom doors, are typically less when the operable part does not incorporate an external lock, key card device, key code device, etc in its design. The change is submitted to clarify that access to required public and employee toilet facilities must not be restricted. The problem is widespread throughout the country and a public outcry for unrestricted access to adequate, sanitary restroom facilities is growing.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P20–07/08
403.4.1 (New)

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Add new text as follows:

403.4.1 Door locking. Entrance doors to required public and employee toilet facilities shall not be lockable from the ingress side.Where a toilet room contains more than one water closet or contains a urinal substituted for a required water closet, the door for such room shall not be lockable from either side.

Reason: The change is submitted as clarification of the code. In modern society access to public restroom facilities is a basic human need. Many requirements of the International Plumbing Code are driven by this human necessity. Access to required public and employee toilet facilities should not be restricted in any way. It's becoming common practice to secure public restroom doors on the outside, thus limiting access to only those individuals deemed eligible to use them. This practice is clearly in conflict with the intent of the code. IPC Section 403.2 specifically states that "Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization."

It's not enough to simply provide the minimum number of required toilet facilities in a building. Unrestricted access to the facilities must also be provided. The practice of externally locking restroom doors has resulted in a steadily increasing number of public toilet facilities becoming unavailable to the public for which they were designed. Keys, keycards and key codes are common tools used to restrict public access to restrooms. Keys, are typically maintained by employees and are kept in out of sight locations. Cards are issued to employees but the public is not provided with a card when they enter the building. In the case of key codes, any person not knowing the code will not be able to access the facilities. Another relevant issue is accessibility. Any restroom door hardware that requires "tight grasping, pinching, or twisting of the wrist" for its operation is clearly prohibited by 2003 ICC/ANSI A117.1 Section 304.

From the employee and property owner's perspective, an externally locked restroom door has the advantage of restricting access to individuals considered a security risk. Less usage also results in less maintenance cost. If building owners wish to provide security in their buildings, the entrance to the restroom door is not the appropriate place to do it. Once an individual is granted access to the building they must also be provided with unrestricted access to the required public toilet facilities. Maintenance of public restroom facilities is a condition of the buildings certificate of occupancy.

The change will not increase the cost of construction. Installation costs, associated with operable parts on restroom doors, are typically less when the operable part does not incorporate an external lock, key card device, key code device, etc in its design. The change is submitted to clarify that access to required public and employee toilet facilities must not be restricted. The problem is widespread throughout the country and a public outcry for unrestricted access to adequate, sanitary restroom facilities is growing.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P21–07/08
Table 403.1 (IBC [P] Table 2902.1)

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Revise as follows:

TABLE 403.1 (IBC [P] Table 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES	
				MALE	FEMALE	MALE	FEMALE
6	Mercantile (see Sections 403.2, 403.4, 403.4.1 and 403.4.2)	M	Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per ~~500~~ 125 for the first 250 and 1 per 500 for the remainder exceeding 250		1 per ~~750~~ 200 for the first 400 and 1 per 750 for the remainder exceeding 400	

(Portions of table and footnotes not shown remain unchanged)

Reason: The purpose of the change is to substitute revised material for current provisions of the code. The IPC requires 1 WC per sex for mercantile occupancies between 51-1000. The UPC [(1)] requires between 2 to 6 WC per sex between 51 - 800. Based on an ARA/Wall Street Journal investigation [(2)], this low IPC minimum has not caused problems because a majority of the public is not aware that they are allowed to use sanitation facilities in small to midsize mercantile establishments. Media awareness campaigns like the Wall Street Journal story and Section 403.5.1 Directional Signs (P34-06/07) will change the public's awareness.

Unlike multi-stalled toilets, single WC toilets are typically user locked and the WC is not available to the next patron until the toilet door is unlocked. While studies such as the Cohen report [4,5] have shown that the average user typically needs less then 2 minutes to use a WC, there appears to be no studies of the impact of single WC, user lockable toilets. Information is available, however, via the experience of those American cities that have installed automated public toilets (APT). Every municipality has found that for legitimate reasons (wheel chair, express breast milk, change ostomy bag, absorbent pads or a child's diaper) user occasionally have a legitimate need to be in the toilet for at least 15 minutes and at least one city's now allows more then 20 minutes before an alarm sounds. This same 'occasional long use' problem occurs in buildings with user lockable toilets and the problem is exacerbated because these user lockable toilets also accommodate activities not related to sanitation. A retail store with 1000 people will sometimes include more then 15 employees. OHSA requires 2 WC for 16 on site employees [3]. It is likely that those 16 employees competing with 984 other occupants does not satisfy the intent of the OSHA requirement.

(The following tables are unofficial interpretations and are not intended for inclusion in the code)

Mercantile (current requirements)			
Water Closets @ 1 per 500		**Lavatories @ 1 per 750**	
Occupants	**Minimum Per Sex**	**Occupants**	**Minimum Per Sex**
1 - 50	[a]	1 - 50	[a]
51 – 1,000	1	51 – 1,500	1
1,001 – 2,000	2	1,501 – 3,000	2
2,001 – 3,000	3	3,001 – 4,500	3
3,001 – 4,000	4	4,501 – 6,000	4
4,001 – 5,000	5	6,001 – 7,500	5
5,001 – 6,000	6	7,501 – 9,000	6
6,001 – 7,000	7	9,001 – 10,500	7
7,001 – 8,000	8	-	-
8,001 – 9,000	9	-	-
9,001 – 10,000	10	-	-

Mercantile (proposed change)			
Water Closets @ 1 per 125/250 Then 1 per 500		**Lavatories @ 1 per 200/400 Then 1 per 750**	
Occupants	**Minimum Per Sex**	**Occupants**	**Minimum Per Sex**
1 - 50	[a]	1 - 50	[a]
51 - 250	1	51 - 400	1
251 – 1,250	2	401 – 1,900	2
1,251 – 2,250	3	1,901 – 3,400	3
2,251 – 3,250	4	3,401 – 4,900	4
3,251 – 4,250	5	4,901 – 6,400	5
4,251 – 5,250	6	6,401 – 7,900	6
5,251 – 6,250	7	7,901 – 9,400	7
6,251 – 7,250	8	9,401 – 10,900	8
7,251 – 8,250	9	-	-
8,251 – 9,250	10	-	-
9,251 – 10,250	11	-	-

Family Dollar 7,500 sq ft 250 Occupants	Family Dollar 9,500 sq ft 317 Occupants	Rite Aid, CVS, Walgreens 11,000 – 15,000 sq ft 367 - 500 Occupants	Big K-Mart , small Wal-Mart 80,000 – 110,000 sq ft 2,667 - 3,667 Occupants	Wal-Mart Super Center 200,000 sq ft 6,667 Occupants

[a] Separate facilities not required for M of 50 or less (IPC Section 403.2)

Bibliography:

2006 Uniform Plumbing Code Table 4.1 'Retail or Wholesale Stores
Wall Street Journal 'Bathroom Backlash Arrives on Main Street ' July 26, 2005
29CFR1910.141(c)(1)(i) Table J-1
ASPE report 95-01 Cohen 'Queuing theory approach to plumbing design research'
ASPE report 92-02 Cohen 'Plumbing fixture requirements for office buildings research report'

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P22–07/08
403.1.1

Proponent: Paul Rimel, City of Staunton, representing Virginia Plumbing & Mechanical Inspectors Association

Revise as follows:

403.1.1 (Supp) Family or assisted-use toilet and bath fixtures. ~~Fixtures~~ Water closets, lavatories, showers and bathtubs located within family or assisted-use toilet and bathing rooms required by Section 1109.2.1 of the *International Building Code* are permitted to be included in the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies.

Reason: The change is submitted as a recommended solution to an oversight in the current code text. Urinals located in family or assisted-use (Family/A-U) toilet rooms should not be counted toward the minimum number of required plumbing fixtures. IBC Section 1109.2.1.7 requires doors to Family/A-U toilet rooms to be securable from within the room and the exception to IBC Section 1109.2.1.2 permits installation of an optional urinal. Due to the internally locked door, a single restroom occupant causes both the water closet & urinal to become simultaneously unavailable to other building occupants. Therefore only the required water closet and lavatory should be permitted to count toward the minimum number of required fixtures. The change will not increase the cost of construction because a urinal is not required in a F/A-U toilet room. Therefore urinals in F/A-U toilet rooms which are currently permitted to be counted toward the minimum number of required fixtures may be installed in multi-occupant restrooms which makes the fixtures independently available for use. The change correlates with the proposed changes to IPC 419.2 and IBC 1109.2.1.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: See related proposal E167-07/08.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P23–07/08
403.1.1

Proponent: Paul Rimel, City of Staunton, representing Virginia Plumbing & Mechanical Inspectors Association

Revise as follows:

403.1.1 (Supp) Family or assisted-use toilet and bath fixtures. ~~Fixtures~~ Water closets, lavatories, showers and bathtubs located within family or assisted-use toilet and bathing rooms ~~required by Section 1109.2.1 of the *International Building Code*~~ are permitted to be included in the number of required fixtures for either the male or female occupants ~~in assembly and mercantile occupancies~~.

Reason: The change is submitted as a recommended solution to several oversights in the current code text. Urinals located in family or assisted-use (Family/A-U) toilet rooms should not be counted toward the minimum number of required plumbing fixtures. IBC Section 1109.2.1.7 requires doors to Family/A-U toilet rooms to be securable from within the room and the exception to IBC Section 1109.2.1.2 permits installation of an optional urinal. Due to the internally locked door, a single restroom occupant causes both the water closet & urinal to become simultaneously unavailable to other building occupants. Therefore only the required water closet and lavatory should be permitted to count toward the minimum number of required fixtures. The change will not increase the cost of construction because a urinal is not required in a F/A-U toilet or room. Therefore urinals in F/A-U toilet rooms which are currently permitted to be counted toward the minimum number of required fixtures may be installed in multi-occupant restrooms which makes the fixtures independently available for use.

Removal of the reference to IBC Section 1109.2.1.7 permits water closets, lavatories, showers and bathtubs located in non-required Family/A-U toilet and bathing rooms to count toward the minimum fixtures. It does not however have any impact on, or make any change to the referenced IBC code section itself. The current language in IPC 403.1.1 states that only fixtures in required Family/A-U toilet and bathing rooms may be counted toward the minimums.

Removal of the phrase “in assembly and mercantile occupancies” permits water closets, lavatories, showers and bathtubs in all Family/A-U toilet and bathing rooms to be credited toward the minimums. The current text only gives credit when Family/A-U fixtures are located in assembly or mercantile occupancies. Removing the reference to specific use groups will likely increase the number of Family/A-U toilet rooms provided in all occupancies. As long as all required plumbing fixtures are provided, there’s nothing wrong with providing one or more non-required Family/A-U toilet rooms. This will encourage installation of non-required Family/A-U toilet rooms because credit for all Family/A-U toilet and bathing room water closets, lavatories, showers and bathtubs will be provided for in the code.

The change correlates with the proposed changes to IPC 419.2 and IBC 1109.2.1.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: See related proposal E167-07/08.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P24–07/08
403.2

Proponent: Raymond Klumb, Raymond Klumb, AIA Architect, representing The Malvern School (Children's Day Care Centers)

Revise as follows:

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

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or less.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 50 or less.
4. Separate facilities shall not be required in I-4 occupancies for toilet rooms used only by children ages 5 and under.

Reason: The purpose of this provision is to acknowledge that I-4 Child Care has different requirements than other occupancies. State statutes of New Jersey and Pennsylvania governing pre-school child care do not require separate toilet facilities for each sex. Visibility and supervision of the children at all times is critical to the operation of the facility. Since many children are still in the process of toilet training, they require assistance by a staff member. Typically, there are multiple toilets within a room and doors to the room are half-doors. Toilet partitions are partial height screens that separate the children from each other but still allow constant supervision of the children by the staff.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P25–07/08
403.4

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

Revise as follows:

403.4 Required public toilet facilities. Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization. The accessible route to public facilities shall not pass through kitchens, storage rooms, closets or similar spaces. Access to the required facilities shall be from within the building. Employees shall be provided with toilet facilities in all occupancies. Employee toilet facilities shall be either separate or combined employee and public toilet facilities.

Reason: This proposed change provides useful guidance that the current code does not contain. The situation where the required plumbing facilities are located outside of the actual building itself is not an uncommon practice. However current code fails to state whether this type of configuration is permitted or prohibited. During the final action hearings in Rochester it was stated that the code was already "clear on this subject and everyone knows that the bathrooms are required inside of the structures." There are several examples where bathrooms are located outside of the structures, gas stations, bleachers, malls, etc... Why not have the code say this type of installation is required instead of leaving it up to local interpretation?

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P26–07/08
403.4, 403.4.1(New)

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

1. Revise as follows:

403.4 Required public toilet facilities. Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization. ~~The accessible route to public facilities shall not pass through kitchens, storage rooms, closets or similar spaces.~~ The number of plumbing fixtures located within the required toilet facilities shall be provided in accordance with Section 403 for all users. Employees shall be provided with toilet facilities in all occupancies. Employee toilet facilities shall be either separate or combined employee and public toilet facilities.

2. Add new text as follows:

403.4.1 Access. The route to the public toilet facilities required by Section 403.4 shall not pass through kitchens, storage rooms and closets and shall not cross a property line other than onto a public way. Access to the required facilities shall be from within the building or from the exterior of the building. All routes shall comply with the accessibility requirements of the *International Building Code*. The public shall have access to the required toilet facilities at all times that the building is occupied.

Reason: This proposed change provides useful guidance that the current code does not contain. The situation where the required plumbing facilities are located outside of the actual building itself is not an uncommon practice. However current code fails to state whether this type of configuration is permitted or prohibited. There are 3 basic areas of concern that this proposal attempts to resolve. 1) Yes, facilities do not have to be within the structure itself, as long as they are within the current requirements for maximum distance. 2) The required facilities shall always be open and available to all the intended users at all times of occupancy. 3) The current minimum fixture requirements and calculations are applicable and accountable for all intended users of the facilities.

During the final action hearings in Rochester it was stated that the code was already "clear on this subject and everyone knows the bathrooms are required inside of the structures." This statement begs the questions:

1. What about gas stations? A typical gas station design requires that you walk outside of the structure and around the side to gain access to the bathrooms.
2. What about a typical outlet mall situation? It is not uncommon for a "strip" type outlet mall (a design that requires you travel outdoors to get from one store to the next) to provide bathrooms in one central location for several stores. Sometimes these facilities may be located out in a parking lot as long as the permitted travel distances are not exceeded.
3. Lastly what about Use Group A 5, bleachers? How do you install bathroom fixtures in a structure where no indoor area exists?

These 3 examples are common everyday designs that occur routinely across the US. So why not have the code say that this type of installation is acceptable instead of leaving it up to local interpretation?

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P27–07/08
405.3 (New); IRC P2705.2 (New)

Proponent: Brien L. Bellous, City of Columbus. Ohio

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Add new text as follows:

405.5 Fixture mounting. Fixtures shall be fastened to the building structure in accordance with the fixture manufacturer's installation instructions. Where the manufacturer's installation instructions do not prescribe fastening methods, approved methods shall be utilized.

(Renumber subsequent sections)

PART II – IRC-P

Add new text as follows:

P2705.2 Fixture mounting. Fixtures shall be fastened to the building structure in accordance with the fixture manufacturer's installation instructions. Where the manufacturer's installation instructions do not prescribe fastening methods, approved methods shall be utilized.

(Renumber subsequent sections)

Reason: Current IPC text does not speak to how fixtures are anchored to the structure; save wall hung fixtures with carriers and closet flanges. Other fixtures, such as lavatories, sinks, tub/shower enclosures and laundry trays need to be attached to the structure in an approved manner and with accepted methods. It is not too uncommon to see items such as dry wall screws with washers or improperly sized toggle bolts holding sinks and lavatories to walls. Other scenarios being seen are roofing nails anchoring tubs to framing or a tube talon to hold a shower head wing ell in place. Some of our jurisdictions are being challenged when requiring proper anchoring or attachment or fixtures, since the code is silent on the issue. This code text addition will give clear guidance that all fixtures need to be attached and anchored to walls and floors with manufacturer recommended hardware or other accepted engineering practice.
Some in the industry believe that it is appropriate to use IPC 303.2 – Installation of materials for this issue. Where this seems like a reasonable thing, materials are defined differently than fixtures. This change makes sense in the chapter dealing with fixtures and requirements related to them.

Cost Impact: The code change proposal will not increase the cost of construction because (in most cases) mounting hardware comes with the plumbing fixture and needs to be attached in some fashion.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P28–07/08
410.1, Chapter 13

Proponent: James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association/ Virginia Building and Code Officials Association (VPMIA/ VBCOA)

1. Revise as follows:

410.1 Approval. Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M ~~and water coolers shall conform to ARI 1010~~. Drinking fountains ~~and water coolers~~ shall conform to NSF 61, Section 9. Where water is served in restaurants, drinking fountains shall not be required. In other occupancies, where drinking fountains are required, ~~water coolers or~~ bottled water dispensers shall be permitted to be substituted for not more than 50 percent of the required drinking fountains.

2. Delete standard from Chapter 13 as follows:

ARI

~~1010–02 Self-contained, Mechanically Refrigerated Drinking water Coolers~~

Reason: The plumbing code never intended to require drinking fountains with cooling devices or bottled water dispensers with coolers. The term "water cooler" has created some confusion among code officials. The term "water cooler" is not defined in the code. Eliminating it will not have any impact on water coolers.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P29–07/08
410.1, 410.2; IBC [P] 2903.1 (New), [P] 2903.2 (New), Chapter 35 (New)

Proponent: Mike Baker, City of Prescott, representing the Arizona Building Officials

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

SECTION 410
DRINKING FOUNTAINS

410.1 Approval. Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9. Where water is served in restaurants, drinking fountains shall not be required. In other occupancies, where drinking fountains are required, water coolers or bottled water dispensers shall be permitted to be substituted ~~for not more than 50 percent of the required drinking fountains~~.

410.2 Prohibited location. Drinking fountains, water coolers and bottled water dispensers shall not be installed in public restrooms.

PART II – IBC GENERAL

1. Add new section as follows:

SECTION [P] 2903
DRINKING FOUNTAINS

[P] 2903.1 Approval. Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9. Where water is served in restaurants, drinking fountains shall not be required. In other occupancies, where drinking fountains are required, water coolers or bottled water dispensers shall be permitted to be substituted for not more than 50 percent of the required drinking fountains.

[P] 2903.2 Prohibited location. Drinking fountains shall not be installed in public restrooms.

2. Add standards to Chapter 35 as follows:

Air-Conditioning & Refrigeration Institute (ARI)

1010—02	Self-contained, Mechanically Refrigerated Drinking-water Coolers

ASME

A112.19.1M—1994 (R1999)	Enameled Cast Iron Plumbing Fixtures with 1998 and 2000 supplements
A112.19.2M—2003	Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals
A112.19.9M—1991(R2002)	Non-Vitreous Ceramic Plumbing Fixtures with 2002 Supplement

Reason: The current code language provides for only one method of supplying drinking water for the public. As written one drinking fountain is required in any occupancy. The reality of the code is that two drinking fountains are always required to meet the requirements of IBC Chapter 11, section 1109.5.1 Minimum Number, which specifically states “no fewer than two drinking fountains shall be installed”. Many people have argued that bottled water coolers do not meet current ADA height requirements. This is not true as we install hundreds of soda fountains across this country. The soda fountains meet the forward and side reach requirements as established by current ADA requirements. In addition current ADA language permits the substitution of bottled water dispensers. Section 4.15.1 of the Americans with Disabilities Act Accessibility Guidelines states “Minimum Number. Drinking fountains or water coolers required to be accessible by 4.1 shall comply with 4.15.” The ADAAG’s intent is not to limit the use of water coolers. Water coolers and bottled water dispensers are viable listed alternatives to drinking fountains. These units provide equivalent accessibility and provide a less expensive alternative to standard accessible compliant drinking fountains. Accessibility standards and narrative explanations published by the Access Board, (www.access-board.gov/adaag/about/4.15-4.24.htm#Drinking%20Fountains%20and%20Water%20Coolers%20[4.15], recognize that the use of alternate dispensers is common place, permissible and compliant.

Sanitation and contamination have been addressed for years in the legacy codes as well as in the I-code family. However we seem to look the other way when drinking fountains are discussed. Once the fixture is installed we assume someone will clean, maintain and service the fountain when needed. Sanitation of these fountains may be performed once per day by the nightly cleaning crew. Maintenance or cleaning of the fountains is generally complaint driven from persons wanting to use the fountain. Again we assume that most drinking fountains are not sanitary and are not polluted from contaminated water.

Contamination is not limited to cross connections. In medical and dental offices the doctors could mitigate the chances of bio-hazard contaminations through the use of disposable cups. People having dental surgery or persons with mouth injuries would not be able to gargle with the water from the drinking fountain and then spit it back into the fountain. This type of bio-hazard is not limited to the medical field as many times the public is greeted by someone's mucus or chewing tobacco that was spat into the drinking fountain. In many businesses the drinking fountains are not routinely cleaned during the day. This allows for items such as cigarette butts, gum and trash to lie in the drinking fountain for hours at a time. Drinking fountains are not sanitary if they are not maintained and routinely cleaned.

Arguments such as the cooler will be removed after the final inspection or the occupant will discontinue service at some future date presents no reasonable justification for eliminating the use of these fixtures to achieve minimum code compliance. We can not read into the future what might happen. We do not assume that once a building is approved all the exit signs will be removed and all of the emergency egress doors will be chained shut. We move forward with the understanding that the building user will maintain the building as it was turned over to them under the Certificate of Occupancy. All too often permanently installed drinking fountains fall into disrepair, are expensive to maintain and the occupant disconnects the unit. This can happen to a water dispensing device, however, if a water cooler or bottled water dispenser malfunctions, it is often repaired or replaced as part of a service contract at little or no cost to the occupant.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: the maintenance of the technical content of the text to be placed into the IBC by this proposal rests with the IPC Code Development Committee. The need for suitability and duplication of the language within the IBC is a matter to be determined by the IBC General Code Development Committee. If both portions of this change are approved, the IBC text will be automatically revised to be consistent with the IPC.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IBC GENERAL

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P30–07/08
413.3

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing In-Sink-Erator

Revise as follows:

413.3 Commercial food waste grinder waste outlets. Commercial food waste grinders shall be connected to a drain ~~a minimum of 2 inches (51 mm)~~ not less than 1-1/2 inches (38 mm) in diameter. Commercial food waste grinders shall be connected and trapped separately from any other fixtures or sink compartments.

Reason: This section will recognize that many smaller units are now used in the commercial marketplace and this change will bring the code up to date with industry standards.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P31–07/08
419.1.1 (New)

Proponent: Earnest Preacely, Energy Services & Technology

Add new text as follows:

419.1.1 Nonwater urinals. Where non water urinals are installed, they shall be listed and comply with all of the requirements of ANSI Z124.9 for plastic urinals and ASME A112.19.19 for vitreous china urinals. Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance

with the manufacturer's instructions after installation. Where nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit.

Reason: As a general contractor I feel it would be beneficial for the model plumbing codes to be consistent and the above code change submittal is identical to one that is proposed to be included in the 2009 *Uniform Plumbing Code* (UPC) so that when work is performed in different jurisdictions the requirements are similar. The proposed conditions will help protect the public health and safety whenever nonwater urinals are installed.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P32–07/08

424.1, 424.3, 607.4, 608.15, Chapter 13; IRC Table P2701.1, P2722.1, Chapter 43

Proponent: Shawn Martin, Plumbing Manufacturer's Institute

THESE PROPOSALS ARE ON THE AGENDAS OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Revise as follows:

424.1 Approval. Faucets and fixture fittings shall conform to ASME A112.18.1/ ~~or~~ CSA ~~B125~~ B125.1. Faucets and fixture fittings that supply drinking water for human ingestion shall conform to the requirements of NSF 61, Section 9. Flexible water connectors exposed to continuous pressure shall conform to the requirements of Section 605.6.

424.3 Individual shower valves. Individual shower and tub-shower combination valves shall be balanced-pressure, thermostatic or combination balanced-pressure/thermostatic valves that conform to the requirements of ASSE 1016 or ASME A112.18.1/CSA ~~B125~~ B125.1and shall be installed at the point of use. Shower and tub-shower combination valves required by this section shall be equipped with a means to limit the maximum setting of the valve to 120°F (49°C), which shall be field adjusted in accordance with the manufacturer's instructions. In-line thermostatic valves shall not be utilized for compliance with this section.

607.4 Flow of hot water to fixtures. Fixture fittings, faucets and diverters shall be installed and adjusted so that the flow of hot water from the fittings corresponds to the left-hand side of the fixture fitting.

> **Exception:** Shower and tub/shower mixing valves conforming to ASSE 1016 or ASME A112.18.1/CSA ~~B125~~ B125.1, where the flow of hot water corresponds to the markings on the device.

608.15 Protection of potable water outlets. All potable water openings and outlets shall be protected against backflow in accordance with Section 608.15.1, 608.15.2, 608.15.3, 608.15.4, 608.15.4.1, ~~or~~ 608.15.4.2 or as prescribed in ASME A112.18.1/CSA B125.1 for the applicable supply fitting.

2. Add standard to Chapter 13 as follows:

ASME

A112.18.1-2005/CSA B125.1-2005 Plumbing Supply Fittings

3. Delete standard from Chapter 13 as follows:

ASME

~~A112.18.1—2003 Plumbing Fixture Fittings~~

PART II – IRC-P

1. Revise as follows:

TABLE P2701.1
PLUMBING FIXTURES, FAUCETS AND FIXTURE FITTINGS

MATERIAL	STANDARD
Plumbing fixture fittings	ASME A112.18.1~~M,~~/CSA ~~B125~~ B125.1

(Portions of table not shown remain unchanged)

P2722.1 General. Fixture supply valves and faucets shall comply with ASME A112.18.1/ ~~or~~ CSA ~~B125~~ B125.1 as listed in Table P2701.1. Faucets and fixture fittings that supply drinking water for human ingestion shall conform to the requirements of NSF 61, Section 9. Flexible water connectors shall conform to the requirements of Section P2904.7.

2. Add standard to Chapter 43 as follows:

ASME
A112.18.1-2005/CSA B125.1-2005 Plumbing Supply Fittings

3. Delete standard from Chapter 43 as follows:

CSA
~~B 125.1—05 Plumbing Supply Fittings~~

Reason: The ASME A112.18.1 standard and the CSA B125 standard have been harmonized into ASME A112.18.1-2005/CSA B125.1-05 Plumbing Supply Fittings. Faucets, fixture fittings, individual shower and tub-shower combination valves (balanced-pressure, thermostatic, or combination balanced-pressure/thermostatic types) are covered by the scope of the new standard which includes plumbing supply fittings previously covered by the scopes of the ASME A112.18.1 standard and the CSA B125 standard.

Section 608.2 of the current code recognizes that plumbing fixture fittings shall have backflow protection in accordance with ASME A112.18.1. The requirements for backflow protection within the new harmonized standard remain the same as was in the ASME A112.18.1 standard. Presently Section 608.15 of the code does not indicate that the protection offered by Section 608.2 is an acceptable means to protect a potable water outlet. The devices allowed in the ASME A112.18.1/CSA B125.1 standard include air gaps, deck mounted vacuum breakers and hose connected vacuum breakers, etc., but it also recognizes integral devices not listed in Section 608.15. These devices are acceptable in Section 608.2 and are included in the proposal as added information for the user of the code.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, A112.18.1-2005/CSA B125.1-2005, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P33–07/08
424.1.2, Chapter 13; IRC Table P2701.1, P2702.2, Chapter 43

Proponent: Shawn Martin, Plumbing Manufacturer's Institute

THESE PROPOSALS ARE ON THE AGENDAS OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Revise as follows:

424.1.2 Waste fittings. Waste fittings shall conform to ASMEA112.18.2/CSA B125.2, ASTMF 409~~, CSA B125~~ or to one of the standards listed in Tables 702.1 and 702.4 for above-ground drainage and vent pipe and fittings.

2. Add standard to Chapter 13 as follows:

ASME
ASME A112.18.2-2005/CSA B125.2-2005 Plumbing Waste Fittings

3. Delete standard from Chapter 13 as follows:

ASME
~~A112.18.2—2002 Plumbing Fixture Waste Fittings~~

PART II – IRC-P

1. Revise as follows:

TABLE P2701.1
PLUMBING FIXTURES, FAUCETS AND FIXTURE FITTINGS

MATERIAL	STANDARD
Plumbing fixture waste fittings	ASME A112.18.2/CSA B125.2, ASTM F409~~, CSA B125~~

(Portions of table not shown remain unchanged)

P2702.2Waste fittings. Waste fittings shall conform to ASME A112.18.2~~,~~/CSA B125.2, ASTM F 409~~, CSA B125~~ or to one of the standards listed in Table P3002.1(1) for above-ground drainage and vent pipe and fittings

2. Add standard to Chapter 43 as follows:

ASME
ASME A112.18.2-2005/CSA B125.2-2005 Plumbing Waste Fittings

3. Delete standard from Chapter 13 as follows:

ASME
~~A112.18.2—2002 Plumbing Fixture Waste Fittings~~

Reason: The ASME A1121.8.2 and CSA B125 standards have been harmonized into the now ASME A112.18.2/CSA B125.2 standard.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, ASME A112.18.2-2005/CSA B125.2-2005 , for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P34–07/08

416.5, 424.5, 425.3.1, Table 608.1, Chapter 13 (New); IRC Table P2701.1, Table P2902.3, P2902.4.1, Chapter 43 (New)

Proponent: Shawn Martin, Plumbing Manufacturer's Institute

THESE PROPOSALS ARE ON THE AGENDAS OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Revise as follows:

416.5 Tempered water for public hand-washing facilities. Tempered water shall be delivered from public hand-washing facilities through an approved water temperature limiting device that conforms to ASSE 1070 or CSA B125.3.

424.5 Bathtub and whirlpool bathtub valves. The hot water supplied to bathtubs and whirlpool bathtubs shall be limited to a maximum temperature of 120°F (49°C) by a water temperature limiting device that conforms to ASSE 1070 or CSA B125.3, except where such protection is otherwise provided by a combination tub/shower valve in accordance with Section 424.3.

425.3.1 Fill valves. All flush tanks shall be equipped with an antisiphon fill valve conforming to ASSE 1002 or CSA ~~B125~~ B125.3. The fill valve backflow preventer shall be located at least 1 inch (25 mm) above the full opening of the overflow pipe.

TABLE 608.1 (Supp)
APPLICATION OF BACKFLOW PREVENTERS

DEVICE	DEGREE OF HAZARD[a]	APPLICATION[b]	APPLICABLE STANDARDS
Antisiphon-type fill valves for gravity water closet flush tanks	High Hazard	Backsiphonage only	ASSE 1002, CSA ~~B125~~ B125.3

(Portions of table and footnotes not shown remain unchanged)

2. Add standard to Chapter 13 as follows:

CSA

CSA B125.3-2005 Plumbing Fittings

PART II – IRC-P

1. Revise as follows:

TABLE P2701.1
PLUMBING FIXTURES, FAUCETS AND FIXTURE FITTINGS

MATERIAL	STANDARD
Water closet flush tank fill valves	ASSE 1002, CSA ~~B125~~ B125.3

(Portions of table not shown remain unchanged)

TABLE P2902.3
APPLICATION FOR BACKFLOW PREVENTERS

DEVICE	DEGREE OF HAZARD[a]	APPLICATION[b]	APPLICABLE STANDARDS
Antisiphon-type fill valves for gravity water closet flush tanks	High Hazard	Backsiphonage only	ASSE 1002, CSA ~~CAN/CSA~~ ~~B125~~ B125.3

(Portions of table and footnotes not shown remain unchanged)

P2902.4.1 Fill valves. Flush tanks shall be equipped with an antisiphon fill valve conforming to ASSE 1002 or CSA ~~B125~~ B125.3. The fill valve backflow preventer shall be located at least 1 inch (25 mm) above the full opening of the overflow pipe.

2. Add standard to Chapter 43 as follows:

CSA

CSA B125.3-2005 Plumbing Fittings

Reason: The purpose of this proposed code change is to add another means of addressing the specified requirement.

The current code language restricts the allowable devices to those meeting one particular standard. There are other standards which also provide means of restricting the outlet temperature to a specific value but are not specifically designed to ASSE 1070. These devices are covered in the CSA B125.3 standard.

With the harmonization of the ASME and CSA standards into ASME A112.18.1/CSA B125.1 for Plumbing Supply Fittings and ASME A112.18.2/CSA B125.2 for Plumbing Waste Fittings, the remaining sections of the CSA B125 standard, that included the requirements for fill valves (as referenced in the present code) were published in the new standard CSA B125.3 Plumbing Fittings. CSA B125.3 was not harmonized with ASME A112, as there is not corresponding section of the standard.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, CSA B125.3, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P35–07/08
419.2

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Revise as follows:

419.2 Substitution for water closets. In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets in assembly and educational occupancies. Urinals shall not be substituted for more than 50 percent of the required water closets in all other occupancies. Urinals substituted for required water closets shall not be located within family or assisted-use toilet and bathing rooms.

Reason: The purpose of the change is clarification of the code. When a required water closet and a urinal substituted for a required water closet are located within the same toilet room, both fixtures must remain independently available to the public and/or employees. IBC Section 1109.2.1.7 requires internal locks on family or assisted-use toilet room doors and the exception to IBC Section 1109.2.1.2 permits the installation of an optional urinal. When a urinal is installed within a family or assisted-use toilet room it is not being substituted for a required water closet. Where urinals are substituted for required water closets, doors should not be internally lockable. The recent addition of IPC Section 310.5 requires privacy partitions for all urinals except those in single occupant/unisex toilet rooms or in child/day care under certain conditions. Toilet rooms where privacy partitions are required are designed as multi-occupant toilet rooms, therefore their doors should not be internally lockable.

Additionally the proposed text will better assure that the intent of OHSA 29 CFR 1910.141(c)(1)(i): Toilet Facilities Table J-1 para c is not undermined. Referring to toilets that can be locked from the inside, it states. 'Where such single-occupancy rooms have more than one toilet facility, only one such facility in each toilet room shall be counted for the purpose of table' In other words, a toilet with multiple water closets that has an internal lock can only satisfy the requirement for a single fixture.

The change will not increase the cost of construction because a urinal is not required in a F/A-U toilet room. Therefore urinals in F/A-U toilet rooms which are currently permitted to be counted toward the minimum number of required fixtures may be installed in multi-occupant restrooms which makes the fixtures independently available for use. The change provides much needed clarification regarding the difference between an optional urinal located in an internally lockable F/A-U toilet room and a urinal substituted for a required water closet located in a multi-occupant toilet room whose door should not be internally lockable.

The change correlates with the proposed change to IPC 403.1.1 and IBC 1109.2.1.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P36–07/08
425.2, 608.13.6; IRC P2902.3.2

Proponent: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

425.2 Flushometer valves and tanks. Flushometer valves and tanks shall comply with ASSE 1037. Vacuum breakers on flushometer valves shall conform to the performance requirements of ASSE 1001 ~~or CSA B64.1.1~~. Access shall be provided to vacuum breakers. Flushometer valves shall be of the water-conservation type and shall not be utilized where the water pressure is lower than the minimum required for normal operation. When operated, the valve shall automatically complete the cycle of operation, opening fully and closing positively under the water supply pressure. Each flushometer valve shall be provided with a means for regulating the flow through the valve. The trap seal to the fixture shall be automatically refilled after each valve flushing cycle.

608.13.6 Atmospheric-type vacuum breakers. Pipe applied atmospheric-type vacuum breakers shall conform to ASSE 1001 ~~or CSA B64.1.1~~. Hose-connection vacuum breakers shall conform to ASSE 1011, ASSE 1019, ASSE 1035, or ASSE 1052~~, CSA B64.2, CSA B64.2.1, CSA B64.2.1.1, CSA B64.2.2 or CSA B64.7~~. These devices shall operate under normal atmospheric pressure when the critical level is installed at the required height.

PART II – IRC-P

P2902.3.2 Atmospheric-type vacuum breakers. Pipe applied atmospheric-type vacuum breakers shall conform to ASSE 1001 ~~or CSA B64.1.1~~. Hose-connection vacuum breakers shall conform to ASSE 1011, ASSE 1019, ASSE 1035, or ASSE 1052~~, CSA B64.2, CSA B64.2.1, CSA B64.2.1.1, CSA B64.2.2 or CSA B64.7~~. These devices shall operate under normal atmospheric pressure when the critical level is installed at the required height.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.
ASSE 1001-2002 has a test for cold water deterioration for the AVB; CSA B64.1.1-01 does not.
ASSE 1001-2002 has a minimum unobstructed passageway requirement; CSA B64.1.1-01 does not.
ASSE 1001-2002 has an air flow test; CSA B64.1.1-01 does not.
ASSE 1001-2002 evaluates a test to verify the thread depth of the AVB; B64.1.1-01 does not.
ASSE 1001-2002 defines the maximum allowable continuous pressure as 12 hours; the CSA B64.1.1-01 does not have a maximum time period.
CSA B64.2-01 requires hose connection vacuum breakers meet NSF 61; ASSE does not because devices/assemblies with hose threaded outlets are exempt from NSF 61.
CSA B64.2-01 allows a hose connection vacuum breakers to be removable. ASSE 1011-2004 requires them to be permanently installed.
CSA B64.2-01 requires a hose connection vacuum breakers to meet B64.0, Section 4.3, Repairs and Replacement of Parts. Hose connection vacuum breakers are not repairable in the field.
ASSE 1011-2004 has a life cycle test; CSA B64.2-01 does not.
CSA B64.2-01 allows for cold water ratings, whereas ASSE 1011-2004 does not allow for a device to be rated for cold water only.
The product covered by CSA B64.2.1-01 is a hose connection vacuum breaker with a marketing feature that is not required by the ASSE Standard 1011-2004. ASSE does not include marketing features in their standards.
The product covered by CSA B64.2.2-01 is a hose connection vacuum breaker with a marketing feature that is not required by the ASSE Standard 1011-2004. ASSE does not include marketing features in their standards.
CSA B64.7.1-01's check valve sealing test is a resistance to opening test, whereas ASSE 1035-2002's is a resealing test. The CSA test does not verify the resealing of the check valve.
B64.6-01's title, *Vacuum Breaker, Laboratory Faucet Type*, is different from the ASSE 1035-2002 title, *Laboratory Faucet Backflow Preventer,* therefore causing confusion to the end user of the IPC.
CSA B64.2.1.1-01 title, Vacuum Breakers, Hose Connection Type (HCVB) with Manual Draining Feature, is different from ASSE 1052-2004, therefore causing confusion to the end user of the IPC.
ASSE 1052-2004 has a minimum temperature range of 140 °F (60 °C); the CSA B64.2.1.1-01 has a minimum temperature range of 113 °F (45 °C).
ASSE 1052-2004 has a test for cold water deterioration for the AVB; CSA B64.2.1.1-01 does not.
CSA B64.1.2-01's check valve sealing test is a resistance to opening test, whereas ASSE 1052-2004's is a resealing test. The CSA test does not verify the resealing of the check valve.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P37–07/08
IPC 425.3.1; IRC P2902.4.1

Proponent: Barry Pines & Paul Bladdick, representing Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

425.3.1 Fill valves. All flush tanks shall be equipped with an antisiphon fill valve conforming to ASSE 1002 ~~or CSA B125~~. The fill valve backflow preventer shall be located at least 1 inch (25 mm) above the full opening of the overflow pipe.

PART II – IRC

Revise as follows:

P2902.4.1 Fill valves. Flush tanks shall be equipped with an antisiphon fill valve conforming to ASSE 1002 ~~or CSA B125~~. The fill valve backflow preventer shall be located at least 1 inch (25 mm) above the full opening of the overflow pipe.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in-depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements.

CSA B125 includes many products in addition to the anti-siphon fill valves. Including it as equivalent to ASSE 1002-2002 is confusing to the end user of the IRC, and inappropriate.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P38–07/08
605.3.1; IRC P2904.4.1

Proponent: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Revise as follows:

PART I – IPC

605.3.1 Dual check-valve-type backflow preventer. Where a dual check-valve backflow preventer is installed on the water supply system, it shall comply with ASSE 1024 ~~or CSA B64.6~~.

PART II – IRC-P

Revise as follows:

P2904.4.1 Dual check-valve-type backflow preventer. Where a dual check-valve backflow preventer is installed on the water supply system, it shall comply with ASSE 1024 ~~or CSA B64.6~~.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.

B64.6-01 vs. ASSE 1024-2004

CSA B64.6-01's check valve sealing test is a resistance to opening test, whereas ASSE 1024-2004's is a resealing test.
CSA B64.6-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested.
ASSE 1024-2004 requires that cold water devices be tested at 110 °F.
CSA B64.6-01 does not have a test to verify the independent operation of the check valves; ASSE 1024-2004 does.
ASSE 1024-2004 requires one end connection to be flanged or union for ease of installation or repair; CSA B64.6-01 does not.
B64.6-01 does not have a minimum copper content specified for bronze alloy; ASSE 1024-2004 does.
B64.6-01 allows the pressure loss for 3/8 inch size devices to be twice that allowed by ASSE 1024-2004.
B64.4-01 does not require hydrostatic at twice the working pressure for the check valves; ASSE 1024-2004 does.
B64.4-01 does not require flow testing at twice the rated flow to verify the integrity of the checks; ASSE 1024-2004 does.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P39–07/08
608.13.2; IRC P2902.3.5

Proponent: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

608.13.2 Reduced pressure principle backflow preventers. Reduced pressure principle backflow preventers shall conform to ASSE 1013~~,~~ or AWWA C511~~, CSA B64.4 or CSA B64.4.1~~. Reduced pressure detector assembly backflow preventers shall conform to ASSE 1047. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.

PART II – IRC-P

Revise as follows:

P2902.3.5 Reduced pressure principle backflow preventers. Reduced pressure principle backflow preventers shall conform to ASSE 1013, or AWWA C511~~, CSA B64.4 or CSA B64.4.1~~. Reduced pressure detector assembly backflow preventers shall conform to ASSE 1047. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.
B64.4-01 has no provisions for testing manifold designs; ASSE 1013-2005 does.
B64.4-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1013-2005 does.
B64.4-01 does not have hydrostatic tests at twice the working pressure of the second check; ASSE 1013-2005 does.
B64.4-01 does not have a test to verify that the relief valve will drain the water in the intermediate zone below the first check; ASSE 1013-2005 does.
B64.4-01 does not have a minimum copper content specified for bronze alloy; ASSE does.
B64.4-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1013-2005 requires that cold water devices be tested at 140 F.
During the cycle test, the CSA B64.4-01 does not verify that the check valve reseals.
B64.4.1-01 has no provisions for testing manifold designs; ASSE 1013-2005 does.
B64.4.1-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1013-2005 does.
B64.4.1-01 does not have hydrostatic tests at twice the working pressure of the second check; ASSE 1013-2005 does.
B64.4.1-01 does not have a test to verify that the relief valve will drain the water in the intermediate zone below the first check; ASSE 1013-2005 does.
B64.4.1-01 does not have a minimum copper content specified for bronze alloy; ASSE does.
B64.4.1-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1013-2005 requires that cold water devices be tested at 140 F.
During the cycle test, the CSA B64.4-01 does not verify that the check valve reseals.
B64.4.1-01's pressure drop requirements are different from ASSE 1013-2005.
B64.4.1-01 does not have a requirement to monitor the pressure drop from 0 to 50 psi; ASSE 1013-2005 does.
B64.4.1-01 does not have a relief/supply pressure fluctuation test at 15 psi; ASSE 1013-2005 does.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P40–07/08
608.13.3; IRC P2902.3.3

Proponent: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

608.13.3 Backflow preventer with intermediate atmospheric vent. Backflow preventers with intermediate atmospheric vents shall conform to ASSE 1012~~ or CSA B64.3~~. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.

PART II – IRC-P

Revise as follows:

P2902.3.3 Backflow preventer with intermediate atmospheric vent. Backflow preventers with intermediate atmospheric vents shall conform to ASSE 1012~~ or CSA CAN/CSA B64.3~~. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.
CSA B64.3-01's backpressure requirements are only half of ASSE 1012-2002 requirements.
ASSE 1012-2002 has a shock (water hammer) test; CSA B64.3 does not.
CSA B64.3-01's check valve sealing test is a resistance to opening test, whereas ASSE 1012-2001's is a resealing test.
CSA B64.3-01 title, *Backflow Preventers, Dual Check Valve Type with Atmospheric Port*, is different from ASSE 1012-2002, therefore causing confusion to the end user of the IPC.
CSA B64.3-01 does not have a vent port leakage test at various flows; ASSE 1012-2002 does.
CSA B64.3 does not have a life cycle test; ASSE 1012-2004 does.
CSA B64.3 does not require cold water rated devices to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1012-2002 does not allow for a device to be rated for cold water only.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P41–07/08
608.13.5; IRC P2902.3.4

Proponent: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

608.13.5 Pressure-type vacuum breakers. Pressure-type vacuum breakers shall conform to ASSE 1020 ~~or CSA B64.1.2~~ and spillproof vacuum breakers shall comply with ASSE 1056. These devices are designed for installation under continuous pressure conditions when the critical level is installed at the required height. Pressure-type vacuum breakers shall not be installed in locations where spillage could cause damage to the structure.

PART II – IRC-P

Revise as follows:

P2902.3.4 Pressure-type vacuum breakers. Pressure type vacuum breakers shall conform to ASSE 1020 ~~or CSA B64.1.2~~ and spillproof vacuum breakers shall comply with ASSE 1056. These devices are designed for installation under continuous pressure conditions when the critical level is installed at the required height. Pressure-type vacuum breakers shall not be installed in locations where spillage could cause damage to the structure.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.
CSA has no minimum corrosion benchmark requirements. ASSE requires materials to have a corrosion resistance equal to at least 78% copper.
CSA standard covers PVB larger than 2 inches that require two check valves. ASSE does not recognize this style of PVB in ASSE 1020-2004.
CSA B64.1.2-01's check valve sealing test is a resistance to opening test, whereas ASSE 1020-2004's is a resealing test. The CSA test does not verify the resealing of the check valve.
CSA B64.1.2-01 only verifies the check valve functioning once, whereas ASSE verifies the check valve functioning five times (four times during the cycle test).
During the cycle test, the CSA B64.1.2-01 does not verify that the check valve reseals.
ASSE 1020-2004 has a shock (water hammer) test; CSA B64.1.2 does not.
ASSE 1020-2004 includes an air passage comparative areas test; CSA B64.1.2 does not.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P42–07/08
608.13.7; IRC P2902.3.6

Proponent: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Revise as follows:

PART I – IPC

608.13.7 Double check-valve assemblies. Double check-valve assemblies shall conform to ASSE 1015, ~~CSA B64.5, CSA B64.5.1~~ or AWWA C510. Double-detector check-valve assemblies shall conform to ASSE 1048. These devices shall be capable of operating under continuous pressure conditions.

PART II – IRC-P

Revise as follows:

P2902.3.6 Double check-valve assemblies. Double check-valve assemblies shall conform to ASSE 1015, ~~CSA B64.5, CSA B64.5.1~~ or AWWA C510. Double-detector check-valve assemblies shall conform to ASSE 1048. These devices shall be capable of operating under continuous pressure conditions.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.
B64.5-01's title and acronym, *Backflow Preventers, Double Check Valve Type (DCVA)*, are different from the ASSE 1015-2005 title and acronym, *Double Check Backflow Prevention Assembly and Double Check Fire Protection Backflow Prevention Assembly (DC and DCF)*, therefore causing confusion to the end user of the IPC.
B64.5-01 has no provisions for testing manifold designs; ASSE 1015-2005 does.
B64.5-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1015-2005 does.
B64.5-01 does not have hydrostatic tests at twice the working pressure of the first and second checks; ASSE 1015-2005 does.
B64.5-01 does not have a minimum copper content specified for bronze alloy; ASSE 1015-2005 does.
B64.5-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1015-2005 requires that cold water devices be tested at 140 F.
During the cycle test, the CSA B64.5-01 does not verify that the check valve reseals.
B64.5.1-01 has no provisions for testing manifold designs; ASSE 1015-2005 does.
B64.5.1-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1015-2005 does.
B64.5.1-01 does not have hydrostatic tests at twice the working pressure of the first and second checks; ASSE 1015-2005 does.
B64.5.1-01 does not have a minimum copper content specified for bronze alloy; ASSE does.
B64.5.1-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1015-2005 requires that cold water devices be tested at 140 F.
During the cycle test, the CSA B64.5-01 does not verify that the check valve reseals.
B64.5.1-01's pressure drop requirements are different from ASSE 1015-2005.
B64.5.1-01 does not have a requirement to monitor the pressure drop from 0 to 50 psi; ASSE 1015-2005 does.
B64.5.1-01 allows a higher pressure at flow than ASSE 1015-2005.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P43–07/08
608.16.2; IRC P2902.5.1

Proponents: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

608.16.2 Connections to boilers. The potable supply to the boiler shall be equipped with a backflow preventer with an intermediate atmospheric vent complying with ASSE 1012 ~~or CSA B64.3~~. Where conditioning chemicals are introduced into the system, the potable water connection shall be protected by an air gap or a reduced pressure principle backflow preventer, complying with ASSE 1013, ~~CSA B64.4~~ or AWWA C511.

PART II – IRC-P

Revise as follows:

P2902.5.1 Connections to boilers. The potable supply to the boiler shall be equipped with a backflow preventer with an intermediate atmospheric vent complying with ASSE 1012 ~~or CSA B64.3~~. Where conditioning chemicals are introduced into the system, the potable water connection shall be protected by an air gap or a reduced pressure principle backflow preventer complying with ASSE 1013, ~~CSA B64.4~~ or AWWA C511.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.
CSA B64.3-01's backpressure requirements are only half of ASSE 1012-2002 requirements.
ASSE 1012-2002 has a shock (water hammer) test; CSA B64.3 does not.
CSA B64.3-01's check valve sealing test is a resistance to opening test, whereas ASSE 1012-2001's is a resealing test.
CSA B64.3-01 title, *Backflow Preventers, Dual Check Valve Type with Atmospheric Port*, is different from ASSE 1012-2002, therefore causing confusion to the end user of the IPC.
CSA B64.3-01 does not have a vent port leakage test at various flows; ASSE 1012-2002 does.
CSA B64.3 does not have a life cycle test; ASSE 1012-2004 does.
CSA B64.3 does not require cold water rated devices to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1012-2002 does not allow for a device to be rated for cold water only.
B64.4-01 has no provisions for testing manifold designs; ASSE 1013-2005 does.
B64.4-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1013-2005 does.
B64.4-01 does not have hydrostatic tests at twice the working pressure of the second check; ASSE 1013-2005 does.
B64.4-01 does not have a test to verify that the relief valve will drain the water in the intermediate zone below the first check; ASSE 1013-2005 does.
B64.4-01 does not have a minimum copper content specified for bronze alloy; ASSE does.
B64.4-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1013-2005 requires that cold water devices be tested at 140 °F.
During the cycle test, the CSA B64.4-01 does not verify that the check valve reseals.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P44–07/08
608.16.4.1

Proponents: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

Revise as follows:

608.16.4.1 Additives or nonpotable source. Where systems under continuous pressure contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer. Where chemical additives or antifreeze are added to only a portion of an automatic fire sprinkler or standpipe system, the reduced pressure principle backflow preventer shall be permitted to be located so as to isolate that portion of the system. Where systems are not under continuous pressure, the potable water supply shall be protected against backflow by an air gap or a pipe applied atmospheric vacuum breaker conforming to ASSE 1001 ~~or CSA B64.1.1~~.

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.
ASSE 1001-2002 has a test for cold water deterioration for the AVB; CSA B64.1.1-01 does not.
ASSE 1001-2002 has a minimum unobstructed passageway requirement; CSA B64.1.1-01 does not.
ASSE 1001-2002 has an air flow test; CSA B64.1.1-01 does not.
ASSE 1001-2002 evaluates a test to verify the thread depth of the AVB; B64.1.1-01 does not.
ASSE 1001-2002 defines the maximum allowable continuous pressure as 12 hours; the CSA B64.1.1-01 does not have a maximum time period.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P45–07/08
Table 608.1; IRC Table P2902.3

Proponents: Barry Pines & Paul Bladdick, Code Study & Development of South Eastern Michigan

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise table as follows:

TABLE 608.1 (Supp)
APPLICATION OF BACKFLOW PREVENTERS

DEVICE	DEGREE OF HAZARD[a]	APPLICATION[b]	APPLICABLE STANDARDS
Antisiphon-type fill valves for gravity water closet flush tanks	High hazard	Backsiphonage only	ASSE 1002~~, CSA B125~~
Backflow preventer with intermediate atmospheric vents	Low hazard	Backpressure or backsiphonage Sizes 1/4″ - 3/4″	ASSE 1012~~, CSA B64.3~~
Double check backflow prevention assembly and double check fire protection backflow prevention assembly	Low hazard	Backpressure or backsiphonage Sizes 3/8″ - 16″	ASSE 1015, AWWA C510~~, CSA B64.5, CSA B64.5.1~~
Dual-check-valve-type backflow preventer	Low hazard	Backpressure or backsiphonage Sizes 1/4″ - 1″	ASSE 1024~~, CSA B64.6~~

TABLE 608.1 (Supp)
APPLICATION OF BACKFLOW PREVENTERS
(continued)

DEVICE	DEGREE OF HAZARD[a]	APPLICATION[b]	APPLICABLE STANDARDS
Hose connection backflow preventer	High or low hazard	Low head backpressure, rated working pressure, backpressure or backsiphonage Sizes 1/2″-1″	ASSE 1052~~, CSA B64.2.1.1~~
Hose connection vacuum breaker	High or low hazard	Low head backpressure or backsiphonage Sizes 1/2″, 3/4″, 1″	ASSE 1011~~, CSA B64.2, CSA B64.2.1~~
Laboratory faucet backflow preventer	High or low hazard	Low head backpressure and backsiphonage	ASSE 1035~~, CSA B64.7~~
Pipe-applied atmospheric-type vacuum breaker	High or low hazard	Backsiphonage only Sizes 1/4″ - 4″	ASSE 1001~~, CSA B64.1.1~~
Pressure vacuum breaker assembly	High or low hazard	Backsiphonage only Sizes 1/2″ - 2″	ASSE 1020~~, CSA B64.1.2~~
Reduced pressure principle backflow preventer and reduced pressure principle fire protection backflow preventer	High or low hazard	Backpressure or backsiphonage Sizes 3/8″- 16″	ASSE 1013, AWWA C511~~, CSA B64.4, CSA B64.4.1~~
Vacuum breaker wall hydrants, frost-resistant, automatic draining type	High or low hazard	Low head backpressure or backsiphonage Sizes 3/4″, 1″	ASSE 1019~~, CSA B64.2.2~~

(Portions of table not shown remain unchanged)

PART II – IRC-P

Revise table as follows:

TABLE P2902.3
APPLICATION OF BACKFLOW PREVENTERS

DEVICE	DEGREE OF HAZARD[a]	APPLICATION[b]	APPLICABLE STANDARDS
Antisiphon-type fill valves for gravity water closet flush tanks	High hazard	Backsiphonage only	ASSE 1002~~, CSA B125~~
Backflow preventer with intermediate atmospheric vents	Low hazard	Backpressure or backsiphonage Sizes 1/4″ - 3/4″	ASSE 1012~~, CSA B64.3~~
Double check backflow prevention assembly and double check fire protection backflow prevention assembly	Low hazard	Backpressure or backsiphonage Sizes 3/8″ - 16″	ASSE 1015, AWWA C510~~, CSA B64.5, CSA B64.5.1~~
Dual-check-valve-type backflow preventer	Low hazard	Backpressure or backsiphonage Sizes 1/4″ - 1″	ASSE 1024~~, CSA B64.6~~
Hose connection backflow preventer	High or low hazard	Low head backpressure, rated working pressure, backpressure or backsiphonage Sizes 1/2″-1″	ASSE 1052~~, CSA B64.2.1.1~~
Hose connection vacuum breaker	High or low hazard	Low head backpressure or backsiphonage Sizes 1/2″, 3/4″, 1″	ASSE 1011~~, CSA B64.2, CSA B64.2.1~~
Laboratory faucet backflow preventer	High or low hazard	Low head backpressure and backsiphonage	ASSE 1035~~, CSA B64.7~~
Pipe-applied atmospheric-type vacuum breaker	High or low hazard	Backsiphonage only Sizes 1/4″ - 4″	ASSE 1001~~, CSA B64.1.1~~
Pressure vacuum breaker assembly	High or low hazard	Backsiphonage only Sizes 1/2″ - 2″	ASSE 1020~~, CSA B64.1.2~~
Reduced pressure principle backflow preventer and reduced pressure principle fire protection backflow preventer	High or low hazard	Backpressure or backsiphonage Sizes 3/8″- 16″	ASSE 1013, AWWA C511~~, CSA B64.4, CSA B64.4.1~~
Vacuum breaker wall hydrants, frost-resistant, automatic draining type	High or low hazard	Low head backpressure or backsiphonage Sizes 3/4″, 1″	ASSE 1019~~, CSA B64.2.2~~

(Portions of table not shown remain unchanged)

Reason: The CSA B64 Standards were included in the IPC under the premise that they are same as the ASSE Standards. Upon in depth analysis, they are significantly different from the ASSE Standards. Some of the differences include different names of the devices and different abbreviations, different performance requirements, different material requirements, and different test requirements. The CSA standards are not promulgated under the ANSI process and procedures. The CSA B64 standards use metric measurements vs. English measurements. The CSA standards do not specify the order the tests should be conducted.

CSA B64.1.1-01 vs. ASSE 1001-2002

ASSE 1001-2002 has a test for cold water deterioration for the AVB; CSA B64.1.1-01 does not.
ASSE 1001-2002 has a minimum unobstructed passageway requirement; CSA B64.1.1-01 does not.
ASSE 1001-2002 has an air flow test; CSA B64.1.1-01 does not.
ASSE 1001-2002 evaluates a test to verify the thread depth of the AVB; B64.1.1-01 does not.
ASSE 1001-2002 defines the maximum allowable continuous pressure as 12 hours; the CSA B64.1.1-01 does not have a maximum time period.

CSA B64.2-01 vs. ASSE 1011-2004

CSA B64.2-01 requires hose connection vacuum breakers meet NSF 61; ASSE does not because devices/assemblies with hose threaded outlets are exempt from NSF 61.
CSA B64.2-01 allows hose connection vacuum breakers to be removable. ASSE 1011-2004 requires them to be permanently installed.
CSA B64.2-01 requires hose connection vacuum breakers to meet B64.0, Section 4.3, Repairs and Replacement of Parts. Hose connection vacuum breakers are not repairable in the field.
ASSE 1011-2004 has a life cycle test; CSA B64.2-01 does not.
CSA B64.2-01 allows for cold water ratings, whereas ASSE 1011-2004 does not allow for a device to be rated for cold water only.

B64.2.1-01

The product covered by CSA B64.2.1-01 is a hose connection vacuum breaker with a marketing feature that is not required by the ASSE Standard 1011-2004. ASSE does not include marketing features in their standards.

CSA B64.2.1.1-01 vs. ASSE 1052-2004

CSA B64.2.1.1-01 title, Vacuum Breakers, Hose Connection Type (HCVB) with Manual Draining Feature, is different from ASSE 1052-2004, therefore causing confusion to the end user of the IPC.
ASSE 1052-2004 has a minimum temperature range of 140 °F (60 °C); the CSA B64.2.1.1-01 has a minimum temperature range of 113 °F (45 °C).
ASSE 1052-2004 has a test for cold water deterioration for the AVB; CSA B64.2.1.1-01 does not.
CSA B64.1.2-01's check valve sealing test is a resistance to opening test, whereas ASSE 1052-2004's is a resealing test. The CSA test does not verify the resealing of the check valve.

CSA B64.2.2-01

The product covered by CSA B64.2.2-01 is a hose connection vacuum breaker with a marketing feature that is not required by the ASSE Standard 1011-2004. ASSE does not include marketing features in their standards.

CSA B64.1.2 vs. ASSE 1020-2004

CSA has no minimum corrosion benchmark requirements. ASSE requires materials to have a corrosion resistance equal to at least 78% copper.
CSA standard covers PVB larger than 2 inches that require two check valves. ASSE does not recognize this style of PVB in ASSE 1020-2004; it is a dual check with an atmospheric breaker.
CSA B64.1.2-01's check valve sealing test is a resistance to opening test, whereas ASSE 1020-2004's is a resealing test. The CSA test does not verify the resealing of the check valve.
CSA B64.1.2-01 only verifies the check valve functioning once, whereas ASSE verifies the check valve functioning five times (four times during the cycle test).
During the cycle test, the CSA B64.1.2-01 does not verify that the check valve reseals.
ASSE 1020-2004 has a shock (water hammer) test; CSA B64.1.2-01 does not.
ASSE 1020-2004 includes an air passage comparative areas test; CSA B64.1.2-01 does not.
CSA B64.1.2-01 does not have a hydrostatic test at twice the working pressure for the check valves; ASSE 1020-2004 does.

CSA B64.3-01 vs. ASSE 1012-2002

CSA B64.3-01's backpressure requirements are only half of ASSE 1012-2002 requirements.
ASSE 1012-2002 has a shock (water hammer) test; CSA B64.3 does not.
CSA B64.3-01's check valve sealing test is a resistance to opening test, whereas ASSE 1012-2001's is a resealing test.
CSA B64.3-01 title, *Backflow Preventers, Dual Check Valve Type with Atmospheric Port*, is different from ASSE 1012-2002, therefore causing confusion to the end user of the IPC.
CSA B64.3-01 does not have a vent port leakage test at various flows; ASSE 1012-2002 does.
CSA B64.3 does not have a life cycle test; ASSE 1012-2004 does.
CSA B64.3 does not require cold water rated devices to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1012-2002 does not allow for a device to be rated for cold water only.

B64.3.1-01 vs. ASSE 1022-2003

CSA B64.3.1-01's check valve sealing test is a resistance to opening test, whereas ASSE 1022-2003's is a resealing test. The CSA test does not verify the resealing of the check valve.
CSA B64.3-01 does not have a vent port leakage test at various flows; ASSE 1022-2003 does.
CSA B64.3.1-01's endurance test uses a carbonator; ASSE 1022-2003 does not. It specifies the backpressure on the device instead.
The CSA B64.3.1-01 endurance test produces only half of the backpressure required in ASSE 1022-2003.
CSA B64.3.1-01's backpressure tests on the upstream and the downstream checks are conducted at half the pressure required by ASSE 1022-2003.

B64.4-01 vs. ASSE 1013-2005

B64.4-01 has no provisions for testing manifold designs; ASSE 1013-2005 does.
B64.4-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1013-2005 does.
B64.4-01 does not have hydrostatic tests at twice the working pressure of the second check; ASSE 1013-2005 does.
B64.4-01 does not have a test to verify that the relief valve will drain the water in the intermediate zone below the first check; ASSE 1013-2005 does.
B64.4-01 does not have a minimum copper content specified for bronze alloy; ASSE does.
B64.4-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1013-2005 requires that cold water devices be tested at 140 °F.
During the cycle test, the CSA B64.4-01 does not verify that the check valve reseals.

B64.4.1-01 vs. ASSE 1013-2005

B64.4.-01 has no provisions for testing manifold designs; ASSE 1013-2005 does.
B64.4.1-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1013-2005 does.
B64.4.1-01 does not have hydrostatic tests at twice the working pressure of the second check; ASSE 1013-2005 does.
B64.4.1-01 does not have a test to verify that the relief valve will drain the water in the intermediate zone below the first check; ASSE 1013-2005 does.

B64.4.1-01 does not have a minimum copper content specified for bronze alloy; ASSE does.
B64.4.1-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1013-2005 requires that cold water devices be tested at 140 °F.
During the cycle test, the CSA B64.4-01 does not verify that the check valve reseals.
B64.4.1-01's pressure drop requirements are different from ASSE 1013-2005.
B64.4.1-01 does not have a requirement to monitor the pressure drop from 0 to 50 psi; ASSE 1013-2005 does.
B64.4.1-01 does not have a relief/supply pressure fluctuation test at 15 psi; ASSE 1013-2005 does.

B64.5-01 vs. ASSE 1015-2005

B64.5-01's title and acronym, *Backflow Preventers, Double Check Valve Type (DCVA)*, are different from the ASSE 1015-2005 title and acronym, *Double Check Backflow Prevention Assembly and Double Check Fire Protection Backflow Prevention Assembly (DC and DCF)*, therefore causing confusion to the end user of the IPC.
B64.5-01 has no provisions for testing manifold designs; ASSE 1015-2005 does.
B64.5-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1015-2005 does.
B64.5-01 does not have hydrostatic tests at twice the working pressure of the first and second checks; ASSE 1015-2005 does.
B64.5-01 does not have a minimum copper content specified for bronze alloy; ASSE 1015-2005 does.
B64.5-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1015-2005 requires that cold water devices be tested at 140 °F.
During the cycle test, the CSA B64.5-01 does not verify that the check valve reseals.

B64.5.1-01 vs. ASSE 1015-2005

B64.5.1-01 has no provisions for testing manifold designs; ASSE 1015-2005 does.
B64.5.1-01 has no requirement for servicing the assembly without removing it from the line; ASSE 1015-2005 does.
B64.5.1-01 does not have hydrostatic tests at twice the working pressure of the first and second checks; ASSE 1015-2005 does.
B64.5.1-01 does not have a minimum copper content specified for bronze alloy; ASSE does.
B64.5.1-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1015-2005 requires that cold water devices be tested at 140 °F.
During the cycle test, the CSA B64.5-01 does not verify that the check valve reseals.
B64.5.1-01's pressure drop requirements are different from ASSE 1015-2005.
B64.5.1-01 does not have a requirement to monitor the pressure drop from 0 to 50 psi; ASSE 1015-2005 does.
B64.5.1-01 allows a higher pressure at flow than ASSE 1015-2005.

B64.6-01 vs. ASSE 1024-2004

CSA B64.6-01's check valve sealing test is a resistance to opening test, whereas ASSE 1024-2004's is a resealing test.
CSA B64.6-01 does not require cold water rated assemblies to undergo a deterioration test - it only requires hot water devices to be tested. ASSE 1024-2004 requires that cold water devices be tested at 110 °F.
CSA B64.6-01 does not have a test to verify the independent operation of the check valves; ASSE 1024-2004 does.
ASSE 1024-2004 requires one end connection to be flanged or union for ease of installation or repair; CSA B64.6-01 does not.
B64.6-01 does not have a minimum copper content specified for bronze alloy; ASSE 1024-2004 does.
B64.6-01 allows the pressure loss for 3/8 inch size devices to be twice that allowed by ASSE 1024-2004.
B64.4-01 does not require hydrostatic at twice the working pressure for the check valves; ASSE 1024-2004 does.
B64.4-01 does not require flow testing at twice the rated flow to verify the integrity of the checks; ASSE 1024-2004 does.

B64.7-01 vs. ASSE 1035-2002

CSA B64.7.1-01's check valve sealing test is a resistance to opening test, whereas ASSE 1035-2002's is a resealing test. The CSA test does not verify the resealing of the check valve.
B64.6-01's title, *Vacuum Breaker, Laboratory Faucet Type*, is different from the ASSE 1035-2002 title, *Laboratory Faucet Backflow Preventer,* therefore causing confusion to the end user of the IPC.

CSA B64.1.3-04 vs. ASSE 1056-2001

The CSA B64.1.3-04 acronym, *SRPVB*, is different from the ASSE acronym, *SVB*, therefore causing confusion to the end user of the IPC.
CSA has no minimum corrosion benchmark requirements. ASSE requires materials to have a corrosion resistance equal to at least 78% copper.
CSA B64.1.3-04's check valve sealing test is a resistance to opening test, whereas ASSE 1056-2001's is a resealing test. The CSA test does not verify the resealing of the check valve.
CSA B64.1.3-04 only verifies the check valve functioning once, whereas ASSE verifies the check valve functioning five times (four times during the cycle test).
During the cycle test, the CSA B64.1.3-04 does not verify that the check valve reseals.
ASSE 1056-2001 has a shock (water hammer) test; CSA B64.1.3-04 does not.
CSA B64.1.3-04 does not have a hydrostatic test at twice the working pressure for the check valves; ASSE 1056-2001 does.

CSA B64.2.2-01 vs. ASSE 1019-2004

The CSA B64.2.2-01 is not for a wall hydrant, only for the vacuum breaker; whereas ASSE 1019-2004 is for a wall hydrant, frost-freeze, automatic draining type with an integral vacuum breaker. CSA B64.2.2-01 covers only one component of the ASSE 1019 device.

CSA 125 vs. ASSE 1002

CSA B125 includes many products in addition to the anti-siphon fill valves. Including it as equivalent to ASSE 1002-2002 is confusing to the end user of the IPC, and inappropriate.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P46–07/08
417.5.2, 417.5.2.5 (New); IRC P2709.2, Chapter 43 (New)

Proponent: Sean Gerolimatos, Schluter Systems L.P.

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Revise as follows:

417.5.2 Shower lining. Floors under shower compartments, except where prefabricated receptors have been provided, shall be lined and made water tight utilizing material complying with Sections 417.5.2.1 through ~~417.5.2.4~~ 417.5.2.5. Such liners shall turn up on all sides at least 2 inches (51 mm) above the finished threshold level. Liners shall be recessed and fastened to an approved backing so as not to occupy the space required for wall covering, and shall not be nailed or perforated at any point less than 1 inch (25 mm) above the finished threshold. Liners shall be pitched one-fourth unit vertical in 12 units horizontal (2-percent slope) and shall be sloped toward the fixture drains and be securely fastened to the waste outlet at the seepage entrance, making a water-tight joint between the liner and the outlet.

Exception~~s~~:

1. Floor surfaces under shower heads provided for rinsing laid directly on the ground are not required to comply with this section.
2. Where a sheet-applied load bearing, bonded waterproof membrane is installed as the shower lining, the membrane shall not be required to be recessed.

2. Add new text as follows:

417.5.2.5 Sheet-applied load bearing, bonded waterproof membranes. Sheet-applied load bearing, bonded waterproof membranes shall meet requirements of ANSI A118.10 and shall be applied in accordance with the manufacturer's installation instructions.

3. Add standard to Chapter 13 as follows:

ANSI

A118.10-99	Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation

PART II – IRC-P

1. Revise as follows:

P2709.2 Lining required. The adjoining walls and floor framing enclosing on-site built-up shower receptors shall be lined with one of the following materials:

1. sheet lead
2. sheet copper
3. ~~or a~~ plastic liner material that complies with ASTM D 4068 or ASTM D 4551
4. hot mopping ~~shall be permitted~~ in accordance with Section P2709.2.3
5. sheet-applied load bearing, bonded waterproof membranes that comply with ANSI A118.10

The lining material shall extend not less than 3 inches (76 mm) beyond or around the rough jambs and not less than 3 inches (76 mm) above finished thresholds. Sheet-applied load bearing, bonded waterproof membranes shall be applied in accordance with the manufacturer's installation instructions.

2. Add standard to Chapter 43 as follows:

ANSI

A118.10-99 Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation

Reason: The purpose of this proposed revision is to provide an alternative system for waterproofing shower installations. Currently, the IPC and the IRC have only provisions for unbonded shower pan liners.

Traditional shower pan liners, such as PVC liners corresponding to ASTM D4551 and CPE liners corresponding to ASTM D4068, are placed below a mortar bed, to which tile is adhered using a bond coat of thin-set mortar. Load bearing, bonded waterproof membranes are adhered to the top of the mortar bed, with tile installed directly on the membrane using thin-set mortar.

In the traditional system, moisture is allowed to infiltrate the relatively thick mortar setting bed (typically between 1" to 1-3/4"), as tile and grout are not waterproof. The water then percolates through the mortar bed to the liner, which is sloped to the weep holes of the subdrain, before exiting the system. This results in a perpetually wet mortar bed when the shower is used regularly. Furthermore, as the water percolates through the system it washes away soluble salts in the mortar bed, resulting in a lowered pH, thus reducing the natural resistance of the mortar to mold growth.

In bonded waterproof systems the tile bond coat is very thin, typically between 3/32" and 1/8". Thus, there is very little material to soak up water during shower use. What little is absorbed evaporates relatively quickly, allowing the assembly to dry completely between uses. As such, the potential for mold growth within the system is eliminated.

Load bearing, bonded waterproof membranes offer a superior system for waterproofing in tile shower applications and should be made available to the building community through inclusion in Section 417 of the International Plumbing Code and Section P2709 of the International Residential Code. With increased awareness of moisture and mold issues related to construction and public health, making this change to the Code will provide immediate and tangible benefits to the construction industry.

Substantiation: Load bearing, bonded waterproof membranes have been used successfully for over twenty years in North America. The ANSI A118.10[1] "American national standard specifications for load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installation" was first published in 1993 and serves as the consensus national standard for such membranes. This is in keeping with the ICC requirement to reference codes that are developed and maintained through a consensus process such as ASTM or ANSI. The ANSI A118.10 specifications include requirements for mold growth resistance, seam strength, breaking strength, shear (bond) strength, dimensional stability, and waterproofness to ensure that the membranes provide suitable performance for waterproofing tiled showers.

Important Note: The ANSI A118.10 standard is being revised to address non-mandatory language identified by ICC staff during the 2006/2007 code development cycle and bring the standard into compliance with ICC requirements. This was the primary point of contention raised by the committee at the hearings in Orlando. Final approval of these revisions has not been reached at the time of this submission, as the revisions must be put to ballot in the ANSI committee and subject to public review. The schedule of this process is attached to this proposal along with explanation of the specific revisions. The proponent does not expect delays in the revision process, as the provisions now made mandatory in language have always been treated as mandatory by testing laboratories to the best of the proponent's knowledge.

There is precedent for the use of these membranes in model plumbing codes. The Uniform Plumbing Code (UPC)[2] references the ANSI A118.10 standard and the International Association of Plumbing and Mechanical Officials (IAPMO) offers listing[3] to the Uniform Plumbing Code (UPC) for products that comply with ANSI A118.10. Further, the International Code Council Evaluation Service (ICC-ES) has adopted an "Interim criteria for waterproof membranes for flooring and shower liners" (AC115[4]) that references ANSI A118.10. The ICC-ES criteria bases recognition of these materials under the provision of IPC Section 105.2[5], which states, "The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternate has been approved." Thus, the International Code Council has a mechanism to help code officials identify load bearing, bonded waterproof membranes as equivalent to the pan liners currently referenced in the IPC and the IRC. The next logical step is to include these liners in the code itself.

Bibliography:

1. Tile Council of America, Incorporated, and "American national standard specifications for load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installation." American National Standard Specifications for the Installation of Ceramic Tile, Tile Council of America, Incorporated, Anderson, SC, 2000, pp. 97 – 100.
2. IAPMO, Uniform Plumbing Code, Chapter 14, p. 1.
3. IAPMO, UPC listed sheet-applied bonded waterproof membranes, http://pld.iapmo.org.
4. ICC-ES, "Interim Criteria for Waterproof Membranes for Flooring and Shower Liners (AC 115)." http://icc-es.org/criteria/pdf_files/ac115.pdf.
5. International Code Council, International Plumbing Code, Country Club Hills, IL

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, ANSI A118.10, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P47–07/08
502.1.1 (New)

Proponent: Richard Grace, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors Association

Add new text as follows:

502.1.1 Elevation and protection. Elevation of water heater ignition sources and mechanical damage protection requirements for water heaters shall be in accordance with the *International Mechanical Code* and the *International Fuel Gas Code*.

Reason: The requirement for elevation of electric water heater ignition sources and protecting equipment from mechanical damage is in the mechanical code. Section 502.1 of the IPC refers the reader to the mechanical code only where the installation is for an oil-fired water heater. If the installation is for an electric water heater, the reader is currently not directed to the requirements in the mechanical code. Adding this code section assures that the reader is directed to the mechanical code for elevation and protection requirements for electric water heaters.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P48–07/08
501.2, 501.2.1 (New), 501.2.2 (New), 501.2.2.1 (New), 501.2.2.2 (New), 501.2.3 (New), 608.1; IRC P2802.1, P2802.3 (New), P2802.4 (New), P2802.5 (New), P2902.1

Proponents: Mark Eatherton, Denver, CO, representing himself; David Yates, York, PA, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Delete and substitute as follows:

~~**501.2 Water heater as space heater.** Where a combination potable water heating and space heating system requires water for space heating at temperatures higher than 140°F (60°C), a master thermostatic mixing valve complying with ASSE 1017 shall be provided to limit the water supplied to the potable hot water distribution system to a temperature of 140°F (60°C) or less. The potability of the water shall be maintained throughout the system.~~

501.2 Water heaters used for space heating. Storage tank water heating systems that supply hot water for domestic and space heating purposes shall comply with sections 501.2.1 through 501.2.3.

2. Add next text as follows:

501.2.1 Temperature control. Where hot water in excess of 140 degrees F is required for space heating, a thermostatic mixing valve complying with ASSE 1017 shall be installed to limit the hot water temperature in the domestic water distribution system to not greater than 140 degrees F.

501.2.2 Heat exchanger required. A heat exchanger shall be installed to isolate the potable water system from the space heating system fluid. Where the space heating system uses a toxic fluid, the heat exchanger shall comply with Section 608.16.3.

501.2.2.1 Potable water circuit for heat exchanger. The developed length of piping and heat exchanger flow path for the potable water circuit for the heat exchanger shall not exceed 20 feet (6096 mm). Exposed piping and components of the potable water circuit and uninsulated exterior heated surfaces of the heater exchanger shall be insulated.

501.2.2.2 Heater exchanger location. The location of the heater exchanger shall be at an elevation above the top of the water heater. The potable water inlet and outlet of the heater exchanger shall be oriented to cause natural convective circulation in the potable water circuit.

501.2.3 Cold water supply connection. The piping system shall be arranged so that the cold water supply for the water heater passes through to the potable water side of the heat exchanger before entering the water heater.

3. Revise as follows:

608.1 General. A potable water supply system shall be designed, installed and maintained in such a manner so as to prevent contamination from nonpotable liquids, space heating system fluids, solids or gases being introduced into the potable water supply through cross-connections or any other piping connections to the system. Backflow preventer applications shall conform to Table 608.1, except as specifically stated in Sections 608.2 through 608.16.10.

PART II – IRC-P

1. Revise as follows:

P2802.1 Protection of potable water. Piping and components connected to a water heater for space heating applications shall be suitable for use with potable water in accordance with Chapter 29. A heat exchanger shall be installed to isolate the potable water system from the space heating system fluid. Where the space heating system uses a toxic fluid, the heat exchanger shall be a double wall type having an air gap open to atmosphere that separates the chambers between the potable water and the space heating fluid. ~~Water heaters that will be used to supply potable water shall not be connected to a heating system or~~ Components previously used ~~with~~ in a nonpotable-water heating ~~appliances~~ system shall not be used in a potable water heating system. Chemicals for boiler treatment shall not be introduced into the water heater.

2. Add new text as follows:

P2802.3 Cold water supply connection. The piping system shall be arranged so that the cold water supply for the water heater passes through to the potable water side of the heat exchanger before entering the water heater.

P2802.4 Potable water circuit for heat exchanger. The developed length of piping and heat exchanger flow path for the potable water circuit for the heat exchanger shall not exceed 20 feet (6096 mm). Exposed piping and components of the potable water circuit and uninsulated exterior heated surfaces of the heater exchanger shall be insulated.

P2802.5 Heater exchanger location. The location of the heater exchanger shall be at an elevation above the top of the water heater. The potable water inlet and outlet of the heater exchanger shall be oriented to cause natural convective circulation in the potable water circuit.

3. Revise as follows:

P2902.1 General. A potable water supply system shall be designed and installed as to prevent contamination from nonpotable liquids, space heating system fluids, solids or gases being introduced into the potable water supply. Connections shall not be made to a potable water supply in a manner that could contaminate the water supply or provide a cross-connection between the supply and a source of contamination unless an approved backflow-prevention device is provided. Cross-connections between an individual water supply and a potable public water supply shall be prohibited.

Reason (Eatherton, Yates): The purpose of this code change is to add new installation requirements for "dual purpose, single fluid" water heaters that provide hot water for domestic use and space heating purposes. The new requirements will eliminate the potential for dispersion of Legionella bacteria that have been amplified by these dual purpose water heating systems, a known cause of Legionnaires' disease.

Within the last 30 years, specially designed domestic water heaters began to be used as a source of hot water for both domestic use and space heating. While conceptually similar to a dedicated heating boiler that circulates hot water for space heating and provides heat for domestic water heating, "dual purpose" water heater systems differ in one important detail: the space heating water is mixed with the domestic hot water.

This "cross-connection" of water systems can have devastating health consequences for the building occupants.

When there is a demand for space heating, hot water is pumped from the water heater storage tank to the space heating pipe loop(s) and returned to the water heater storage tank. When there is a demand for hot water for domestic use, hot water is drawn from the water heater storage tank. It is assumed that the incoming cold water is being sent first into the space heating system circuits to "flush" the heating water out of the tubing circuits and into the heating vessel. With today's multiple micro-zoned systems it is virtually impossible to guarantee that all stagnant water is being flushed from the heating system circuits, and during extended periods of non occupancy/non use, the heating system circuits are not being flushed at all.

During periods when space heating is not required, water in the space heating pipe loop is not circulated. As the demand for space heating lessens, the water in the space-heating pipe loop can eventually become extremely stagnant as no pumped circulation occurs for days and even months. The space-heating pipe loop, installed in the building's concealed and insulated spaces, is warmed by the natural ambient summer temperatures which results in warming of the stagnant water.

This stagnant, warm water is prime breeding ground for Legionella bacteria, the cause of Legionnaires' disease. Legionella bacteria are commonly found, in small numbers, in all potable water systems – both municipal and private well systems. Many studies have found that Legionella bacteria multiply when the following four conditions are met:

1. water pH of 5.0 to 8.5,
2. temperatures between 55F and 133F (with the ideal range being 80F to 122F),
3. stagnant conditions and
4. the presence of bio-films/rust/sediment (a food/shelter source).

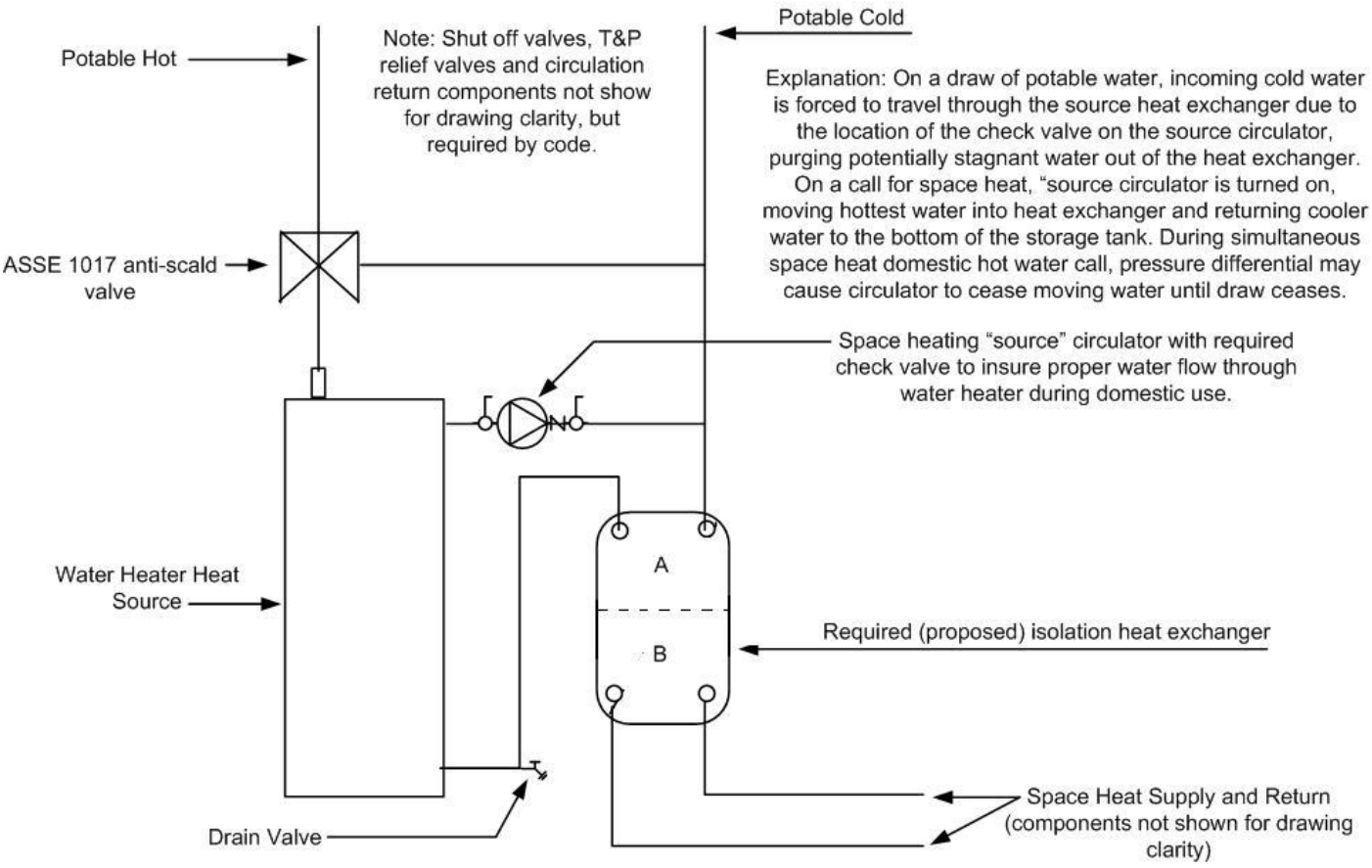
The stagnant, warm water in the space-heating loop satisfies all the requirements for reproduction of Legionella bacteria.

When the demand for space heating increases, the bacteria laden water in the space heating loop is circulated into the water heater storage tank and is eventually drawn out of the tank for domestic hot water use. If the hot water is sprayed or misted such as occurs with flow through a showerhead or vegetable sprayer, the bacteria in the water becomes aerosolized airborne and is easily inhaled by humans.

Even steam from boiled water, a dishwasher, or a kitchen sink filled with hot water can expose the building occupants to Legionella bacteria. This is a serious health threat to humans.

The proposed code requirements for installation isolates the space heating loop water by requiring a heat exchanger to separate the potable hot water from the space heating fluid. To mitigate any stagnant water in the potable domestic hot water circuit of the heat exchanger, the cold water supply is to be connected so that it flushes the heat exchanger upon every draw of domestic hot water. And finally, to reduce the possibility of stagnant water in the domestic hot water supply line to the heater exchanger, the exchanger is located above the water heater and in close proximity to the water heater in order to promote natural water circulation by convection. See drawing below.

This code change is necessary to assure the safety of the building occupants where domestic water heaters are also used for space heating purposes.



Cost Impact: The code change proposal will increase the cost of construction.

This code change eliminate potential litigation costs associated with the contraction of LD, potential loss of life, and possibilities of permanent disability due to current code allowances as it pertains to the use of "open and direct" potable water heating/space heating systems

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P49–07/08
504.6; IRC P2803.6.1

Proponent: Jud Collins, JULYCO, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

504.6 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap located in the same room as the water heater.
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to ~~an indirect~~ a waste receptor or to the outdoors. ~~Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.~~
6. Discharge in a manner that does not cause personal injury or structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed so as to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of such piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section 605.4 or materials tested, rated and approved for such use in accordance with ASME A112.4.1.

PART II – IRC-P

Revise as follows:

P2803.6.1 Requirements for discharge pipe. The discharge piping serving a pressure-relief valve, temperature relief valve or combination valve shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap located in the same room as the water heater.
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to ~~an indirect~~ a waste receptor or to the outdoors. ~~Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.~~
6. Discharge in a manner that does not cause personal injury or structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed so as to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of such piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section 605.4 or materials tested, rated and approved for such use in accordance with ASME A112.4.1.

Reason: The language proposed for deletion is unnecessary. Sections 305.6 and P2603.6 already cover water, soil and waste piping in areas subjected to freezing temperatures. Item 2 of Sections 504.6 and P2803.6.1 already requires the drain to discharge through an air gap located in the same room as the water heater. The term “indirect” is removed because it doesn’t describe a waste receptor.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P50–07/08
504.6; IRC P2803.6.1

Proponent: Jud Collins, JULYCO, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

504.6 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap located in the same room as the water heater.
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to an indirect waste receptor or to the outdoors. Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.
6. Discharge in a manner that does not cause personal injury or structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed so as to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of such piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section 605.4 or materials tested, rated and approved for such use in accordance with ASME A112.4.1.
14. Not terminate or discharge into a pan.

PART II – IRC-P

Revise as follows:

P2803.6.1 Requirements for discharge pipe. The discharge piping serving a pressure-relief valve, temperature-relief valve or combination valve shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap located in the same room as the water heater.
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to an indirect waste receptor or to the outdoors. Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.
6. Discharge in a manner that does not cause personal injury or structural damage.

7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of the piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section P2904.5 or materials tested, rated and approved for such use in accordance with ASME A112.4.1.
14. Not terminate or discharge into a pan.

Reason: This proposed code change is to clarify the intent of the code. While some jurisdictions allow TPRV drains to terminate or discharge into pans, the current code text does not allow this practice. The proposed text is merely stating in plain language what the code already prohibits. The following code sections clearly indicate the practice to be in violation of the code.

Section 802.3 (IRC P2706.1) requires waste receptors to have a removable strainer or basket covering the waste outlet of waste receptors. It also requires waste receptors to be installed in ventilated spaces and prohibits their installation in bathrooms, toilet rooms and inaccessible or unventilated spaces such as a closet or storeroom. Section 802.3.1 (IRC P2706.1) requires waste receptors to be sized for the maximum discharge of all indirect waste pipes served by the receptor. It also requires waste receptors to be installed to prevent splashing or flooding.

A pan for a water heater does not comply with any of these requirements. Pans are required to be installed where leakage of the tanks or connections will cause damage.

Cost Impact: The code change proposal will not increase the cost of construction since this change is only clarifying what the code already requires.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P51–07/08
504.6.1 (New); P2803.6.1.1 (New)

Proponent: Chuck King, Town of Oro Valley, AZ, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Add new text as follows:

504.6.1 Discharge outdoors. Where a drainage pipe that conveys the discharge of a temperature relief, pressure relief or combination temperature and pressure relief valve terminates outdoors, the pipe shall terminate not less than 6 inches (152 mm) and not greater than 24 inches (610 mm) above grade and shall be oriented to discharge flow in a downward direction.

PART II – IRC-P

Add new text as follows:

P2803.6.1.1 Discharge outdoors. Where a drainage pipe that conveys the discharge of a temperature relief, pressure relief or combination temperature and pressure relief valve terminates outdoors, the pipe shall terminate not less than 6 inches (152 mm) and not greater than 24 inches (610 mm) above grade and shall be oriented to discharge flow in a downward direction.

Reason: It is even more critical that direct discharge relief lines from relief valves terminate properly, in a manner currently required for pan drains as shown in Section 504.7.2 and P2801.5.2. The code as written does not provide direction for termination at exterior locations. This allows for the piping termination to be less than 6" above grade. In many regions of the country yearly snowfall and blowing snow can drift up above the pipe

termination. This could lead to a blockage in the pipe due to freezing. The 6" height would be sufficient in most regions and maintains the air break dimension currently specified in item #10. If no dimensions are specified, in areas with heavy rain, cross connection contamination can occur from ponding water when the termination point is at or near grade. The 6" dimension is consistent with the provisions for protection of potable water in Section 608.15.4 atmospheric vacuum breakers.

In many commercial locations the termination point is over concrete or asphalt where pedestrian traffic can occur. By indicating a maximum height we can reduce the height of splashing water when the relief valve releases water. The 24" height dimension will reduce the amount of scalding that can occur by hot water discharged under pressure.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P52–07/08

504.7.1, 504.7.2, Chapter 13 (New); IRC P2801.5.1, P2801.5.2, Chapter 43 (New)

Proponent: Mark Chaffee, Taco, Inc., representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Revise as follows:

504.7.1 Pan size ~~and drain~~. The pan shall be not less that 1.5 inches (38 mm) deep and shall be of ~~sufficient~~ a size and shape to receive all dripping or condensate from the tank or water heater. ~~The pan shall be drained by an indirect waste pipe having a minimum diameter of 0.75 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table 605.4.~~

504.7.2 Pan drain ~~termination~~. The pan shall be drained by an indirect waste pipe having a minimum diameter of 0.75 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table 605.4. The pan drain shall extend full size and terminate over a suitably located indirect waste receptor or floor drain or extend to the exterior of the building and terminate not less than 6 inches (152 mm) and not more than 24 inches (610 mm) above adjacent ground surface.

> **Exception:** Where an existing water heater or hot water storage tank is replaced and a waste receptor, floor drain or a drain pipe extending to the outdoors is not present, the installation of an approved automatic water supply shutoff valve for the water heater or hot water storage tank shall be an alternative to installing the required pan drain piping. The automatic water supply shutoff valve shall comply with CSA TIL No. MSE-50.

2. Add standard to Chapter 13 as follows:

CSA Technical Information Letter No. MSE-50.

PART II – IRC-P

1. Revise as follows:

P2801.5.1 Pan size ~~and drain~~. The pan shall be not less that 1.5 inches (38 mm) deep and shall be of ~~sufficient~~ a size and shape to receive all dripping or condensate from the tank or water heater. ~~The pan shall be drained by an indirect waste pipe having a minimum diameter of 3/4 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table P2904.5.~~

P2801.5.2 Pan drain ~~termination~~. The pan shall be drained by an indirect waste pipe having a minimum diameter of 3/4 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table P2904.5. The pan drain shall extend full size and terminate over a suitably located indirect waste receptor or floor drain or extend to the exterior of the building and terminate not less than 6 inches (152 mm) and not more than 24 inches (610 mm) above adjacent ground surface.

Exception: Where an existing water heater or hot water storage tank is replaced and a waste receptor, floor drain or a drain pipe extending to the outdoors is not present, the installation of an approved automatic water supply shutoff valve for the water heater or hot water storage tank shall be an alternative to installing the required pan drain piping. The automatic water supply shutoff valve shall comply with CSA TIL No. MSE-50.

2. Add standard to Chapter 43 as follows:

CSA Technical Information Letter No. MSE-50.

Reason: In an overwhelming amount of existing properties there is no provision for a drain line or the presence of an indirect waste receptor or floor drain. The ability in most installations to install a floor drain or to provide external access to the building structure is very difficult and expensive. A suitable shutoff device provides the same benefit of preventing catastrophic flooding and damage as is the intent of a drain line, but it also shuts down the cold water line so upon a tank failure it does not keep refilling and leaking.

Cost Impact: The code change proposal will not increase the cost of construction. The code change may reduce the cost of construction, especially in existing structures that need to comply with the code when replacing a water heater.

Analysis: CSA TIL No. MSE-50 is a Technical Information Letter and not a CSA standard. The document does not meet ICC criteria for referenced standards.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P53–07/08

202, 602.1, 602.2, 602.3, 602.3.1, 602.3.3, 608.16, 608.16.10 (New)

Proponent: John M. Rattenbury, RMS Engineering LLC

1. Add new definitions as follows:

SECTION 202
GENERAL DEFINITIONS

GRAY WATER. Water, free of human and animal waste, that is discharged from lavatories, sinks, bathtubs, showers, clothes washers, laundry sinks, other fixtures and drains.

RAIN WATER. Water collected from the roof of a building or other catchment surface during a rainfall event and stored in a cistern for non-potable use.

2. Revise definition as follows:

NONPOTABLE WATER. Water not safe for drinking, personal or culinary utilization but safe for use as irrigation water, flushing of water closets and urinals, and other approved uses.

3. Revise as follows:

602.1 General. Every structure equipped with plumbing fixtures and utilized for human occupancy or habitation shall be provided with a potable supply of water in the amounts and at the pressures specified in this chapter. Structures with an occupancy of 25 or more occupants for at least 60 days per year shall be supplied by an EPA regulated publicly- or privately-owned drinking water system. Private water sources for structures intended for less than 25

occupants shall be approved by the local public health authority. Where the potable water supplies are limited or the potable water supply consumption is required to be reduced for water conservation reasons, non-potable water shall be used supply to water closets, urinals, landscape irrigation and other approved uses.

602.2 Potable water required. Only potable water shall be supplied to plumbing fixtures that provide water for drinking, bathing or culinary purposes, or for the processing of food, medical or pharmaceutical products. Unless otherwise provided in this code, potable water shall be supplied to all plumbing fixtures.

602.3 Individual water supply. Where a potable public water supply is not available, individual sources of potable water supply shall be utilized. Where the potable water supplies are limited, non-potable water shall be used supply to water closets, urinals, landscape irrigation and other approved uses.

602.3.1 Sources. Dependent on geological and soil conditions and the amount of rainfall, individual water supplies are of the following types: drilled well, driven well, dug well, bored well, spring, stream or rain water cistern. Surface bodies of water and land cisterns shall not be sources of individual water supply unless properly treated by approved means to prevent contamination.

602.3.3 Water quality. Water from an individual water supply to be used as potable water shall be approved as potable by the authority having jurisdiction prior to connection to the plumbing system.

608.16 Connections to the potable water system. Connections to the potable water system shall conform to Sections 608.16.1 through ~~608.16~~ 608.16.10.

4. Add new text as follows:

608.16.10 Potable back-up supply to nonpotable distribution. Where a nonpotable water supply is used in a building, a back-up source from the potable supply shall be available. Where systems are connected to a nonpotable water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

Reason: The purpose of the proposed code change is to clarify the permitted use of potable and nonpotable alternative water sources. Some jurisdictions interpret Section 602.2 to say that no nonpotable use is permitted for toilets and urinals (e.g., rain water and gray water). This is contrary to the intent of the code and to the ongoing efforts to conserve limited drinking water supplies around the country.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P54–07/08
Table 604.3; IRC Table P2903.1

Proponent: Robert Evans, PE, American Society of Plumbing Engineers

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise table as follows:

TABLE 604.3
WATER DISTRIBUTION SYSTEM DESIGN CRITERIA
REQUIRED CAPACITY AT FIXTURE SUPPLY PIPE OUTLETS

FIXTURE SUPPLY OUTLET SERVING	FLOW RATE[a] (gpm)	FLOW PRESSURE (psi)
Bathtub, pressure balanced or thermostatic mixing valve	4	20
Bidet, thermostatic mixing	2	20
Shower, ~~temperature controlled~~ pressure balancing or thermostatic mixing valve	3	20
Urinal, valve	~~15~~ 12	~~15~~ 25
Water closet, blow out, flushometer valve	~~35~~ 25	~~25~~ 45
Water closet, flushometer tank	1.6	~~15~~ 20
Water closet, siphonic, flushometer valve	25	~~15~~ 35
Water closet, tank, close coupled	3	~~8~~ 20

(Portions of table not shown remain unchanged)

a. For additional requirements for flowrates and quantities, see Section 604.4.

PART II – IRC-P

Revise table as follows:

TABLE P2903.1
REQUIRED CAPACITIES AT POINT OF OUTLET DISCHARGE

FIXTURE AT POINT OF OUTLET	FLOW RATE (gpm)	FLOW PRESSURE (psi)
Bathtub, pressure balanced or thermostatic mixing valve	4	20
Bidet, thermostatic mixing	2	20
Shower, ~~temperature controlled~~ pressure balancing or thermostatic mixing valve	3	20
Water closet, flushometer tank	1.6	~~15~~ 20
Water closet, tank, close coupled	3	~~8~~ 20

(Portions of table not shown remain unchanged)

Reason: Tables 604.3 and P2903.1 are out of date and inconsistent with proper plumbing engineering design. The ASME A112.19.2 standard specifies the minimum pressure requirements for flush valves for water closets and urinals. The standard also specifies the minimum pressure for close coupled water closets. The change to these pressures is consistent with the standard. The flow rate for a blow out water closet reflects the flow required to properly operate a 1.6 gpf blowout water closet.

The code changed to requiring protection on bathtub fill valves and bidet fill valves. There needs to be a new category that lists the minimum pressures for thermostatic mixing valves for bathtubs and bidets. The new pressure is consistent with the manufacturer's requirements and the standards.

For showers, a change was made to clarify that the showers identified are either pressure balancing or thermostatic mixing.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P55–07/08
202; IRC R202

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise definition as follows:

SECTION 202
GENERAL DEFINITIONS

QUICK-CLOSING VALVE. ~~A~~ An electronic solenoid valve ~~or faucet~~ that closes automatically in one complete operation ~~when released manually or that is controlled by mechanical means for fast-action closing~~.

PART II – IRC

Revise definition as follows:

SECTION R202
DEFINITIONS

QUICK-CLOSING VALVE. ~~A~~ An electronic solenoid valve ~~or faucet~~ that closes automatically in one complete operation ~~when released manually or controlled by mechanical means for fast-action closing~~.

Reason: There is no clear interpretation of this definition some folks say that virtually all faucets and valves are “quick closing” and others say that none are, and then everywhere in between.

Current text in IRC-P 2903.5 and IPC-604.9 states water hammer arrestors are required where quick closing valves are utilized. No one is actually installing these devices at every faucet because that is not necessary or reasonable. But the code must clearly state its intent. It would seem in this case it is clear that water hammer arrestors are only necessary for electronic solenoid type valves, because they close automatically at a high rate of speed. Webster’s New World Dictionary defines a solenoid as “a coil of wire with a movable iron core, used as an electromagnetic switch.” The definition of electromagnetic describes the “flow of electric current” which indicates that electricity is involved with the operation. This clearly separates mechanical or manual devices from the electronic valves for the purposes of the requirements for water hammer arrestors. Faucets and shut off valves do not need water hammer arrestors, electronic solenoids that close in one operation, do. The reason for the inclusion of the language “in one operation” is that some solenoids are available that actually close in “stages” specifically to avoid hammer. This proposed text will make it clear that these type devices do not require the installation of water hammer arrestors either.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P56–07/08
604.9; IRC P2903.5

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

604.9 Water-hammer arrestors. ~~The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A~~ Water-hammer arrestors shall be installed in water distribution systems where quick-closing valves are ~~used~~ utilized. Water-hammer arrestors shall be installed in accordance with manufacturer's ~~specifications~~ installation instructions. Water-hammer arrestors shall conform to ASSE 1010.

PART II – IRC-P

Revise as follows:

P2903.5 (Supp) Water hammer arrestors. ~~The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer.~~ Water-hammer arrestors shall be installed in water distribution systems where quick-closing valves are utilized. Water hammer arrestors shall be installed in accordance with the manufacturer's installation instructions. Water hammer arrestors shall conform to ASSE 1010.

Reason: What this proposal does is clarify exactly where water hammer arrestors are required to be installed. This is a much needed correction of a code section that is consistently misapplied. Currently some require water hammer arrestors be installed at a ¼ turn shut off ball valve that may not be used for many years. Others require they be installed on any single handle faucet. Some still require them be installed at a flush valve even when the definitions clearly identify a flush valve is not a quick closing valve. However, most require individual arrestors at every washing machine hot and cold, ice makers and humidifiers. This new text clarifies where they must be installed and that a manufacturer can determine if they need to be installed at each solenoid valve or a single device to serve the entire system.

The stricken text that addresses flow velocity is a function of the sizing criteria for the piping system served not to determine the use of a water hammer arrestor or not. The velocity that is associated with water hammer is that of "shock" pressure in a piping system, not design velocity. Designers will rarely design a water system using the velocity values produced by "shock" pressure in the system, these numbers are typically three times that of normal design velocity. Water hammer arrestors are just that, a device that controls the "hammer" effect from "shock" in water in a piping system.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P57–07/08
Table 605.3, Table 605.5, Chapter 13 (New)

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association

1. Revise tables as follows:

TABLE 605.3 (Supp)
WATER SERVICE PIPE

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe	ASTM D 2239; ASTM D 3035; CSA B137.1

(Portions of table not shown remain unchanged)

TABLE 605.5 (Supp)
PIPE FITTINGS

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe	ASTM D 2609; ASTM D 2683; ASTM D 3261; ASTM F 1055; CSA B137.1

(Portions of table not shown remain unchanged)

2. Add standards to Chapter 13 as follows:

ASTM

D 3035-03 Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter

D 3261-03 Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing

D 2683-04 Standard Specification for Socket-Type Polyethylene Fittings for Outside Diameter- Controlled Polyethylene Pipe and Tubing

F 1055-98 Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing

Reason: To add ASTM D3035 for PE pipe to Table 605.3 and suitable fittings to Table 605.5.

NSF indicates there are currently 21 manufacturers and 332 products listed under the ASTM D 3035 standard for polyethylene pipe.

ASTM D 3035 is a consensus standard for "Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter". This specification covers polyethylene (PE) pipe made in thermoplastic pipe dimension ratios based on outside diameter and pressure rated for water. All pipes produced under this specification may be used for the transport of water and other applications.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standards proposed for inclusion in the code, ASTM D3035, D3261, D2683 and F1055, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P58–07/08
Table 605.4; IRC Table P2904.5

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Noveon

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise table as follows:

TABLE 605.4 (Supp)
WATER DISTRIBUTION PIPE

MATERIAL	STANDARD
Chlorinated Poly (Vinyl Chloride)-aluminum-chlorinated poly (vinyl Chloride) CPVC-AL-CPVC	ASTM D 2846

(Portions of table not shown remain unchanged)

PART II – IRC-P

Revise table as follows:

TABLE P2904.5 (Supp)
WATER DISTRIBUTION PIPE

MATERIAL	STANDARD
Chlorinated Poly (Vinyl Chloride)-aluminum-chlorinated poly (vinyl Chloride) CPVC-AL-CPVC	ASTM D 2846

(Portions of table not shown remain unchanged)

Reason: This code change recognizes a somewhat new technology that is currently being produced and used on a limited basis. It has a NSF specification, and IAPMO IGC and a project is underway at ASTM to add requirements to D2846 and should be finished in time to be included in the 2009 code. The piping uses the same fittings currently approved for use with CPVC in the UPC (ASTM F438 and F439).

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D

P59–07/08

Table 605.5, 605.6 (New), Table 605.6 (New); IRC Table P2904.6, P2904.7 (New), Table P2904.7 (New)

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Revise table as follows:

TABLE 605.5 (Supp)
PIPE FITTINGS

MATERIAL	FITTING STANDARD
Chlorinated polyvinyl chloride (CPVC) plastic	ASSE 1061; ~~ASTM D 2846~~; ASTM F 437; ASTM F 438; ASTM F 439; CSA B137.6
~~Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)~~	~~ASTM F 1986~~
Fittings for cross-linked polyethylene (PEX) plastic tubing	ASSE 1061; ~~ASTM F 877;~~ ASTM F 1807; ASTM F 1960; ASTM F 2080; ASTM F 2098;ASTM F 2159; ASTM F 2434; CSA B137.5

(Portions of table not shown do not change)

2. Add new text and table as follows:

605.6 Systems. Pipe and fitting systems shall comply with the applicable standards listed in Table 605.6.

TABLE 605.6
SYSTEM STANDARDS - PIPE & FITTINGS

MATERIAL	SYSTEM STANDARD
Chlorinated polyvinyl chloride (CPVC) plastic systems	ASTM D 2846
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE) systems	ASTM F 1986
Cross-linked polyethylene (PEX) plastic systems	ASTM F 877

PART II – IRC-P

1. Revise table as follows:

TABLE P2904.6 (Supp)
PIPE FITTINGS

MATERIAL	FITTING STANDARD
Chlorinated polyvinyl chloride (CPVC) plastic	ASSE 1061; ~~ASTM D 2846~~; ASTM F 437; ASTM F 438; ASTM F 439; CSA B137.6
~~Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)~~	~~ASTM F 1986~~
Fittings for cross-linked polyethylene (PEX) plastic tubing	ASSE 1061; ~~ASTM F 877;~~ ASTM F 1807; ASTM F 1960; ASTM F 2080; ASTM F 2098;ASTM F 2159; ASTM F 2434; CSA B137.5

(Portions of table not shown do not change)

2. Add new text and table as follows:

P2904.7 Systems. Pipe and fitting systems shall comply with the applicable standards listed in Table P2904.7.

TABLE P2904.7
SYSTEM STANDARDS - PIPE & FITTINGS

MATERIAL	SYSTEM STANDARD
Chlorinated polyvinyl chloride (CPVC) plastic systems	ASTM D 2846
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE) systems	ASTM F 1986
Cross-linked polyethylene (PEX) plastic systems	ASTM F 877

Reason: To expand the table structure, and better illustrate the intent of system standards, a table specifically for fittings that are a part of pipe and fitting "systems" is proposed.

There are now a fair number of standards for plumbing systems that are "systems standards" that contain both pipe and fitting information. These dedicated standards for fitting systems should be separated into a new table and out of the general fittings table. This action would better clarify the intent of these standards.

Pipes and tubes with system standards would be left alone in their current tables as these indicate approved applications.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P60–07/08
605.16.2, 605.22.2, 705.14.2; IRC P2904.9.1.2, P2904.9.1.3, P3003.14.2

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing IPS Corp.

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

605.16.2 Solvent cementing. Joint surfaces shall be clean and free from moisture, and an approved purple primer or clear detectable primer shall be applied. Solvent cement, orange in color and conforming to ASTM F 493, shall be applied to all joint surfaces. The joint shall be made while the cement is wet, and in accordance with ASTM D 2846 or ASTM F 493. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM F 493.
2. The solvent cement used is yellow in color.
3. The solvent cement is used only for joining ½ inch (12.7 mm) through 2 inch (51 mm) diameter CPVC pipe and fittings.
4. The CPVC pipe and fittings are manufactured in accordance with ASTM D 2846.

605.22.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer or clear detectable primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564 or CSA-B137.3 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

705.14.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer or clear detectable primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

PART II – IRC-P

Revise as follows:

P2904.9.1.2 CPVC plastic pipe. Joint surfaces shall be clean and free from moisture and an approved purple primer or clear detectable primer shall be applied. Solvent cement for CPVC plastic pipe, orange in color and conforming to ASTM F 493, shall be applied to all joint surfaces. The parts shall be joined while the cement is wet and in accordance with ASTM D 2846 or ASTM F 493. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM F 493.
2. The solvent cement used is yellow in color.
3. The solvent cement is used only for joining ½-inch (13 mm) through 2-inch (51 mm) diameter CPVC pipe and fittings.
4. The CPVC pipe and fittings are manufactured in accordance with ASTM D 2846.

P2904.9.1.3 PVC plastic pipe. A purple primer or clear detectable primer that conforms to ASTM F 656 shall be applied to PVC solvent cemented joints. Solvent cement for PVC plastic pipe conforming to ASTM D 2564 shall be applied to all joint surfaces.

P3003.14.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer or clear detectable primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3 or CSA B181.2 shall be applied to all joint surfaces. The joint shall be made while the cement is wet, and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

Reason: This code change recognizes a new technology that allows a clear primer to be used which is detectable with a UV or “blue light”. The code change also underscores the fact that a primer must be detectable either by color or other means to assure it is used when required.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P61–07/08
705.8.2, 705.14.2; IRC P3003.9.2, P3003.14.2

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

705.8.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining drain waste and vent PVC pipe and fittings in non-pressure applications in sizes up to and including 4 inch (100 mm) in diameter.

705.14.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTMD2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining drain waste and vent PVC pipe and fittings in non-pressure applications in sizes up to and including 4 inch (100 mm) in diameter

PART II – IRC-P

Revise as follows:

P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3 or CSA B181.2 shall be applied to all joint surfaces. The joint shall be made while the cement is wet, and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining drain waste and vent PVC pipe and fittings in non-pressure applications in sizes up to and including 4 inch (100 mm) in diameter

P3003.14.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3 or CSA B181.2 shall be applied to all joint surfaces. The joint shall be made while the cement is wet, and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining drain waste and vent PVC pipe and fittings in non-pressure applications in sizes up to and including 4 inch (100 mm) in diameter.

Reason: To introduce an exception in chapter 7, Sanitary Drainage, allowing for the practice of one-step solvent cementing of non-pressure DWV systems 4" and under.

This exception allows for an optional one-step procedure for joining non-pressure DWV PVC piping systems 4" in diameter and below with solvent cement conforming to ASTM D 2564. This method is practiced, and the code should include specific language to indicate when it is acceptable.

Pressure testing completed by NSF International has shown that solvent cement conforming to ASTM D 2564, when used without primer on PVC DWV pipe and fittings, both solid wall and cell core, generates bonding forces well in excess of what is required for these systems. See attached NSF International report.

Bibliography: NSF International report J-00036842.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P62–07/08
605.17.2; IRC P2904.9.1.4.2

Proponent: William Chapin, Cash Acme

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

605.17.2 (Supp) Mechanical joints. Mechanical joints shall be installed in accordance with the manufacturer's instructions. Fittings for crosslinked polyethylene (PEX) plastic tubing as described in ~~ASTM F 877, ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098, ASTM F 2159 and ASTM F 2434~~ shall comply with the applicable standards listed in Table 605.5 and shall be installed in accordance with the manufacturer's instructions. PEX tubing shall be factory marked with the appropriate standards for the fittings that the PEX manufacturer specifies for use with the tubing.

PART II – IRC-P

Revise as follows:

P2904.9.1.4.2 Mechanical joints. Mechanical joints shall be installed in accordance with the manufacturer's instructions. Fittings for cross-linked polyethylene (PEX) plastic tubing ~~as described in ASTM F 877, ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2098, ASTM F 2159, ASTM F 2434 and ASSE 1061~~ shall comply with the applicable standards listed in Table P2904.6 and shall be installed in accordance with the manufacturer's installation instructions. PEX tubing shall be factory marked with the appropriate standards for the fittings that the PEX manufacturer specifies for use with the tubing.

Reason: There are PEX Fittings standards listed in the tables that do not appear in this section and this can lead to confusion and misinterpretation. Table 605.5 (Table P2904.6 in IRC) is the reference source for determining appropriate pipe fittings; therefore there is no need to rewrite this section every time a new joining method is developed.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P63–07/08
608.8, 608.8.2; IRC P2901.1

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

608.8 Identification of potable and nonpotable water. In all buildings where ~~two or more water distribution systems, one potable water and the other~~ a nonpotable water system ~~are~~ is installed, ~~each~~ the nonpotable system shall be identified either by color marking or metal tags in accordance with Sections 608.8.1 through 608.8.3. Any nonpotable outlet that could inadvertently be used for drinking or domestic purposes shall be posted.

608.8.2 Color. The color of the pipe identification shall be discernable and consistent throughout the building. The color purple shall be used to identify municipally reclaimed water, rain water, and gray water distribution systems.

PART II – IRC-P

Revise as follows:

P2901.1 Potable water required. Dwelling units shall be supplied with potable water in the amounts and pressures specified in this chapter. In a building where ~~both~~ a ~~potable and~~ nonpotable water-distribution system ~~are~~ is installed, ~~each~~ the nonpotable system shall be identified by color marking, metal tags or other appropriate method. Where color is utilized for marking, purple shall be used to identify municipally reclaimed water, rain water, and gray water distribution systems. Any nonpotable outlet that could inadvertently be used for drinking or domestic purposes shall be posted.

Reason: To improve the language and requirements section on non-potable water systems.

Green and Sustainable Building rating systems and standards are being used and developed that encourage the use of various non-potable water systems in commercial and residential buildings and implementation is on the rapid increase. In order to have a consistent color scheme when color is used to identify piping for these systems, we suggest that purple be chosen. This change would also correct a few oversights in the IPC section with language from the IRC section.

Numerous purple products already exist in the marketplace for reclaimed water systems and the color is understood by many to imply non-potable water. Non potable water standards, such as CSA standard B128.1-06 *Design and installation of non-potable water systems*, section 12.2.1 states purple clearly;

Pipe for non-potable water systems shall be
(a) marked with the legend WARNING: NON-POTABLE WATER — DO NOT DRINK; and*
(b) purple in colour, or marked with a continuous purple stripe.

The proposed change also corrects some weakness in the current code language that would not require one to identify a non-potable water system in a building in the absence of a potable system. There also appears to be important language missing that exists in the IRC section P2901.1 that should be carried over; *"Any nonpotable outlet that could inadvertently be used for drinking or domestic purposes shall be posted."*

Bibliography: CSA standard B128.1-06 *Design and installation of non-potable water systems*

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P64–07/08
608.16.11 (New)

Proponent: Joel Hipp, representing Hobart, Division of ITW Food Equipment Group, LLC/Hobart

Add new text as follows:

608.16.11 Commercial dishwashing machines. The water supply connection to the final rinse, fill, drain water tempering and condenser inlets on a commercial dishwashing machine shall be protected against backflow in accordance with Section 608.13.1, 608.13.2, 608.13.3, 608.13.5, 608.13.6 or 608.13.8.

Reason: Allow a "low hazard" device (608.13.3) for protection of the water supply connection of a commercial dishwasher.
The 2005 NSF Joint Committee agreed to work with ASSE to update Standard 1004 to include backflow preventers with intermediate atmospheric vents. Once ASSE 1004 is revised, NSF 3 can begin review process to update accordingly. The FDA Food Code, sections 5-202.14 and 5-203.14 simply require an approved backflow prevention device that meets ASSE standards.
The backflow prevention requirements in NSF Standard 2 for FOOD EQUIPMENT allow several low hazard devices. Included are ASSE types 1022, 1024 and 1032.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P65–07/08
613.1

Proponent: Shawn Martin, Plumbing Manufacturers Institute

Revise as follows:

613.1 Temperature-actuated mixing valves. Temperature-actuated mixing valves, ~~which are~~ installed to reduce water temperatures to defined limits, shall comply with ASSE 1017 and shall be installed at the hot water source.

Reason: To clarify that these temperature activated devices are not intended for end use applications and are to be installed at the heat source

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P66–07/08
Table 702.1, Table 702.2, Table 702.3, Table 702.4, Chapter 13 (New)

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association

1. Revise tables as follows:

TABLE 702.1
ABOVE-GROUND DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Polyvinylidene Fluoride (PVDF) plastic pipe	ASTM F1673; CAN/CSA B181.3

(Portions of table not shown remain unchanged)

TABLE 702.2
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Polyvinylidene Fluoride (PVDF) plastic pipe	ASTM F1673; CAN/CSA B181.3

(Portions of table not shown remain unchanged)

TABLE 702.3
BUILDING SEWER PIPE

MATERIAL	STANDARD
Polyvinylidene Fluoride (PVDF) plastic pipe	ASTM F1673; CAN/CSA B181.3

(Portions of table not shown remain unchanged)

TABLE 702.4
PIPE FITTINGS

MATERIAL	STANDARD
Polyvinylidene Fluoride (PVDF) plastic pipe	ASTM F1673; CAN/CSA B181.3

(Portions of table not shown remain unchanged)

2. Add standards to Chapter 13 as follows:

ASTM
F1673-01(2005) Standard Specification for Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems

Reason: To add PVDF plastic pipe manufactured under ASTM F1673 and CSA B181.3 as an acceptable material to the code.

There are consensus standards that control requirements for material, pipe and fittings of Polyvinylidene Fluoride (PVDF) corrosive waste drainage systems.

ASTM F1673, "Standard Specification for Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems", is a consensus standard that contains information for the manufacture of polyvinylidene drainage systems for corrosive applications.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standards proposed for inclusion in the code, ASTM F1673, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P67–07/08
705.18 (New), 705.18.1 (New), 705.18.2 (New), Chapter 13 (New)

Proponent: Christopher G. Ziu, Orion Enterprises, Inc. (subsidiary of Watts Water technologies, Inc.), representing Orion Enterprises

1. Add new text as follows:

705.18 Polyvinylidene fluoride plastic. Joints between polyvinylidene plastic pipe and fittings shall comply with Sections 705.18.1 and 705.18.2.

705.18.1 Heat-fusion joints. Heat-fusion joints for polyvinylidene fluoride pipe and tubing joints shall be installed with socket-type heat-fused polyvinylidene fluoride fittings or electrofusion polyvinylidene fittings and couplings. Joint surfaces shall be clean and free from moisture. The joint shall be undisturbed until cool. Joints shall be made in accordance with ASTM F1673.

705.18.2 Mechanical and compression sleeve joints. Mechanical and compression sleeve joints shall be installed in accordance with the manufacturer's instructions.

2. Add standard to Chapter 13 as follows:

ASTM
F1673-04 Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems

Reason: Polyvinylidene Fluoride has been used since 1992 in corrosive waste piping systems and is the only material which formally carries a UL listing to UL 723 for use in return air plenums and other fire rated areas for applications involving corrosive waste. PVDF has been listed by ICC-ES in Files 98•38 and 98•38•1 on the basis of ASTM F1673, which is an accepted standard. ASTM F1673 has also been used as the basis for listing by NSF for at least two other manufactured products which have been readily sold and accepted by authorities having jurisdiction in jurisdictions using the *International Plumbing Code*.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, ASTM F1673, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P68–07/08
Table 702.1, Table 702.2, Table 702.4, Chapter 13 (New)

Proponent: Christopher G. Ziu, Orion Enterprises, Inc. (subsidiary of Watts Water technologies, Inc.), representing Orion Enterprises

1. Revise tables as follows:

TABLE 702.1
ABOVE-GROUND DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Polyolefin pipe	ASTM F1412; CSA B181.3
Polyvinylidene fluoride pipe	ASTM F1673

(Portions of table not shown remain unchanged)

TABLE 702.2
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Polyvinylidene fluoride pipe	ASTM F1673

(Portions of table not shown remain unchanged)

TABLE 702.4
PIPE FITTINGS

MATERIAL	STANDARD
Polyvinylidene fluoride pipe	ASTM F1673

(Portions of table not shown remain unchanged)

2. Add standard to Chapter 13 as follows:

ASTM
F1673-04 Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems

Reason: ASTM F1412 is properly referenced, in addition to CSA B181.3 for polyolefin pipe in Tables 702.2 and 702.4 but is missing from Table 702.1. Polyvinylidene Fluoride has been used since 1992 in corrosive waste piping systems and is the only material which formally carries a UL listing to UL 723 for use in return air plenums and other fire rated areas for applications involving corrosive waste. PVDF has been listed by ICC-ES in Files 98•38 and 98•38•1 on the basis of ASTM F1673, which is an accepted standard. ASTM F1673 has also been used as the basis for listing by NSF for at least two other manufactured products which have been readily sold and accepted by authorities having jurisdiction in jurisdictions using the *International Plumbing Code*.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, ASTM F1673, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P69–07/08

Tables 702.1, Table 702.2, Table 702.3, Chapter 13 (New); IRC Table P3002.1(1), Table P3002.1(2), Table P3002.2, Chapter 43 (New)

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Revise tables as follows:

TABLE 702.1
ABOVE-GROUND DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628;CSA B181.1
Brass pipe	ASTM B 43
Cast-iron pipe	ASTM A 74; ASTM A 888;CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488; ASTM F1760
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 891; ASTM F 1488; ASTM F1760
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488; ASTM F1760
Copper or copper-alloy pipe	ASTM B 42; ASTM B 302
Copper or copper-alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Galvanized steel pipe	ASTM A 53
Glass pipe	ASTM C 1053
Polyolefin pipe	ASTM F 1412; CSA B181.3
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949;CSA B181.2
Stainless steel drainage systems, Type 316L	ASME A112.3.1

TABLE 702.2
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; CSA B181.1
Asbestos-cement pipe	ASTM C 428
Cast-iron pipe	ASTM A 74; ASTM A 888; CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488; ASTM F1760
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 891; ASTM F 1488; ASTM F1760
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488; ASTM F1760
Copper or copper-alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Polyolefin pipe	ASTM F 1412; CSA B181.3
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; CSA B181.2
Stainless steel drainage systems, Type 316L	ASME A112.3.1

TABLE 702.3
BUILDING SEWER PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM D 2751; ASTM F 628
Asbestos-cement pipe	ASTM C 428
Cast-iron pipe	ASTM A 74; ASTM A 888; CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488; ASTM F1760
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 891; ASTM F 1488; ASTM F1760
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488; ASTM F1760
Coextruded composite ABS sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488
Coextruded composite PVC sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488; ASTM F1760
Coextruded PVC sewer and drain PS25, PS50, PS100 (cellular core)	ASTM F 1488
Copper or copper-alloy tubing (Type K or L)	ASTM B 75; ASTM B 88; ASTM B 251
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR 28, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; CSA B182.2; CSA B182.4
Stainless steel drainage systems, Type 316L	ASME A112.3.1
Vitrified clay pipe	ASTM C 4; ASTM C 700

2. Add standard to Chapter 13 as follows:

ASTM

F1760-01(2005) Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC) Non-Pressure Plastic Pipe Having Reprocessed-Recycled Content

PART II – IRC-P

1. Revise tables as follows:

TABLE P3002.1(1)
ABOVE-GROUND DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628;CSA B181.1
Brass pipe	ASTM B 43
Cast-iron pipe	ASTM A 74; ASTM A 888;CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488; ASTM F1760
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 891; ASTM F 1488; ASTM F1760
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488; ASTM F1760
Copper or copper-alloy pipe	ASTM B 42; ASTM B 302
Copper or copper-alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Galvanized steel pipe	ASTM A 53
Glass pipe	ASTM C 1053
Polyolefin pipe	ASTM F 1412; CSA B181.3
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949;CSA B181.2
Stainless steel drainage systems, Type 316L	ASME A112.3.1

TABLE P3002.1(2)
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; CSA B181.1
Asbestos-cement pipe	ASTM C 428
Cast-iron pipe	ASTM A 74; ASTM A 888; CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488; ASTM F1760
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 891; ASTM F 1488; ASTM F1760
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488; ASTM F1760
Copper or copper-alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Polyolefin pipe	ASTM F 1412; CSA B181.3
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; CSA B181.2
Stainless steel drainage systems, Type 316L	ASME A112.3.1

TABLE P3002.2
BUILDING SEWER PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM D 2751; ASTM F 628
Asbestos-cement pipe	ASTM C 428
Cast-iron pipe	ASTM A 74; ASTM A 888; CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488; ASTM F1760
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 891; ASTM F 1488; ASTM F1760
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488; ASTM F1760
Coextruded composite ABS sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488
Coextruded composite PVC sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488; ASTM F1760
Coextruded PVC sewer and drain PS25, PS50, PS100 (cellular core)	ASTM F 1488
Copper or copper-alloy tubing (Type K or L)	ASTM B 75; ASTM B 88; ASTM B 251
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR 28, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; CSA B182.2; CSA B182.4
Stainless steel drainage systems, Type 316L	ASME A112.3.1
Vitrified clay pipe	ASTM C 4; ASTM C 700

2. Add standard to Chapter 43 as follows:

ASTM

F1760-01(2005) Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC) Non-Pressure Plastic Pipe Having Reprocessed-Recycled Content"

Reason: To add ASTM F1760 as an acceptable material to the code.

There is a consensus ASTM standard that controls recycled content PVC pipe made using coextrusion technology. There is at least one manufacturer producing the product.

ASTM F1760, "Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC) Non-Pressure Plastic Pipe Having Reprocessed-Recycled Content", is a consensus standard that contains information for the manufacture of coextruded Poly(Vinyl Chloride) (PVC) plastic pipe where the inner and outer layers are made of virgin PVC compound and the center layer has reprocessed-recycled PVC content. The pipe is for nonpressure use in three series: Sewer-Drain series with a sewer-pipe outside diameter and a pipe stiffness of 46 psi (320 kPa), IPS Schedule 40 series, and IPS Pipe Stiffness (PS) series with pipe stiffnesses of 100 psi (690 kPa) and 120 psi (830 kPa).

SDR 28 is added because it is listed in the CSA B182.2 standard, and is between existing wall thickness SDR 26 and 35 and therefore should also be in the table.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, ASTM F1760, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P70–07/08

Table 702.1, Table 702.2, Table 702.3, Table 702.4; IRC Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3

Proponent: Marty Ocedek representing Genova Products, Inc.

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise tables as follows:

TABLE 702.1
ABOVE-GROUND DRAINAGE AND VENT PIPE

PIPE ~~MATERIAL~~	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200 DWV~~	~~ASTM F 1488~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV)~~ in IPS diameters, including schedule 40, DR 22, (PS 200), and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall	ASTM D 2949, ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE 702.2
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

PIPE ~~MATERIAL~~	STANDARD
Acrylonitrile butadiene styrene(ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200, DWV~~	~~ASTM F 1488~~

TABLE 702.2
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE
(continued)

PIPE ~~MATERIAL~~	STANDARD
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV)~~ in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS140); with a solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall	ASTM D 2949; ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE 702.3
BUILDING SEWER PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core,or composite wall	ASTM D 2661; ~~ASTM D 2751~~; ASTM F 628; ASTM F 1488
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200, DWV~~	~~ASTM F 1488~~
~~Coextruded composite~~ Acrylonitrile butadiene styrene (ABS) plastic pipe in sewer and drain ~~DR-PS~~ diameters, including SDR 42 (PS 20), PS 35, SDR 35 (PS 45), PS 50, PS 100, PS 140, SDR 23.5 (PS 150) and PS 200; with a solid, cellular core, or composite wall	ASTM F 1488; ASTM D 2751
~~Coextruded composite~~ Polyvinyl Chloride (PVC) plastic pipe in sewer and drain ~~DR-PS~~ diameters, including PS 25, SDR 41 (PS 28), PS 35, SDR 35 (PS 46), PS 50, PS 100, SDR 26 (PS 115), PS 140, and PS 200; with a solid, cellular core, or composite wall	ASTM F 891; ASTM F 1488; ASTM D 3034; CSA B182.2; CSA B182.4
~~Coextruded PVC sewer and drain PS25, PS50, PS100, (cellular core)~~	~~ASTM F 891~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV, SDR 26, SDR 35, SDR 41, PS50, PS100),~~ in IPS diameters, including schedule 40, DR 22 (PS200) and DR 24 (PS140); with solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~: ASTM F 891, ~~ASTM D 3034;~~ ~~CSA B182.2, CSA B 182.4~~ ASTM F 1488
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall.	ASTM D 2949, ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE 702.4
PIPE FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters	ASTM D 2661; ASTM D 3311; ASTM F 628; CSA B 181.1
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid or cellular core)~~	~~ASTM D 2661; ASTM D 3311; ASTM F 628~~
~~Coextruded composite PVC DWV schedule 40 IPS-DR, PS 140, PS 200 (solid or cellular core)~~	~~ASTM D 2665; ASTM D 3311; ASTM F 891~~
~~Coextruded composite~~ Acrylonotrile butadiene styrene (ABS) plastic pipe in sewer and drain diameters ~~DR-PS in PS 35, PS 50, PS 100, PS 140, PS 200~~	ASTM D 2751
~~Coextruded composite~~ Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters ~~DR-PS in PS 35, PS 50, PS 100, PS 140, PS 200~~	ASTM D 3034
Polyvinyl chloride (PVC) plastic in IPS diameters	ASTM D 2665; ASTM D 3311; ASTM F 1866
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D.	ASTM D 2949

(Portions of table not shown remain unchanged)

PART II – IRC-P

Revise tables as follows:

TABLE P3002.1(1)
ABOVE-GROUND DRAINAGE AND VENT PIPE

PIPE ~~MATERIAL~~	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200 DWV~~	~~ASTM F 1488~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV)~~ in IPS diameters, including schedule 40, DR 22, (PS 200), and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall	ASTM D 2949, ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE P3002.1(2)
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

PIPE ~~MATERIAL~~	STANDARD
Acrylonitrile butadiene styrene(ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200, DWV~~	~~ASTM F 1488~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV)~~ in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS140); with a solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall	ASTM D 2949; ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE P3002.2
BUILDING SEWER PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core,or composite wall	ASTM D 2661; ~~ASTM D 2751~~; ASTM F 628; ASTM F 1488
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (solid)~~	~~ASTM F 1488~~
~~Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)~~	~~ASTM F 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200, DWV~~	~~ASTM F 1488~~
~~Coextruded composite~~ Acrylonitrile butadiene styrene (ABS) plastic pipe in sewer and drain ~~DR-PS~~ diameters, including SDR 42 (PS 20), PS 35, SDR 35 (PS 45), PS 50, PS 100, PS 140, SDR 23.5 (PS 150) and PS 200; with a solid, cellular core, or composite wall	ASTM F 1488; ASTM D 2751
~~Coextruded composite~~ Polyvinyl Chloride (PVC) plastic pipe in sewer and drain ~~DR-PS~~ diameters, including PS 25, SDR 41 (PS 28), PS 35, SDR 35 (PS 46), PS 50, PS 100, SDR 26 (PS 115), PS 140, and PS 200; with a solid, cellular core, or composite wall	ASTM F 891; ASTM F 1488; ASTM D 3034; CSA B182.2; CSA B182.4
~~Coextruded PVC sewer and drain PS25, PS50, PS100, (cellular core)~~	~~ASTM F 891~~

TABLE P3002.2
BUILDING SEWER PIPE
(continued)

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV, SDR 26, SDR 35, SDR 41, PS50, PS100),~~ in IPS diameters, including schedule 40, DR 22 (PS200) and DR 24 (PS140); with solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~: ASTM F 891, ~~ASTM D 3034;~~ ~~CSA B182.2, CSA B 182.4~~ ASTM F 1488
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall.	ASTM D 2949, ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE P3002.3 (Supp)
PIPE FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters	ASTM D 2661; ASTM D 3311; ASTM F 628; CSA B 181.1
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid or cellular core)~~	~~ASTM D 2661; ASTM D 3311; ASTM F 628~~
~~Coextruded composite PVC DWV schedule 40 IPS-DR, PS 140, PS 200 (solid or cellular core)~~	~~ASTM D 2665; ASTM D 3311; ASTM F 891~~
~~Coextruded composite~~ Acrylonotrile butadiene styrene (ABS) plastic pipe in sewer and drain diameters ~~DR PS in PS 35, PS 50, PS 100, PS 140, PS 200~~	ASTM D 2751
~~Coextruded composite~~ Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters ~~DR PS in PS 35, PS 50, PS 100, PS 140, PS 200~~	ASTM D 3034
Polyvinyl chloride (PVC) plastic in IPS diameters	ASTM D 2665; ASTM D 3311; ASTM F 1866
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D.	ASTM D 2949

(Portions of table not shown remain unchanged)

Reason (Part I): This revision does not add or remove any pipes or fittings that were not previously accepted. It simply re-groups them using the same criteria in all 4 tables. By doing so it clarifies the plastic pipe materials, sizes, and standards that are permitted by Tables 702.1, 702.2 and 702.3. The new groups and revised column headings also identify the fittings that are "approved for installation with the piping material installed", as required by Clause 702.4.

The new groups are based on the plastic material (either ABS or PVC) and the diameter (IPS, sewer and drain, or 3.25 inch O.D.). These criteria were chosen because they are the factors that determine both applicability for the end use and compatibility of the pipe and fittings. Pipe in sewer and drain diameters, for example, is not used for DWV and only IPS-ABS fittings are used with IPS-ABS pipe. Some examples of the inconsistencies in the current tables are as follows:

1. In Table 702.1, solid IPS - ABS pipe (D 2661) and cell core ABS pipe (F 628) are grouped together. In the same table, solid IPS – PVC pipe (D 2665) and cell core PVC pipe (F 891) are NOT grouped together.
2. Instead, solid IPS - PVC pipe (D 2665) is grouped with 3.25 in O.D. PVC pipe (D 2949) and with composite pipe (F 1488).
3. In Table 702.1 a group referred to as "Type DWV" includes ASTM F 1488. In Tables 702.2 and 702.3 it does not.
4. Table 702.4 lists F 891 fittings for use with composite PVC pipe, but the F 891 standard does not include any fittings. It is strictly a pipe standard.
5. Table 702.4 allows D 2751 fittings to be used with composite sewer and drainpipe, but not with solid pipe made to the same D 2751 pipe and fitting standard.

Reason (Part II): This revision does not add or remove any pipes or fittings that were not previously accepted. It simply re-groups them using the same criteria in all 4 tables. By doing so it clarifies the plastic pipe materials, sizes, and standards that are permitted by Tables P3002.1(1), P3002.1(2), and P3002.2. In addition, Table P3002.3 now identifies the fittings that are "approved and compatible with the type of piping being used", as required by Clause P3002.3.

The new groups are based on the plastic material (either ABS or PVC) and the diameter (IPS, sewer and drain, or 3.25 inch O.D.). These criteria were chosen because they are the factors that determine both applicability for the end use and compatibility of the pipe and fittings. Pipe in sewer and drain diameters, for example, is not used for DWV and only IPS-ABS fittings are used with IPS-ABS pipe. Some examples of the inconsistencies in the current tables are as follows:

1. Table P3002.2 includes ASTM F 1412, *Polyolefin Pipe and Fittings for Corrosive Waste,* as a PVC plastic pipe standard.
2. ASTM F 1412 is also listed as a fitting standard for use with PVC pipe in Table P3002.3.
3. In Table P3002.1(1) a reference to PVC "Type DWV" includes pipe made to ASTM F 1488. In Table P3002.1(2) it does not.
4. Table P3002.3 permits ASTM D 3034 fittings to be used with coextruded composite PVC sewer and drain pipe, but not with solid PVC pipe made to the same D 3034 pipe and fitting standard.
5. PVC fittings to ASTM D 2665 and/or F 891 are listed for use with ABS composite pipe in Table P3002.3.
6. The 2007 Supplement moved ASTM F 1866 fabricated fittings to a separate line item, but there is no way to know what type of pipe they can be used with. This proposal links them to PVC pipe with an IPS O.D. They cannot be used with PVC pipe made to a sewer and drain O.D.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P71–07/08
702.4, Table 702.4; IRC P3002.3, Table P3002.3

Proponents: Michael Cudahy, Plastic Pipe and Fittings Association; James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association/ Virginia Building and Code Officials Association (VPMIA/ VBCOA)

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

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

TABLE 702.4
PIPE FITTINGS

PIPE MATERIAL	FITTING STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ~~ASTM D 3311~~; ASTM F 628; ASTM D2751; CSA B181.1
Asbestos Cement	ASTM C 428
Cast iron	ASME B 16.4; ASME B 16.12; ASTM A 74; ASTM A 888; CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid or cellular core)	ASTM D 2661; ~~ASTM D 3311~~; ASTM F 628
Coextruded composite PVC DWV schedule 40 IPS-DR, PS140, PS200 (solid or cellular core)	ASTM D 2665; ASTM D2949 ~~ASTM D 3311~~; ~~ASTM F 891~~
Coextruded composite ABS sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM D 2751
Coextruded composite PVC sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM D 3034
Copper or copper alloy	ASME B 16.15; ASME B 16.18; ASME B 16.22; ASME B 16.23; ASME B 16.26; ASME B 16.29
Glass	ASTM C 1053
Gray iron and ductile iron	AWWA C 110
Malleable iron	ASME B 16.3
Polyolefin	ASTM F 1412; CSA B181.3
Polyvinyl chloride (PVC) plastic	ASTM D 2665; ASTM D 2949; ASTM D 3034 ~~ASTM D 3311~~; ASTM F 1866
Stainless steel drainage systems, Types 304 and 316L	ASME A 112.3.1
Steel	ASME B 16.9; ASME B16.11; ASME B16.28
Vitrified Clay	ASTM C 700

PART II – IRC-P

Revise as follows:

P3002.3 (Supp) Fittings. Pipe fittings shall be approved for installation with the piping material installed and ~~compatible with the type of piping being used and~~ shall comply with the applicable standards listed ~~be of a sanitary or DWV design for drainage and venting as shown~~ in Table P3002.3.

TABLE P3002.3 (Supp)
PIPE FITTINGS

PIPE MATERIAL	FITTING STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ~~ASTM D 3311~~; ASTM D 2751; ASTM F 628; CSA B181.1
Asbestos cement	ASTM C 428
Cast iron	ASME B 16.4; ASME B 16.12; ASTM A 74; ASTM A 888; CISPI 301
Coextruded composite ABS DWV schedule 40 IPS pipe (solid or cellular core)	ASTM D 2661; ~~ASTM D 3311~~ ASTM F 628
Coextruded composite ~~ABS~~ PVC DWV schedule 40 IPS-DR, PS140, PS200 (solid or cellular core)	ASTM D 2665; ASTM D2949 ~~ASTM D 3311~~;
Coextruded composite ABS sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM D 2751
~~Coextruded composite PVC DWV schedule 40 IPS DR, PS140, PS200 (solid or cellular core)~~	~~ASTM D 2665; ASTM D 3311; ASTM F 891~~
Coextruded composite PVC sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM D 3034
Copper or copper alloy	ASME B 16.15; ASME B 16.18; ASME B 16.22; ASME B 16.23; ASME B 16.26; ASME B 16.29
Gray iron and ductile iron	AWWA C 110
Polyolefin	ASTM F 1412; CSA B181.3
Polyvinyl chloride (PVC) plastic	~~ASTM D 3311;~~ ASTM D 2949; ASTM D 2665; ASTM D 3034; ~~ASTM F 1412;~~ CSA B 181.2; CSA B 182.4
PVC fabricated fittings	ASTM F 1866
Stainless steel drainage systems, Types 304 and 316L	ASME A 112.3.1
Vitrified clay	ASTM C 700

Reason: (Cudahy, Anjam) To clarify the code language and Table 702.4 for use of proper fittings based on pipe material consistent with changes made to section IPC 605.5 and IPC Table 605.5 made last cycle. This change is to clarify that fittings need to comply with fitting standards and not "pipe only" standards.

Not all pipe standards contain relevant information for fittings and the current language "respective pipe standards" is improper. There are ASTM pipe standards that simply do not and can not apply to fittings. There are, however, a fair number of standards that contain both pipe and fitting information that must be included into the table before the preceding language can be corrected.

ASTM F 628, "Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core", contains ABS fitting information in a mandatory annex.

ASTM F 891, "Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC) Plastic Pipe With a Cellular Core", does not contain fitting information.

ASTM D 2751, "Standard Specification for Acrylonitrile-Butadiene- Styrene (ABS) Sewer Pipe and Fittings" contains information for ABS pipe and fittings.

ASTM D 2949, " Standard Specification for 3.25-in. Outside Diameter Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings" and ASTM D 3034, "Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings" both contain PVC pipe and fitting information.

ASTM D 3311, "Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns", is a DWV "fitting pattern" standard covering the geometric form of the fittings and is referenced in the proper fitting standard. By itself, ASTM D 3311 does not produce a suitable fitting.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P72–07/08
704.5

Proponent: James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association/ Virginia Building and Code Officials Association (VPMIA/ VBCOA)

Delete without substitution:

~~**704.5 Dead ends.** In the installation or removal of any part of a drainage system, dead ends shall be prohibited. Cleanout extensions and approved future fixture drainage piping shall not be considered as dead ends.~~

Reason: Although not having any dead end pipe is a good idea, we are allowing dead pipe for cleanouts and future fixtures. This has created enforcement issues since every dead end pipe can be for future fixtures. In practice, having a dead pipe has not caused any maintenance or nuisance issues, therefore removing this restriction make sense. Where fixtures are permanently removed, especially in slab construction, the current requirement of no "dead ends" technically requires that the abandoned piping be removed, sometimes at great expense. There is no technical reason why the piping should be removed.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P73–07/08
706.3; IRC P3005.1.1

Proponent: Lawrence Suggars, South Salt Lake City, UT, representing Utah Chapter of ICC

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

706.3 Installation of fittings. Fittings shall be installed to guide sewage and waste in the direction of flow. Change in direction shall be made by fittings installed in accordance with Table 706.3. Change in direction by combination fittings, side inlets or increasers shall be installed in accordance with Table 706.3 based on the pattern of flow created by the fitting. Double sanitary tee patterns shall not receive the discharge of back-to-back water closets and fixtures or appliances with pumping action discharge. Double sanitary tee patterns shall not receive discharge from other back-to-back fixtures such as lavatories, sinks and floor drains except where the run of the tee is one pipe size larger than the largest branch pipe connected or cleanout provisions are provided for the run of the double sanitary tee.

> ~~**Exception:** Back-to-back water closet connections to double sanitary tees shall be permitted where the horizontal developed length between the outlet of the water closet and the connection to the double sanitary tee pattern is 18 inches (457 mm) or greater.~~

PART II – IRC-P

Revise as follows:

P3005.1.1 Horizontal to vertical (multiple connection fittings). Double fittings such as double sanitary tees and tee-wyes or approved multiple connection fittings and back-to-back fixture arrangements that connect two or more branches at the same level shall be permitted as long as directly opposing connections are the same size and the discharge into directly opposing connections is from similar fixture types or fixture groups. Double sanitary tee patterns shall not receive the discharge of back-to-backwater closets and fixtures or appliances with pumping action discharge. Double sanitary tee patterns shall not receive discharge from other back-to- back fixtures such as lavatories, sinks and floor drains except where the run of the tee is one pipe size larger than the largest branch pipe connected or cleanout provisions are provided for the run of the double sanitary tee.

~~**Exception:** Back-to-back water closet connections to double sanitary tee patterns shall be permitted where the horizontal developed length between the outlet of the water closet and the connection to the double sanitary tee is 18 inches (457 mm) or greater.~~

Reason: Back to back fixtures installed on an sanitary cross fitting will create cleaning problems when a clog occurs. The cleaning of the drain through the removal of the trap-arm (as permitted by code) can be difficult given the location of the clog. Provisions must be made to clean the drain when a blockage occurs, and blockages do occur. Even more offensive are back to back water closets installed with the sanitary cross fitting. That type of an installation is carrying solids which can potentially collide with other solids. (What an ugly thought.) Please give more protection for the cleaning of a drain when giving permission for the installation of the double sanitary tee pattern fittings. Systems will operate better if they are more easily maintained.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P74–07/08
708.3.2

Proponent: James Ranfone, American Gas Association

Revise as follows:

708.3.2 Building sewers. Building sewers shall be provided with cleanouts located not more than 100 feet (30 480 mm) apart measured from the upstream entrance of the cleanout. For building sewers 8 inches (203 mm) and larger, manholes shall be provided and located not more than 200 feet (60 960 mm) from the junction of the building drain and building sewer, at each change in direction and at intervals of not more than 400 feet (122 m) apart. Manholes and manhole covers shall be of an approved type. A cleanout shall also be provided at the property line.

Reason: Installing underground utilities includes a method known as directional boring. The use of directional boring equipment eliminates the need for open trench or ditch work but may have some uncertainty concerning the location of existing underground utilities. The amendment will provide a needed cleanout to clear blockages that frequently occur at the junction of the sewer tap and the building sewer. The cleanout at the property line provides a permanent marker that will help reduce the damage to such underground facilities and most of all would help protect the building and its occupants from hazards created from damaged utilities.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P75–07/08
Table 709.1

Proponents: Richard Grace, Fairfax County, representing Virginia Plumbing and Mechanical Inspectors Association; Julius Ballanco, PE, JB Engineering and Code Consulting, P.C.

Revise table as follows:

TABLE 709.1 (Supp)
DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS

FIXTURE TYPE	DRAINAGE FIXTURE UNIT VALUE AS LOAD FACTORS	MINIMUM SIZE OF TRAP (inches)
Shower (based on the total flow rate through showerheads and bodysprays)		
Flow rate:		2
5.7 gpm or less	2	1 ½
Greater than 5.7 gpm to 12.3 gpm	3	2
Greater than 12.3 gpm to 25.8 gpm	5	3
Greater than 25.8 gpm to 55.6 gpm	6	4

(Portions of table not shown remain unchanged)

Reason (Grace): Drainage fixture units for these types of showers need to correspond with the amount of water flow. A flow rate of 5.7 gpm is not equal to a flow rate of 55.6 gpm when it drains. The greater the flow rate, the greater the demand on the drainage system. Therefore, it would be logical to utilize Table 709.2 to obtain drainage fixture unit values based on the required trap size.

Reason (Ballanco): This is a follow up to the change last cycle. The trap sizes were modified, however, the fixture unit value was not. The fixture unit value for the larger traps should be at least consistent with the requirements in Table 709.2. The proposed fixture unit values are taken from that table. With an increased flow rate, there is an impact on the overall drainage system. The impact is established by increasing the fixture unit value.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P76–07/08
712.3.3

Proponent: John Seay Jr., Albemarle County, VA, representing Virginia Plumbing and Mechanical Inspectors Association/ Virginia Building and Code Officials Association (VPMIA/ VBCOA)

Revise as follows:

712.3.3 Discharge piping. Discharge piping ~~shall meet the requirements of Section 712.2~~ and fittings shall be constructed of approved materials.

Reason: Currently the code does not state what materials shall be used for pumped discharge or sewers commonly referred to as forced mains. It is becoming increasingly more popular for forced and pumped systems to be utilized as building sewers. It would seem logical to require that they conform to Section 702.3. However Section 702.3 contains some materials such as vitrified clay that may not provide optimum service for a pumped system.

The only requirements in Section 712.2 are the valving provisions for these systems and the reference back to this section is unnecessary and not relevant under the section title “discharge piping.”

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P77–07/08
802.1, 802.1.8 (New)

Proponent: Jud Collins, JULYCO, representing himself

1. Revise as follows:

802.1 Where required. Food-handling equipment and clear-water waste shall discharge through an indirect waste pipe as specified in Sections 802.1.1 through ~~802.1.7~~ 802.1.8. All health-care related fixtures, devices and equipment shall discharge to the drainage system through an indirect waste pipe by means of an air gap in accordance with this chapter and Section 713.3. Fixtures not required by this section to be indirectly connected shall be directly connected to the plumbing system in accordance with Chapter 7.

2. Add new text as follows:

802.1.8 Food utensils, dishes, pots and pans sinks. Sinks used for the washing, rinsing or sanitizing of utensils, dishes, pots, pans or service ware used in the preparation, serving or eating of food shall discharge indirectly through an air gap or an air break or shall be directly connected to the drainage system.

Reason: Many local, county and state health departments require such fixtures to discharge through an indirect waste. This proposed change is an attempt to remove the conflict between this code and health department regulations. The proposed language does not prohibit the direct connection of these fixtures but does allow such fixtures to discharge through an air gap or an air break.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P78–07/08
802.1.8 (New)

Proponent: James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association/ Virginia Building and Code Officials Association (VPMIA/ VBCOA)

Add new text as follows:

802.1.8 Commercial bar sink and pot sink. The discharge from commercial bar sinks and pot sinks shall be through an air gap or air break into a standpipe or waste receptor in accordance with Section 802.2.

Reason: The health departments in many jurisdictions require bar sinks and pot sinks to be discharged indirectly. This section is necessary for the public health.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P79–07/08
901.3, 917.8

Proponent: Jack Beuschel, Studor, Inc.

Revise as follows:

901.3 Chemical waste vent system. The vent system for a chemical waste system shall be independent of the sanitary vent system and shall terminate separately through the roof to the ~~open air~~ outdoors or to an air admittance valve installed in compliance with Section 917.

917.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8 except where such valves are constructed of materials complying with Section 702.5 and ASTM F1412. Air admittance valves shall not be located in spaces utilized as supply or return air plenums.

Reason: The purpose of this code change is to add new provisions to the code to permit air admittance valves (AAVs) to serve as the vent for a chemical waste system as an option to open pipe vents.

Sinks in laboratories into which acids and chemicals are dumped are usually located in islands in the middle of rooms. To vent the sinks with open pipe vents requires extensive labor and material. The pipe and findings made from materials that are acid and chemical resistant are costly compared to ABS or PVC used in sanitary drainage systems. The installation of AAVs will significantly reduce labor and material costs in chemical waste systems compared with open pipe vents.

The performance requirements for AAVs that comply with ANSI/ASSE 1051 for single fixture and branch venting are the same for both normal sanitary DWV systems and nonneutralized special waste systems with the exception of the high temperature range which must be 212°F instead of 150°F and chemical waste material specifications. Although they are separate systems, the dynamics, with regard to trap seal protection, for both systems is the same. The only difference in a nonneutralized special waste system is that the DWV piping and components must be manufactured from material that is acid and chemical resistant in accordance with Section 702.5 of the IPC. Therefore, AAVs that are manufactured from materials that meet recognized industry standards for chemical and acid resistant material in compliance with Section 702.5, such as flame retardant polypropylene, and tested to ASTM F1412 for chemical resistance, must be permitted to serve as a vent for nonneutralized special waste systems.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P80–07/08
Table 906.1; IRC Table P3105.1

Proponent: Lawrence Suggars, South Salt Lake City, UT, representing Utah Chapter of ICC

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise table as follows:

TABLE 906.1
MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT

SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1½	¼	6[a]
2	¼	8[b]

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm,
1 inch per foot = 83.3 mm/m.

a. Where a vertical vent pipe, oriented 90 degrees from horizontal, connects to a horizontal run of fixture drain pipe, the maximum distance from the fixture trap to the vent shall be 6 feet. Where the vent pipe connects to the top of a single or double sanitary tee oriented such that the run of the tee is 90 degrees from horizontal and the fixture(s) drain to be vented connects to the branch of the single or double sanitary tee, the maximum distance from the fixture trap to the vent(s) shall be 5 feet.

b. Where a vertical vent pipe, oriented 90 degrees from horizontal, connects to a horizontal run of fixture drain pipe, the maximum distance from the fixture trap to the vent shall be 8 feet. Where the vent pipe connects to the top of a single or double sanitary tee oriented such that the run of the tee is 90 degrees from horizontal and the fixture drain to be vented connects to the branch of the single or double sanitary tee, the maximum distance from the fixture trap to the vent shall be 6 feet.

PART II – IRC-P

Revise table as follows:

TABLE P3105.1
MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT

SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1½	¼	6[a]
2	¼	8[b]

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm,
1 inch per foot = 83.3 mm/m.

a. Where a vertical vent pipe, oriented 90 degrees from horizontal, connects to a horizontal run of fixture drain pipe, the maximum distance from the fixture trap to the vent shall be 6 feet. Where the vent pipe connects to the top of a single or double sanitary tee oriented such that the run of the tee is 90 degrees from horizontal and the fixture(s) drain to be vented connects to the branch of the single or double sanitary tee, the maximum distance from the fixture trap to the vent(s) shall be 5 feet.
b. Where a vertical vent pipe, oriented 90 degrees from horizontal, connects to a horizontal run of fixture drain pipe, the maximum distance from the fixture trap to the vent shall be 8 feet. Where the vent pipe connects to the top of a single or double sanitary tee oriented such that the run of the tee is 90 degrees from horizontal and the fixture drain to be vented connects to the branch of the single or double sanitary tee, the maximum distance from the fixture trap to the vent shall be 6 feet.

Reason: In the current language of "Table 906.1" a 2 inch trap can be installed up to 8 feet from the vent and the 1½ trap up to 6 feet. In truth, this installation is only permitted in a very limited application. In fact, in most installations this application would put the weir of the trap above the vent. A clear violation of Section 906.2. It is easer to understand that a trap can be located per the said table than to understand Section 906.2. (… shall connect above the weir of the fixture trap being vented). I believe that the current language used in these two sections are in direct conflict with each other. In the built environment they work against each other more than they help. This application must be clarified. It is in the best interest of both the installer and inspector to bring together these two sections, "Table 906.1 and 906.2" for a better understanding of how they both apply. The footnotes will correct the problem.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P81–07/08

909.2, 909.2.1 (New), 909.2.2 (New); IRC P3108.2, P3108.2.1 (New), P3108.2.2 (New)

Proponent: Luke Thomas Connable, Jr., Code Enforcement, Shelby County, TN

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Delete and substitute as follows:

~~**909.2 Vent connection.** The dry vent connection to the wet vent shall be an individual vent or common vent to the lavatory, bidet, shower or bathtub. In vertical wet-vent systems, the most upstream fixture drain connection shall be a dry-vented fixture drain connection. In horizontal wet-vent systems, not more than one wet-vented fixture drain shall discharge upstream of the dry-vented fixture drain connection.~~

909.2 Dry vent connection. The required dry-vent connection for wet-vented systems shall comply with Sections 909.2.1 and 909.2.2

2. Add new text as follows:

909.2.1 Horizontal wet vent. The dry-vent connection for a horizontal wet-vent system shall be an individual vent or a common vent for any bathroom group fixture, except an emergency floor drain. Where the dry-vent connects to a water closet fixture drain, the drain shall connect horizontally to the horizontal wet vent system. Not more than one wet-vented fixture drain shall discharge upstream of the dry-vented fixture drain connection.

909.2.2 Vertical wet vent. The dry-vent connection for a vertical wet-vent system shall be an individual vent or common vent for the most upstream fixture drain.

PART II – IRC-P

1. Delete and substitute as follows:

~~**P3108.2 Vent connection.** The dry-vent connection to the wet vent shall be an individual vent or common vent to the lavatory, bidet, shower or bathtub. In vertical wet-vent systems, the most upstream fixture drain connection shall be a dry-vented fixture drain connection. In horizontal wet-vent systems, not more than one wet-vented fixture drain shall discharge upstream of the dry-vented fixture drain connection.~~

P3108.2 Dry vent connection. The required dry-vent connection for wet-vented systems shall comply with Sections P3108.2.1 and P3108.2.2

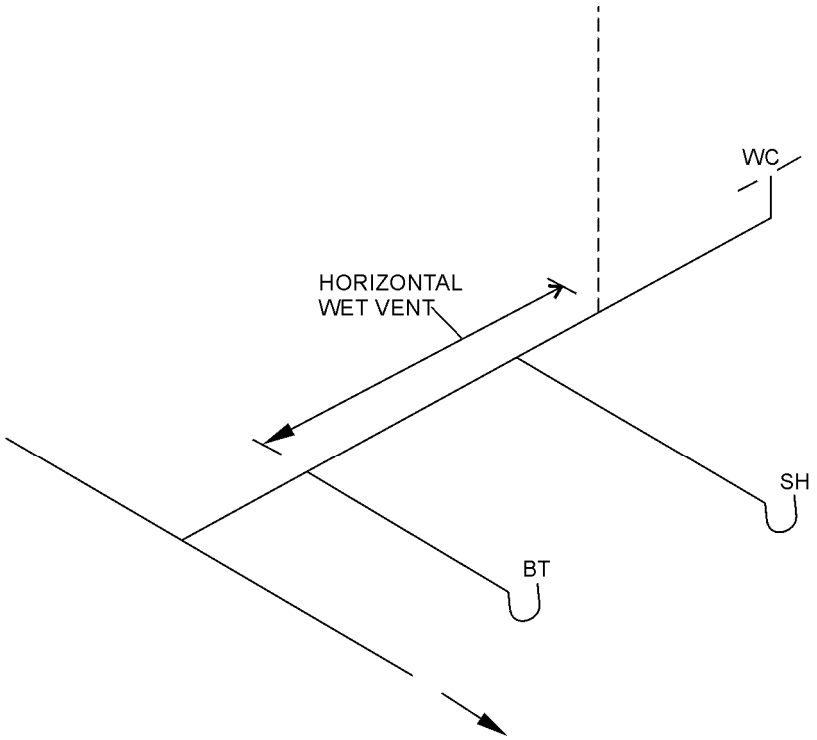
2. Add new text as follows:

P3108.2.1 Horizontal wet vent. The dry-vent connection for a horizontal wet-vent system shall be an individual vent or a common vent for any bathroom group fixture, except an emergency floor drain. Where the dry vent connects to a water closet fixture drain, the drain shall connect horizontally to the horizontal wet vent system. Not more than one wet-vented fixture drain shall discharge upstream of the dry-vented fixture drain connection.

P3108.2.2 Vertical wet vent. The dry-vent connection for a vertical wet-vent system shall be an individual vent or common vent for the most upstream fixture drain.

Reason: In horizontal wet vent systems, water closets should be included in the list of bathroom group fixtures that can have the required dry vent. See drawing Connable-P1-909.2 below. In circuit venting methodology (another form of horizontal wet venting), water closets are not restricted in locations upstream of the dry vent connection. The same logic should apply for horizontal wet vented systems.

As currently stated in the code, emergency floor drains, which rarely experience any flow, should continue to not be allowed to be the fixture that has the required dry vent. Debris build-up in the fixture drain caused by system “backwash” would not be washed out which could cause the dry vent to become blocked.



CONNABLE - P1-909.2

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P82–07/08
914 (New)

Proponent: Robert Evans, PE, American Society of Plumbing Engineers

Add new section as follows:

SECTION 914
SINGLE STACK VENT SYSTEM

914.1 Where permitted. A drainage stack shall serve as a single stack vent system where sized and installed in accordance with Sections 914.2 through 914.9. The drainage stack and branch piping shall be the vents for the drainage system. The drainage stack shall have a stack vent.

914.2 Stack size. Drainage stacks shall be sized in accordance with Table 914.2. Stacks shall be uniformly sized based on the total connected drainage fixture unit load. The stack vent shall be the same size as the drainage stack. A 3-inch stack shall serve not more than two water closets.

TABLE 914.2
SINGLE STACK SIZE

STACK SIZE (inches)	MAXIMUM CONNECTED DRAINAGE FIXTURE UNITS		
	Stacks less than 75 feet in height	Stacks 75 feet to less than 160 feet in height	Stacks 160 feet and greater in height
3	24	NP	NP
4	225	24	NP
5	480	225	24
6	1,015	480	225
8	2,320	1,015	480
10	4,500	2,320	1,015
12	8,100	4,500	2,320
15	13,600	8,100	4,500

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

914.3 Branch size. Horizontal branches connecting to a single stack vent system shall be sized in accordance with Table 710.1(2). Not more than one water closet shall discharge into a 3 inch (76.2 mm) horizontal branch at a point within a developed length of 18 inches (457.2 mm) measured horizontally from the stack.

Where a water closet is within 18 inches (457.2 mm) measured horizontally from the stack and not more than one fixture with a drain size of not more than 1-1/2 inch (38.1 mm) connects to a 3 inch (76.2 mm) horizontal branch, the branch drain connection to the stack shall be made with a sanitary tee.

914.4 Length of horizontal branches. The length of horizontal branches shall conform to the requirements of Sections 914.4.1 through 914.4.3.

914.4.1 Water closet connection. Water closet connections shall be not greater than 4 feet (1219 mm) in developed length measured horizontally from the stack.

> **Exception:** Where the connection is made with a sanitary tee, the maximum developed length shall be 8 feet (2438 mm).

914.4.2 Fixture connections. Fixtures other than water closets shall be located not greater than 12 feet (3657 mm) in developed length measured horizontally from the stack.

914.4.3 Vertical piping in branch. The length of vertical piping in a fixture drain connecting to a horizontal branch shall not be considered in computing the fixture's distance in developed length measured horizontally from the stack.

914.5 Minimum vertical piping size from fixture. The minimum size of the vertical portion of piping in a fixture drain connecting to a horizontal branch shall be 2 inches (50.8 mm). The minimum size of the vertical portion of piping in a fixture drain for a urinal or standpipe shall be 3 inches (76.2 mm).

914.6 Additional venting required. Additional venting shall be provided where more than one water closet discharges to a horizontal branch and where the distance from a fixture trap to the stack exceeds the limits in Section 914.4. Where additional venting is required, the fixture(s) shall be vented by individual vents, common vents, wet vents, circuit vents, or a combination waste and vent pipe. The dry vent extensions for the additional venting shall connect to a branch vent, vent stack, stack vent, air admittance valve, or shall terminate outdoors.

914.7 Stack offsets. Where fixture drains are not connected below a horizontal offset in a stack, a horizontal offset shall not be required to be vented. Where horizontal branches or fixture drains are connected below a horizontal offset in a stack, the offset shall be vented in accordance with Section 915. Fixture connections shall not be made to a stack within 2 feet (609.6 mm) above or below a horizontal offset.

914.8 Prohibited lower connections. Stacks greater than 2 branch intervals in height shall not receive the discharge of horizontal branches on the lower two floors. Where a separate stack is provided for the lower two floors, the stack shall connect to the building drain at a distance of not less than 10 pipe diameters downstream from the base of the connection of any single stack vented system.

914.9 Sizing building drains and sewers. The building drain and building sewer receiving the discharge of a single stack vent system shall be sized in accordance with Table 710.1(1).

Reason: This change was submitted last year and failed to receive the 2/3rds ballot by 9 votes. ASPE believes that the change is a worthwhile change, even though the previous change was not submitted by ASPE. This method of venting is addressed in the ASPE Plumbing Engineering Design Handbook. Single stack venting is currently permitted in the UPC and NSPC. The IPC is the only model plumbing code that does not have provisions for the single stack venting system.

The only difference in the text between this change and the one submitted last year is Section 914.6 on additional venting requirements. This section requires a second water closet on a branch to be vented by other means. This requirement was developed by the Philadelphia Chapter of ASPE. They have extensive experience in the design of single stack systems.

There is over 100 years of experience with single stack venting systems. If the stack is large enough, additional venting is not required provided that the fixtures are within a limited distance to the stack. It should be noted that the single stack system is one without long horizontal branches, nor drops in piping. By limiting the length of the branch and the vertical drops into the branch, you can control the pressure excursions in the piping system.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: In Section 914.8, it is not clear which pipe is referred to relative to the "10 pipe diameters." (The stack or the building drain diameter?)

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P83–07/08
903.2

Proponent: Julius Ballanco, PE, JB Engineering and Code Consulting, P.C.

Revise as follows:

903.2 (Supp) Vent stack required. A vent stack shall be required for every drainage stack that has five branch intervals or more.

Exception: Drainage stacks installed in accordance with Section 910 or 914.

Reason: This change is necessary to coordinate with the change proposed by ASPE to add single stack venting systems.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P84–07/08
917.8; IRC P3114.8 (New)

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

917.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves shall not be utilized to vent sumps or tanks of any type.

PART II – IRC-P

Add new text as follows:

P3114.8 Prohibited installations. Air admittance valves shall not be utilized to vent sumps or tanks of any type.

Reason: Theses devices are listed to vent fixtures and specific portions of plumbing systems such as stacks. Testimony has been provided at previous code hearings that "an engineer can easily design tank systems in order to take advantage of AAV's" however they are not listed to serve these devices as a typical conventional venting system.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P85–07/08
1002.1, 1003.3.4.2

Proponent: Brian Tubaugh, Josam Company

Revise as follows:

1002.1 Fixture traps. Each plumbing fixture shall be separately trapped by a water-seal trap, except as otherwise permitted by this code. The vertical distance from the fixture outlet to the trap weir shall not exceed 24 inches (610 mm) and the horizontal distance shall not exceed 30 inches (610 mm) measured from the centerline of the fixture outlet to the centerline of the inlet of the trap. The height of a clothes washer standpipe above a trap shall conform to Section 802.4. A fixture shall not be double trapped. Where a grease interceptor is integrally trapped, a vent shall connect to the fixture drain between the fixture trap and the grease interceptor and shall terminate outdoors.

Exceptions:

1. This section shall not apply to fixtures with integral traps.
2. A combination plumbing fixture is permitted to be installed on one trap, provided that one compartment is not more than 6 inches (152 mm) deeper than the other compartment and the waste outlets are not more than 30 inches (762 mm) apart.
3. ~~A grease interceptor intended to serve as a fixture trap in accordance with the manufacturer's installation instructions shall be permitted to serve as the trap for a single fixture or a combination sink of not more than three compartments where the vertical distance from the fixture outlet to the inlet of the interceptor does not exceed 30 inches (762 mm) and the developed length of the waste pipe from the most upstream fixture outlet to the inlet of the interceptor does not exceed 60 inches (1524 mm).~~

1003.3.4.2 ~~Rate of~~ Flow control. Grease interceptors shall be equipped with flow-control devices having ready access. ~~to control the rate of water flow so that the water flow does not exceed the rated flow.~~ The required vent piping for a flow-control device shall ~~be vented and~~ terminate outdoors. ~~not less than 6 inches (152 mm) above the flood rim level or shall be installed in accordance with the manufacturer's instructions.~~

Reason: (Section 1002.1) Grease interceptors often generate offensive odors due to the degradation of food particles that collect in the interceptor. Where the interceptor is used as the water-seal trap for the connected fixtures, these noxious odors are free to escape from untrapped fixture drains as well as from the flow control vent that often terminates in the room. For this reason, grease interceptors that have an integral water-seal trap should not be used as the fixture trap. (This is why Exception No. 3 is being deleted). A separate fixture trap upstream of the interceptor must be installed to block the odors from escaping though the fixture drains. This fixture trap must vented in order to prevent the potential for siphoning that could occur by having the interceptor's water-seal trap immediately downstream. (This prevents a 'double trapping of a fixture' condition). Since the vent for the fixture trap can convey the noxious odors, the vent must terminate outdoors, either independently or by connection to the sanitary drain vent system.

(Section 1003.3.4.2) Since a flow control device is required at the inlet to the grease interceptor, the vent for the flow control device must not terminate in the room as the noxious odors from the grease interceptor can escape through this vent. Therefore, the vent for the flow control must also terminate outdoors, either independently or by connection to the sanitary drain vent system.

The efficient operation of a grease interceptor is dependent upon the required flow control device being installed upstream of the grease interceptor. Many times the installation plan locates the interceptor to be installed in a vault, below a floor or even buried underground. Unfortunately, these locations often overlook the space and access requirements for the required flow control and thus, the flow control doen't get installed. Adding the requirement for the flow control to have ready access will allow the inspector to easily verify that the device is present. Since the flow control device has an orifice that restricts flow, ready access is also needed when the device requires periodic cleaning.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P86–07/08
1002.3; IRC P3201.5

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Falcon Waterless

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

Revise as follows:

1002.3 Prohibited traps. The following types of traps are prohibited:

1. Traps that depend on the action of elastomeric check valves or any other type of moving parts to maintain the seal.
2. Bell traps.
3. Crown-vented traps.
4. Traps not integral with a fixture and that depend on interior partitions for the seal, except those traps constructed of an approved material that is resistant to corrosion and degradation.
5. "S" traps.
6. Drum traps.

   Exception: Drum traps used as solids interceptors and drum traps serving chemical waste systems shall not be prohibited.

PART II – IRC-P

Revise as follows:

P3201.5 Prohibited trap designs. The following types of traps are prohibited:

1. Bell traps.
2. Separate fixture traps with interior partitions, except those lavatory traps made of plastic, stainless steel or other corrosion-resistant material.
3. "S" traps.
4. Drum traps.
5. Trap designs with moving parts or elastomeric check valves.

Reason: A device, that can be described as an elastomeric check valve, is being marketed as a replacement or substitution for the code required liquid seal trap. Many code officials don't understand how this device works and mistakenly approve these devices for trap applications even though the device is a moving part, violating this code section. Adding this wording will clarify that this type of trap device is specifically prohibited as the code has long intended to have traps perform sealing by liquid only.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P87–07/08
1002.3

Proponent: James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association/ Virginia Building and Code Officials Association (VPMIA/ VBCOA)

Revise as follows:

1002.3 Prohibited traps. The following types of traps are prohibited:

1. Traps that depend on moving parts to maintain the seal.
2. ~~Bell traps.~~
3. Crown-vented traps.
4. ~~Traps not integral with a fixture and that depend on interior partitions for the seal, except those traps constructed of an approved material that is resistant to corrosion and degradation.~~
5. "S" traps.
6. Drum traps.

   Exception: Drum traps used as solids interceptors and drum traps serving chemical waste systems shall not be prohibited.

Reason: This section of the plumbing code needs to be updated so it will coordinate with other sections of the code. Bell traps are archaic and no longer available; therefore Item 2 should be deleted. Item 4, which applies to many types of interceptors and separators, has been out of date for many years and serves no purpose. Item 4 is redundant because it is already stated in Section 1002.2

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P88–07/08
1002.1

Proponent: Richard Grace, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors Association

Revise as follows:

1002.1 Fixture traps. Each plumbing fixture shall be separately trapped by a ~~water~~ liquid-seal trap, except as otherwise permitted by this code. The vertical distance from the fixture outlet to the trap weir shall not exceed 24 inches (610 mm) and the horizontal distance shall not exceed 30 inches (610 mm) measured from the centerline of the fixture outlet to the centerline of the inlet of the trap. The height of a clothes washer standpipe above a trap shall conform to Section 802.4. A fixture shall not be double trapped.

Exceptions:

1. This section shall not apply to fixtures with integral traps.
2. A combination plumbing fixture is permitted to be installed on one trap, provided that one compartment is not more than 6 inches (152 mm) deeper than the other compartment and the waste outlets are not more than 30 inches (762 mm) apart.
3. A grease interceptor intended to serve as a fixture trap in accordance with the manufacturer's installation instructions shall be permitted to serve as the trap for a single fixture or a combination sink of not more than three compartments where the vertical distance from the fixture outlet to the inlet of the interceptor does not exceed 30 inches (762 mm) and the developed length of the waste pipe from the most upstream fixture outlet to the inlet of the interceptor does not exceed 60 inches (1524 mm).

Reason: The use of the term "liquid" will include fixtures that do not utilize a water-seal such as a waterless urinal.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P89–07/08
1002.4, Chapter 13 (New); IRC P3201.2, Chapter 43 (New)

Proponent: Julius Ballanco, PE, JB Engineering and Code Consulting, P.C., representing Sure-Seal

THESE PROPOSALS ARE ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IPC

1. Revise as follows:

1002.4 (Supp) Trap seals. Each fixture trap shall have a liquid seal of not less than 2 inches (51 mm) and not more than 4 inches (102 mm), or deeper for special designs relating to accessible fixtures. Where a trap seal is subject to loss by evaporation, a trap seal primer valve or trap seal protection device shall be installed. Trap seal primer valves shall connect to the trap at a point above the level of the trap seal. Trap seal protection devices shall be installed in accordance with the manufacturer's installation instructions. ~~A~~ Trap seal primer valves shall conform to ASSE 1018 or ASSE 1044. Trap seal protection devices shall conform to ASSE 1072.

2. Add standard to Chapter 13 as follows:

ASSE
1072-06 Performance Requirements for Barrier Type Floor Drain Trap Seal Protection Devices.

PART II – IRC-P

1. Revise as follows:

P3201.2 Trap seals and trap seal protection. Traps shall have a liquid seal not less than 2 inches (51 mm) and not more than 4 inches (102 mm) in depth. Traps for floor drains shall be fitted with a trap primer or trap seal protection device or shall be of the deep seal design. Trap seal protection devices shall be installed in accordance with the manufacturer's installation instructions. Trap seal protection devices shall conform to ASSE 1072.

2. Add standard to Chapter 43 as follows:

ASSE
1072-06 Performance Requirements for Barrier Type Floor Drain Trap Seal Protection Devices.

Reason: I submitted a similar change last year. The new standard had been completed; however, it was not published in printed form prior to the final code hearing. The standard has now been printed.

One of the newest devices is a floor drain trap seal protection device. The new ASSE standard regulates these protection devices. The trap seal protection device provides a barrier over the opening to the floor drain. This prevents evaporation of the trap seal. In addition, the barrier prevents the escape of sewer gas by closing off the opening. While this is not the primary function of the device, it is one of the added benefits that such a barrier device provides.

At the International SARS Symposium, all three methods of protecting a trap seal where discussed. It was recognized that these three levels of protection are necessary to prevent the passage of sewer gas that may be contaminated with a corona virus. The proposed new section will permit the design professional or contractor the option to use any one of the viable methods of protecting a floor drain trap seal from evaporation.

The difference between this change and last year's change is the addition of the sentence regarding the installation requirements. This sentence was added following the addition of the new text last year regarding in the installation of trap seal primer valves. The new text simply states that the trap seal protection devices must be installed in accordance with the manufacturer's installation.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standards proposed for inclusion in the code, ASSE 1072, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

PART I – IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IRC-P

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P90–07/08
202, 1003.3.1

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Thermaco

Revise as follows:

SECTION 202
GENERAL DEFINITIONS

GREASE INTERCEPTOR. A plumbing appurtenance that is installed in a sanitary drainage system to intercept oily and greasy wastes from a wastewater discharge. Such device has the ability to intercept free-floating fats and oils.

Hydromechanical. A grease interceptor, compact in size and usually located indoors, that is designed to separate fats, oils and grease in a time period of approximately one minute, by means of the simultaneous actions of hydraulic flow action, air entrainment and differences in specific gravities.

Gravity. A grease interceptor, large in size and usually located outdoors and underground, that is designed to separate fats, oils and grease in a time period of 30 minutes or more by means of differences in specific gravities only.

1003.3.1 Grease interceptors and automatic grease removal devices required. A grease interceptor or automatic grease removal device shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in food preparation areas, such as in restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias and clubs. Fixtures and equipment shall include pot sinks, prerinse sinks; soup kettles or similar devices; wok stations; floor drains or sinks into which kettles are drained; automatic hood wash units and dishwashers without prerinse sinks. Grease interceptors and automatic grease removal devices shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged. Where lack of available space or other physical constraint prevents the installation of the required size gravity grease interceptor, one or more hydromechanical grease interceptors shall be installed upstream of the gravity grease interceptor to achieve the overall required grease removal capacity.

Reason: This code change recognizes the need for combinations of grease interceptors for renovation projects involving existing buildings where there is insufficient space to install a large enough in-ground grease interceptor (gravity type) to meet local sewer ordinance requirements.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P91–07/08
1003.3.2

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing In-Sink-Erator

Delete without substitution:

~~**1003.3.2 Food waste grinders.** Where food waste grinders connect to grease interceptors, a solids interceptor shall separate the discharge before connecting to the grease interceptor. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste grinder. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste grinder.~~

Reason: This Section as now written is totally confusing and implies that all grease interceptors must have a solids interceptor if a garbage disposal is discharging into the interceptor. This is not only impractical (potential clogging) but there are no solids interceptors large enough to accommodate all installations. In addition, many jurisdictions do add chemicals and bacteria to help remediate potential sewer problems (such as grease and hydrogen sulfide).

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P92–07/08
1003.3.3 (New)

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing In-Sink-Erator

Add new text as follows:

1003.3.3 Food waste disposals. A food waste disposal shall connect to the sanitary drainage system downstream of all grease interceptors other than outdoor underground grease interceptors.

Reason: This Section will clarify the intent of the code regarding use of commercial garbage disposals. In addition, many jurisdictions currently allow garbage disposals to discharge into a properly sized gravity type grease interceptors (few allow discharging into smaller grease interceptors) while others do not allow any discharge from disposals into all types of grease interceptors. This code change gives an alternative to jurisdictions and spells out the intent of the code which does not prohibit the use of commercial garbage disposals in commercial kitchens.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P93–07/08
1003.3.4

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

Revise as follows:

1003.3.4 Grease interceptors and automatic grease removal devices. Grease interceptors ~~or~~ and automatic grease removal devices shall conform to PDI G101, ASME A112.14.3 or ASME A112.14.4 and shall be installed in accordance with the manufacturer's instructions.

> **Exception:** Interceptors constructed of concrete that have a volume of not less than 500 gallons and that are located outdoors shall not be required to meet the requirements of this section.

Reason: The addition of the current ASME standards was an excellent addition to the IPC, however it removed a reasonable approach to grease recovery that has been used successfully for decades. The installation of concrete tanks is a typical feature for large projects that have the space available to utilize them. While justification was provided to incorporate the current standards, no justification was provided to explain the prohibition of this long standing viable option to several small interior type interceptors.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P94–07/08
1003.3.3.4

Proponent: Brian Tubaugh, Josam Company

Revise as follows:

1003.3.4 Grease interceptors and automatic grease removal devices. Grease interceptors ~~or~~ and automatic grease removal devices shall be sized in accordance with ~~conform to~~ PDI G101, ASME A112.14.3 Appendix A or ASME A112.14.4. Grease Interceptors and automatic grease removal devices shall be designed and tested in accordance with PDI G101, ASME A112.14.3 or ASME A112.14.4. Grease Interceptors and automatic grease removal devices shall be installed in accordance with the manufacturer's instructions.

Reason: The current code language was not clear as to how grease interceptors and automatic grease removal devices are to be sized. Many jurisdications still use antiquated methods for sizing that result in a required total gallon capacity and not gallon per minute capacity that is required by the referenced standards. The revised language makes it clear where to look for proper sizing methodology and which standards apply for design and testing.
Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P95–07/08
1106.2, Table 1106.2(1), Table 1106.2(2) (New)

Proponent: Daniel J. Walker, PE, Thomas Associates, Inc., representing Metal Building Manufacturers Association

1. Revise as follows:

1106.2 Vertical conductors and leaders. Vertical conductors and leaders shall be sized for the maximum projected roof area, in accordance with Tables 1106.2(1) and 1106.2(2).

TABLE ~~1106.2~~ 1106.2.1
SIZE OF CIRCULAR VERTICAL CONDUCTORS AND LEADERS

(Portions of table not shown remain unchanged)

a. Sizes indicated are the diameter of circular piping. This table is applicable to piping of other shapes provided the cross-sectional shape fully encloses a circle of the diameter indicated in this table. For rectangular leaders see Table 1106.2.2. Interpolation is permitted for pipe sizes that fall between those listed in this table.

2. Add new table as follows:

TABLE 1106.2(1)
SIZE OF RECTANGULAR VERTICAL CONDUCTORS AND LEADERS

DIMENSIONS OF COMMON LEADER SIZES width x length (inches)[a]	HORIZONTALLY PROJECTED ROOF AREA (square feet)											
	Rainfall rate (inches per hour)											
	1	2	3	4	5	6	7	8	9	10	11	12
1-3/4 x 2-1/2	3,410	1,700	1,130	850	680	560	480	420	370	340	310	280
2 x 3	5,540	2,770	1,840	1,380	1,100	920	790	690	610	550	500	460
2-3/4 x 4-1/4	12,830	6,410	4,270	3,200	2,560	2,130	1,830	1,600	1,420	1,280	1,160	1,060
3 x 4	13,210	6,600	4,400	3,300	2,640	2,200	1,880	1,650	1,460	1,320	1,200	1,100
3-1/2 x 4	15,900	7,950	5,300	3,970	3,180	2,650	2,270	1,980	1,760	1,590	1,440	1,320
3-1/2 x 5	21,310	10,650	7,100	5,320	4,260	3,550	3,040	2,660	2,360	2,130	1,930	1,770
3-3/4 x 4-3/4	21,960	10,980	7,320	5,490	4,390	3,660	3,130	2,740	2,440	2,190	1,990	1,830
3-3/4 x 5-1/4	25,520	12,760	8,500	6,380	5,100	4,250	3,640	3,190	2,830	2,550	2,320	2,120
3-1/2 x 6	27,790	13,890	9,260	6,940	5,550	4,630	3,970	3,470	3,080	2,770	2,520	2,310
4 x 6	32,980	16,490	10,990	8,240	6,590	5,490	4,710	4,120	3,660	3,290	2,990	2,740
5-1/2 x 5-1/2	44,300	22,150	14,760	11,070	8,860	7,380	6,320	5,530	4,920	4,430	4,020	3,690
7-1/2 x 7-1/2	100,500	50,250	33,500	25,120	20,100	16,750	14,350	12,560	11,160	10,050	9,130	8,370

a. Sizes indicated are nominal width x length of the opening for rectangular piping.
b. For shapes not included in this table, the equation (11-1) shall be used to determine the equivalent circular diameter of rectangular piping for use in interpolation using the data from table 1106.2(1).

$$D_e = [\text{width} \times \text{length}]^{1/2} \qquad \textbf{(Equation 11-1)}$$

where D_e, width and length are expressed in inches.

Reason: The purpose of this change is to provide design values for rectangular leaders, which are already commonplace in commercial construction. The current code provisions only provide design values for circular storm leaders and conductors. While circular interior conductors are commonplace, exterior leaders are almost always fabricated from sheet metal coils into rectangular profiles. The current code allows for the use of other geometric profiles, but it restricts the allowable flow to the area of an inscribed circle. This provision is overly conservative and does not appear to be supported by hydraulic theory. Furthermore, rectangular shapes are severely penalized because the inscribed circle does not account for the additional flow capacity of a rectangular profile.

Table 1106.2 of the 2006 International Plumbing Code is based on empirical investigations of circular leaders. The table provides, for the purposes of design, the relationship between roof area, rainfall rates and the required leader diameter. The Metal Building Manufacturers Association has performed an engineering study to determine a more reasonable rationale for determining the flow capacity of rectangular vertical leaders. This proposal uses simple geometry to conservatively equate the allowable horizontally projected roof area when utilizing rectangular leaders to the allowable areas in Table 1106.2. Applied in the practical range of rectangular leader cross-section geometry, this method would

continue to be somewhat conservative without unduly penalizing the capacity of rectangular leaders. One way of looking at this in terms of equivalent flow capacity is to imagine forming a circular leader into an ellipse while maintaining its circumference and inscribing this ellipse such that it intersects the midpoint of all four sides of the rectangular leader.

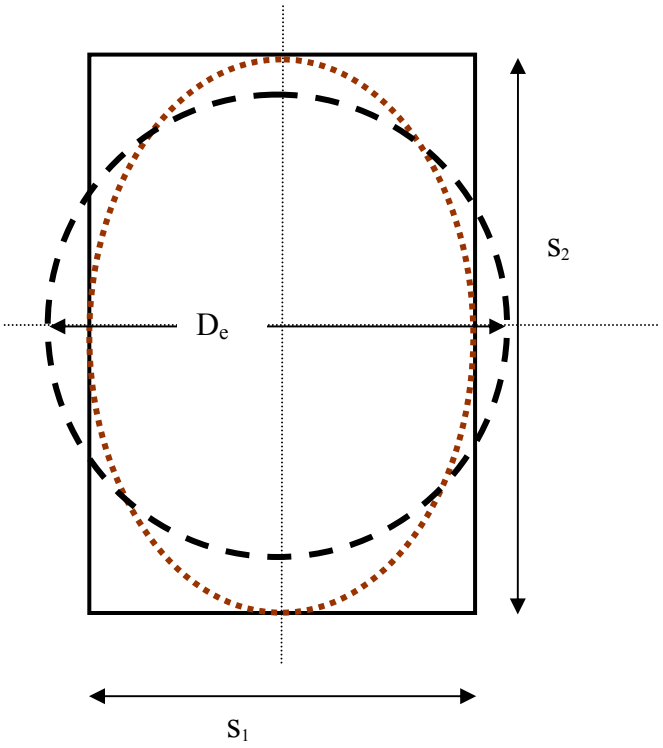
The following is the algebraic derivation of the equivalent circular diameter, D_e. The rectangular leader, inscribed ellipse, and the "equivalent" circular diameter are shown in the attached figure. The values in proposed Table 1106.2.2 are based on: (1) Determining the area of an inscribed elliptical area based on the S1 (Length) and S2 (Width) dimensions of the rectangular leader, (2) using the area of this inscribed ellipse to determine the diameter of an equivalent circle (De) and assigning either the published value or an interpolated value from renumbered Table 1106.2.1 for the equivalent diameter circle to the rectangular leader to determine the maximum horizontal projected roof area that can be drained using the rectangular leader for each rainfall rate.

$A_{ellipse} = A_{equivalent\ circle}$

$$\pi\left(\frac{s_1}{2}\right)\left(\frac{s_2}{2}\right) = \frac{\pi D_e^2}{4}$$

By algebraic simplification, $D_e = \sqrt{s_1 s_2}$ or D_e = [width x length]$^{1/2}$

Rectangular and Equivalent Circular Leaders



For the inscribed ellipse,

a = ½ (s_1) = minor radius of ellipse.

b = ½ (s_2) = major radius of ellipse.

Then, for area equivalence,

$A_{ellipse} = A_{equivalent\ circle}$

$$\pi ab = \frac{\pi D_e^2}{4}$$

$$\pi\left(\frac{s_1}{2}\right)\left(\frac{s_2}{2}\right) = \frac{\pi D_e^2}{4}$$

By algebraic simplification,

$$D_e = \sqrt{s_1 s_2}$$

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P96–07/08

1102.6, 1111 (New), Chapter 13 (New)

Proponent: John M. Rattenbury, RMS Engineering LLC

1. Revise as follows:

1102.6 Roof drains. Roof drains shall conform to ASME A112.21.2M, ~~or~~ ASME A112.3.1 or ASME A112.6.4. Siphonic roof drains shall conform to ASME A112.6.9.

2. Add new text as follows:

SECTION 1111
SIPHONIC ROOF DRAINAGE SYSTEMS

1111.1 General. Siphonic roof drainage systems shall be an alternative to the roof drain systems designed in accordance with Sections 1105 and 1106. Siphonic roof drainage systems shall be designed and installed in accordance with ASPE 45.

(Renumber subsequent sections)

3. Add standards to Chapter 13 as follows:

ASME
A112.6.4-2003 Roof Deck and Balcony Drains

A112.6.9–2005 Siphonic Roof Drains

ASPE
45-2007 Siphonic Roof Drainage

Reason: The purpose of this code change is to incorporate by reference the consensus standards for siphonic roof drainage to serve as the basis for authority approval under Section 105.4 "Alternative engineering design." The current code does not reference the relevant standards.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standards proposed for inclusion in the code, ASME A112.6.4, ASME A112.6.9, and ASPE 45, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P97–07/08
1107.1 (New), Chapter 13 (New)

Proponent: Robert Evans, P.E., American Society of Plumbing Engineers

1. Add new text as follows:

SECTION 1107
SIPHONIC ROOF DRAINAGE SYSTEMS

1107.1 General. A siphonic roof drainage system shall be designed in accordance with ASPE 45.

(Renumber subsequent sections)

2. Add standard to Chapter 13 as follows:

ASPE
45-2007 Siphonic Roof Drainage Systems

Reason: ASPE developed a new standard for siphonic roof drainage systems. This change will reference the new consensus standard. Siphonic roof drainage is complex requiring an engineered design. The new standard provides the methodology for designing such a system.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, ASPE 45, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P98–07/08
1107.1 (New), 1107.1.1 (New), 1107.1.2 (New), 1107.1.3 (New), 1107.1.3.1 (New), 1107.1.3.2 (New)

Proponent: Robert Evans, P.E., American Society of Plumbing Engineers

Delete and substitute as follows:

~~**1107.1 Secondary drainage required**. Secondary (emergency) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason.~~

~~**1107.2 Separate systems required.** Secondary roof drain systems shall have the end point of discharge separate from the primary system. Discharge shall be above grade, in a location that would normally be observed by the building occupants or maintenance personnel.~~

~~**1107.3 Sizing of secondary drains.** Secondary (emergency) roof drain systems shall be sized in accordance with Section 1106 based on the rainfall rate for which the primary system is sized in Tables 1106.2, 1106.3 and 1106.6. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.~~

1107.1 Secondary drainage required. Where failure of the primary drainage system will result in a depth of water exceeding that for which the roof was designed in accordance with Section 1101.7, a secondary roof drainage system shall be required. The secondary roof drainage system shall comply with one or more of the systems described in Sections 1107.1.1 through 1107.1.3.

1107.1.1 Open side roof. An open-sided roof shall be utilized for secondary drainage to prevent a ponding water depth that would exceed that for which the roof was designed in accordance with Section 1101.7.

1107.1.2 Scuppers. Scuppers shall be utilized for secondary drainage and shall be designed to prevent a ponding water depth that would exceed that for which the roof was designed in accordance with Section 1101.7. Scupper openings shall have a height of not less than 4 inches and shall have a width of not less than the circumference of the roof drain sized in accordance with Section 1106 for draining the roof area served by the scupper.

1107.1.3 Secondary roof drains. Secondary roof drains shall be be utilized for secondary drainage and shall be designed to prevent a ponding water depth that would exceed that for which the roof was designed in accordance with Section 1101.7. The weir of the secondary roof drains shall be installed at an elevation not less than 2 inches above the roof surface at the secondary drain location. The top of the roof drain shall be installed at an elevation not greater than the depth of ponding water that would exceed that for which the roof was designed in accordance with Section 1101.7. Secondary roof drains shall be served by a piping system conforming to Section 1107.1.3.1 or 1107.1.3.2.

1107.1.3.1 Separate piping System. Secondary roof drains shall discharge to a piping system that is independent from the primary roof drain piping system. Secondary roof drain piping systems shall be sized in accordance with Section 1106 using the same rainfall rate for which the primary system is sized. The point of discharge of the piping system shall be above grade and shall be in a location that would normally be observed by the building occupants or maintenance personnel.

1107.1.3.2 Combined piping system. The piping from secondary and primary roof drains shall be independent until after all horizontal piping offsets below the roof and above the ceiling have occurred. The junction of secondary and primary roof drain piping systems shall occur only in vertical piping. All piping down stream from the point where such two piping systems combine shall be sized in accordance with Section 1106 using a rainfall rate that is two times the rate determined by Section 1106.1. The combined primary and secondary drain piping shall connect to a building storm sewer that connects to an underground public storm sewer.

Reason: ASPE developed code text to clarify the various options for secondary storm drainage. Text similar to this has been adopted by other plumbing codes. The proposed new text also references the appropriate other sections of the chapter.

Roof loads based on ponding is already stated in Section 1101.7. There is no need to duplicate the requirements.

The code mandates secondary roof drainage for all buildings hence, the first section is clear in simply stating this requirement. The remaining sections provide the options.

Currently, the code provides no sizing for scuppers. This section includes the minimum scupper size. It also lists the open side of a roof as an acceptable secondary drainage method.

When a secondary drainage system is piped, there are two options for such design. The first would be to separately pipe the system. A separate system is sized the same as a primary system. The discharge is required to be above grade as currently required in the code.

The second option would be to tie the primary into the secondary. This design has been used successfully for many years. The limitation requires the secondary to be piped into the vertical downspout downstream of any horizontal offset. The common piping must be size for double the rainfall rate. This provides the additional factor of safety to the roof design for unusual occurrences.

It should be noted that the propose requirements list a minimum height above the roof of 2 inches for the secondary drain. The current code has no such requirement. A secondary drain could be at roof level, thus reducing the reliability of the secondary system.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:				
	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P99–07/08
1107.1.1 (New), 1107.1.2 (New)

Proponent: Luke Thomas Connable, Jr., Code Enforcement, Shelby County, TN

Add new text as follows:

1107.1.1 Scupper location. Scuppers in parapet walls shall be located at a point that results in the least horizontal distance between a scupper and a primary drain. The weir of scuppers shall be located at an elevation not less than 2 inches (51 mm) and not greater than 4 inches (102 mm) above the roof surface at the parapet wall.

1107.1.2 Secondary drain location. Secondary drains shall be located within 4 feet horizontally of a primary drain location. The weir of secondary drains shall be located at an elevation not less than 2 inches (51 mm) and not greater than 4 inches (102 mm) above the roof surface at the secondary drain location.

Reason: The height of the scuppers or roof drains above the roof was dropped in the 1999 *Southern Building Code* Section 1511.6.4.3 and there is no reference that can be found in either the 2006 *International Building Code* or *International Plumbing Code*. Limitations should be set on the height of ponding water, and this would make it much easier for the structural engineer to design the roof to carry such load. Keeping the secondaries as close as possible to the primaries would also help limit ponding water amounts.

Cost Impact: The code change proposal will not increase the cost of construction. This change could possibly create a savings due to roof design requirements if ponding water was deeper.

Public Hearing:				
	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

P100–07/08
Chapter 13

Proponent: Standards writing organizations as listed below.

Revise standards as follows:

ASME American Society of Mechanical Engineers
International Three Park Avenue
New York, NY 10016-5990

Standard reference number	Title
A112.1.2—2004 ~~1991(R2002)~~	Air Gaps in Plumbing Systems
A112.1.3—2000(Reaffirmed 2005)	Air Gap Fittings for Use with Plumbing Fixtures, Appliances, and Appurtenances
A112.3.1—2007 ~~93~~	~~Performance Standard and Installation Procedures for~~ Stainless Steel Drainage Systems for Sanitary, DWV, Storm and ~~Chemical~~ Vacuum Applications Above and Below Ground
A112.3.4—2000(Reaffirmed 2004)	Macerating Toilet Systems and Related Components
A112.4.3—1999 (Reaffirmed 2004)	Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System

A112.6.2—2000 (Reaffirmed 2004)	Framing-Affixed Supports for Off-the-floor Water Closets with Concealed Tanks
A112.6.3—(Reaffirmed 2007) 2001	Floor and Trench Drains
A112.6.7— 2001(Reaffirmed 2007)	Enameled and Epoxy-coated Cast-iron and PVC Plastic Sanitary Floor Sinks
A112.14.4—2001 (Reaffirmed 2007)	Grease Removal Devices
A112.18.1—2005 2003	Plumbing Fixture Fittings
A112.18.2— 2005 2002	Plumbing Fixture Waste Fittings
A112.18.3M — 2002	Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings
A112.18.7—1999 (Reaffirmed 2004)	Deck mounted Bath/Shower Transfer Valves with Integral Backflow Protection
A112.19.1M— 1994 2004 (Reaffirmed 2004)	Enameled Cast Iron Plumbing Fixtures—with 1998 and 2000 Supplements
A112.19.2—2003	Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals
A112.19.3M—2000 (Reaffirmed 2007)	Stainless Steel Plumbing Fixtures (Designed for Residential Use)—with 2002 Supplement
A112.19.4M—1994(Reaffirmed 2004) (1999)	Porcelain Enameled Formed Steel Plumbing Fixtures—with 1998 and 2000 Supplements
A112.19.5— 2005 1999	Trim for Water-Closet Bowls, Tanks, and Urinals
A112.19.7M—2006 1995	Hydromassage Whirlpool Bathtub Appliances
A112.19.8M—1987(R1996)	Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs, andWhirlpool Bathtub Appliance
A112.19.12—2006 2000	Wall Mounted and Pedestal Mounted, Adjustable, Elevating, Tilting and Pivoting Lavatory, Sink and Shampoo Bowl Carrier Systems and Drain Waste Systems
A112.19.13—2001 (Reaffirmed 2007)	Electrohydraulic Water Closets
A112.19.15—2005 2001	Bathtub/Whirlpool Bathtubs with Pressure Sealed Doors
B1.20.1—1983(R2006 2001)	Pipe Threads, General Purpose (Inch)
B16.3—2006 1998	Malleable Iron Threaded Fittings Classes 150 and 300
B16.4—2006 1998	Gray-Iron Threaded Fittings Classes 125 and 250
B16.11—2005 2001	Forged Fittings, Socket-welding and Threaded
B16.12—1998 (Reaffirmed 2006)	Cast Iron Threaded Drainage Fittings
B16.15—1985(R1994) 2006	Cast Bronze Threaded Fittings
B16.18—2001 (Reaffirmed 2005)	Cast Copper Alloy Solder Joint Pressure Fittings
B16.22—2001 (Reaffirmed 2005)	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings

B16.23—2002 (Reaffirmed 2006)	Cast Copper Alloy Solder Joint Drainage Fittings (DWV)
B16.26— 2006 ~~1988~~	Cast Copper Alloy Fittings for Flared Copper Tubes

ASTM

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

Standard reference number	Title
A 53/A 53M-06a ~~05~~	Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
A 74-06 ~~05~~	Specification for Cast Iron Soil Pipe and Fittings
A 312/A 312M-06 ~~05a~~	Specification for Seamless and Welded Austenitic Stainless Steel Pipes
A 888-07a ~~05~~	Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Application
B 43—~~04~~ 98(2004)	Specification for Seamless Red Brass Pipe, Standard Sizes
B 152/B 152M-06a	Specification for Copper Sheet, Strip Plate and Rolled Bar
B 447—07 ~~02~~	Specification for Welded Copper Tube
C 14-07 ~~05a~~	Specification for Nonreinforced Concrete Sewer, Storm Drain and Culvert Pipe
C 76-07 ~~05b~~	Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
C 428-97(2006~~5~~)	Specification for Asbestos-Cement Nonpressure Sewer Pipe
C 700-07 ~~05~~	Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated
C 1053-00(2005)	Specification for Borosilicate Glass Pipe and Fittings for Drain, Waste, and Vent (DWV) Applications
C 1277— 06 ~~04~~	Specification for Shielded Coupling Joining Hubless Cast-iron Soil Pipe and Fittings
C 1461— 06 ~~02~~	Specification for Mechanical Couplings Using Thermoplastic Elastomeric (TPE) Gaskets for Joining Drain, Waste and Vent (DWV) Sewer, Sanitary and Storm Plumbing Systems for Above and Below Ground Use
D 1785-06 ~~05~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120
D 2282-(2005)99e01	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR)
D 2464-06 ~~99e01~~	Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
D 2466-06 ~~05~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
D 2467-06 ~~05~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
D 2564- 04e01	Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
D 2657-07 ~~03~~	Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings
D 2661— 06 ~~02~~	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
D 2665-07 ~~04ae02~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
D 2672—96a(2003)	Specification for Joints for IPS PVC Pipe Using Solvent Cement
D 2846/D 2846M-06 ~~99e01~~	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
D 3034-06 ~~04~~a	Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
D 3311-06a ~~02e01~~	Specification for Drain, Waste and Vent (DWV) Plastic Fittings Patterns
F 437—06 ~~99~~	Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F 439-06 ~~05~~	Standard Specification for ~~Socket-Type~~ Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F 477—07 ~~02e01~~	Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
F 628—06e01	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core

F 714-06a ~~05~~	Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
F 876-06 ~~05~~	Specification for Crosslinked Polyethylene (PEX) Tubing
F 877—07 ~~02e01~~	Specification for Cross-linked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems
F 1281-07 ~~05~~	Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
F 1807-07 ~~05~~	Specifications for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) tubing
F 1866-07 ~~05~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings
F 1960-07 ~~05~~	Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing
F 1986-01(2006)	Specification for Multilayer Pipe, Type 2, Compression Fittings and Compression Joints for Hot and Cold Drinking Water Systems
F 2262-05 ~~03~~	Specification for Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Tubing OD Controlled SDR9
F 2389-06 ~~04~~	Specification for Pressure-Rated Polypropylene (PP) Piping Systems

NFPA

National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-9101

Standard reference number	Title
51—07 ~~02~~	Design and Installation of Oxygen-fuel Gas Systems for Welding, Cutting and Allied Processes

NSF

NSF International
789 N. Dixboro Road
Ann Arbor, MI 48105

Standard reference number	Title
3— 2007 ~~2003~~	Commercial Warewashing Equipment
14— 2007 ~~2003~~	Plastic Piping System Components and Related Materials
18—2007 ~~2004~~	Manual Food and Beverage Dispensing Equipment
42—2007e ~~2002e~~	Drinking Water Treatment Units—Anesthetic Effects
53—2007 ~~2002e~~	Drinking Water Treatment Units—Health Effects
58—2006 ~~2004~~	Reverse Osmosis Drinking Water Treatment Systems
61—2007a ~~2003e~~	Drinking Water System Components—Health Effects

Reason: The *CP Code Development Policy,* Section 4.5 requires the updating of referenced standards to be accomplished administratively, and be processed as a Code Change Proposal. In May 2007, a letter was sent to each developer of standards that is referenced in the International Codes, asking them to provide the ICC with a list of their standards in order to update to the current edition. Above is the received list of the referenced standards that are under the maintenance responsibility of the IPC Committee.

4.5 Updating Standards: The updating of standards referenced by the Codes shall be accomplished administratively by the appropriate code development committee in accordance with these full procedures except that multiple standards to be updated may be included in a single proposal.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

P101–07/08
Appendix E Section E202 (New), E202.1 (New)

Proponents: Michael Cudahy, Plastic Pipe and Fittings Association

Add new text as follows:

SECTION E202
DETERMINATION OF PIPE VOLUMES

E202.1 Determining volume of piping systems. Where required for engineering design purposes, Table E202.1 shall be used to determine the approximate internal volume of water distribution piping.

TABLE E202.1
INTERNAL VOLUME OF VARIOUS WATER DISTRIBUTION TUBING

OUNCES OF WATER PER FOOT OF TUBE							
SIZE	COPPER TYPE M	COPPER TYPE L	COPPER TYPE K	CPVC CTS SDR 11	CPVC SCH 40	COMPOSITE ASTM F 1281	PEX CTS SDR 9
3/8”	1.06	0.97	0.84	N/A	1.17	0.63	0.64
1/2”	1.69	1.55	1.45	1.25	1.89	1.31	1.18
3/4”	3.43	3.22	2.90	2.67	3.38	3.39	2.35
1”	5.81	5.49	5.17	4.43	5.53	5.56	3.91
1 1/4	8.70	8.36	8.09	6.61	9.66	8.49	5.81
1 1/2	12.18	11.83	11.45	9.22	13.20	13.88	8.09
2”	21.08	20.58	20.04	15.79	21.88	21.48	13.86

Conversions: 1 ounce = 1.80 cubic inches, 1 ounce = 0.125 cups.

Reason: To provide a tool for designers to determine the internal volume content of various water distribution layouts.

Green Building rating systems and standards are being used and developed that encourage the designer to consider the conservation of water when designing hot water distribution systems. This table will allow a designer to readily determine and compare the internal volumes of different arrangements of hot water distribution systems and to determine if a credit can be achieved.

Optimizing a hot water system layout conserves water and energy every time a “cold” start occurs at a fixture. Reducing the wait time for hot water to arrive by optimizing layout should be a goal of designers.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:				
	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF