

# INTERNATIONAL PLUMBING CODE/ INTERNATIONAL PRIVATE SEWAGE DISPOSAL CODE

**P4-06/07**  
**103.2, 103.3, 103.4**

*Proposed Change as Submitted:*

**Proponent:** Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

**Revise as follows:**

## SECTION 103 DEPARTMENT OF PLUMBING INSPECTION

**103.2 Appointment.** ~~The code official shall be appointed by the chief appointing authority of the jurisdiction, and the code official shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges by and before the appointing authority.~~

**103.3 Deputies.** In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the code official shall have the authority to appoint a deputy code official, other related technical officers, inspectors and other employees. Such employees shall have powers as delegated by the code official.

**103.4 Liability.** The code official, ~~member of the board of appeals officer~~ or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission required or permitted in the discharge of official duties.

Any suit instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code, ~~and any officer of the department of plumbing inspection, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.~~

**Reason:** Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at [iccsafe.org/cs/cc/admin/](http://iccsafe.org/cs/cc/admin/).

This proposal focuses on the enforcing agency of the IPC. A section-by-section discussion follows:

**103.2:** The purpose of this change is to correlate with current Section 103.2 of the *International Building Code*, *International Residential Code*, *International Existing Building Code*, and Section 301.2 of the *ICC Electrical Code---Administrative Provisions*.

The AHC felt that text relating to the removal of the code official should be deleted because it is a local personnel procedural matter that is outside the scope of the code. Removal from office is not usually associated with an administrative code Chapter, but is more frequently found in state statute, a union contract or civil service law.

A similar correlating proposal has also been submitted to the *International Fire Code*, *International Mechanical Code*, *International Private Sewage Disposal Code*, *International Property Maintenance Code*, *International Zoning Code*, *International Wildland-Urban Interface Code*, *International Fuel Gas Code*.

**103.3:** The purpose of this proposed change is to provide correlation with Section 103.3 of the *International Building Code*, *International Residential Code* and *International Existing Building Code*, and Section 301.3 of the *ICC Electrical Code--Administrative Provisions*.

The new text would provide the code official with an important administrative tool in assigning personnel to assist with the administration and enforcement of the code within the department.

A similar correlating proposal has also been submitted to the *International Fire Code*, *International Mechanical Code*, *International Private Sewage Disposal Code*, *International Property Maintenance Code*, *International Wildland-Urban Interface Code*, *International Fuel Gas Code*.

**103.4:** The purpose of this change is to provide correlation with Section 104.8 of the *International Building Code*, *International Residential Code*, *International Existing Building Code*, the text of which provides a more logical presentation of the provision. It will also afford important protection to members of the appeals board who typically serve voluntarily and might not personally have the liability protection afforded by the revised text.

A similar correlating proposal has been submitted to the *International Fire Code*, *International Mechanical Code*, *International Private Sewage Disposal Code*, *International Property Maintenance Code*, *International Wildland-Urban Interface Code* and *International Fuel Gas Code*.

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The committee felt that it is inappropriate for the IPC to limit the personal liability of members of a board of appeals.

**Assembly Action: None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Rebecca Baker, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes, requests Approval as Submitted.**

**Commenter's Reason:** The ICC Ad-Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) was tasked with reviewing Chapter 1 administrative provisions in each of the I-Codes and attempting to correlate applicable provisions through the code development process.

This change was proposed by the AHC-Admin to correlate the IPC with Sections 103.2, 103.3 and 104.8 of the IBC, IRC and IEBC. Specifically, the language in 103.2 was struck because the committee felt that removal of the code official is an administrative personnel matter and, therefore, does not belong in the code. Section 103.3 spells out that employees shall have powers as delegated by the code official, thus enhancing the code official's ability to efficiently manage the department.

Importantly, the changes to Section 103.4 would include the board of appeals members along with the code official and department employees that are protected from personal liability in the discharge of their duties for those actions performed in accordance with the code in a reasonable and lawful manner. In most jurisdictions, the board of appeals members are citizen volunteers and should be protected from liability exposure. Without such protection, it would be difficult to attract volunteers to serve on the board of appeals.

The committee's stated reason for disapproval was that extending liability protection to board of appeals members was inappropriate. The AHC-Admin disagrees and requests that the committee action be overturned and that P4-06/07 be approved as submitted so that this important and reasonable protection will be provided for volunteer members of the board of appeals and the IPC will be correlated with Sections 103.2, 103.3 and 104.8 of the IBC, IRC and IEBC.

Final Action: AS AM AMPC\_\_\_ D

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## **P13-06/07**

### **202**

*Proposed Change as Submitted:*

**Proponent:** Billy Smith and Max Weiss, Jay R. Smith Mfg., Co.

**Add new definition as follows:**

#### **SECTION 202**

**FAT, OIL AND GREASE DISPOSAL SYSTEM.** A system consisting of single or multiple elements comprising an engineered system which separates, retains and internally disposes of wastewater-borne polar fats, oils and greases by means of mass and volume reduction. The distinguishing features are classified by performance and, typically, such systems are tested and certified as discharging less than 100 mg/L of fats, oils and grease.

**Reason:** Add new requirements to the code. The proposed definition provides for a term used in ASME A112.14.6 and proposed new Section 1003.3.6. This code change will bring Chapter 10 in line with the newest ASME national consensus standards relative to Grease Interceptor technologies.

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

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** The proposed definition is part of a group of related proposals that will update Chapter 10 relative to the latest grease interceptor technologies.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Disapproval.**

**Commenter's Reason:** This is a reference to a process that may incorporate enzymes and bacteria for grease removal. Sewage Treatment facilities must be the ones that determine if such removal process is acceptable, not the plumbing code. Some treatment facilities may not accept that this type of process be utilized for waste being processed at their plants. The practice of using enzymes and bacteria to remove grease in a system may also produce a negative impact on a private sewage disposal system. Widespread use of this technology can have a detrimental impact on treatment plants. It is unclear why the proponent never actually describes the process that they are proposing. This proposal contains useful information when addressing fats, oils and grease in a plumbing system but this needs to be an alternate approved system approved from the treatment facility. This would be setting up a terrible situation where the plumbing code recognizes something but yet another industry (the treatment facility) does not. Designers may utilize this technology and get started on a project only to find they will never be able to finish because another department in a jurisdiction does not accept this design. Unfortunately in this case this is information that that is better left in the Standards that it was extracted from. It is information that is impossible to utilize and more importantly impossible to enforce in real world conditions. It is performance based criteria not prescriptive. Grease removal systems must be designed and installed appropriately prior to occupancy. The particulate measurement referenced is not something a plumbing inspector/plan reviewer/engineer/architect can go back and take samples and then write corrective measures. This information may be important to sewage treatment facilities and health departments but only relating to the maintenance of plumbing systems, not the new construction provisions that the plumbing code is designed to address.

Final Action:        AS            AM            AMPC\_\_\_\_        D

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**P14-06/07, Part I  
202**

*Proposed Change as Submitted:*

**Proponent:** William Chapin, Cash Acme

**PART I – IPC**

**Add new definition as follows:**

**SECTION 202**

**PUSH-FIT FITTING.** A type of fitting that joins pipes and that is not caulked, threaded, soldered, cemented, brazed or welded. These joints consist of elastomeric seals and corrosion resistant tube grippers. Such joints can be removable or non-removable depending on the design.

**Reason:** This definition is needed to recognize new technology for pipe connection systems that meet the appropriate standards. ASSE 1061 is the new standard for Push-fit Fittings.

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposed definition is too broad in that it could apply to many types of joints.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Rand Ackroyd, Rand Engineering, representing himself, requests Approval as Modified by this public comment for Part I.**

**Modify proposal as follows:**

**PUSH-FIT FITTING.** ~~A type of fitting that joins pipes and that is not caulked, threaded, soldered, cemented, brazed or welded. These A fitting with joints consisting of elastomeric seals and corrosion resistant tube grippers. Such joints can be removable or non- removable depending on design. These fittings require only manual insertion of the pipe or tube to fully retain the pipe or tube and seal the joint.~~

**Commenter's Reason:** Definition is needed for new technology. The modification addresses the committee's comments.

Final Action:      AS              AM              AMPC\_\_\_\_\_              D

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**P14-06/07, Part II  
IRC R202**

*Proposed Change as Submitted:*

**Proponent:** William Chapin, Cash Acme

**PART II – IRC PLUMBING**

**Add new definition as follows:**

**SECTION R202**

**PUSH-FIT FITTING.** A type of fitting that joins pipes and that is not caulked, threaded, soldered, cemented, brazed or welded. These joints consist of elastomeric seals and corrosion resistant tube grippers. Such joints can be removable or non-removable depending on the design.

**Reason:** This definition is needed to recognize new technology for pipe connection systems that meet the appropriate standards.  
ASSE 1061 is the new standard for Push-fit Fittings.

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposed definition is too broad in that it could apply to many types of joints.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Rand Ackroyd, Rand Engineering, representing himself, requests Approval as Modified by this public comment for Part II.**

Modify proposal as follows:

~~**PUSH-FIT FITTING.** A type of fitting that joins pipes and that is not caulked, threaded, soldered, cemented, brazed or welded. These A fitting with joints consisting of elastomeric seals and corrosion resistant tube grippers. Such joints can be removable or non-removable depending on design. These fittings require only manual insertion of the pipe or tube to fully retain the pipe or tube and seal the joint.~~

**Commenter's Reason:** Definition is needed for new technology. The modification addresses the committee's comments.

Final Action: AS AM AMPC\_\_\_\_\_ D

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## P16-06/07 301.7

*Proposed Change as Submitted:*

**Proponent:** Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA)

**Delete and substitute as follows:**

~~**301.7 Conflicts.** Where conflicts between this code and the conditions of the listing or the manufacturer's installation instructions occur, the provisions of this code apply.~~

~~**Exception:** Where a code provision is less restrictive than the conditions of the listing of the equipment or appliance or the manufacturer's installation instructions, the conditions of the listing and manufacturer's installation instructions shall apply.~~

**301.7 Conflicts.** Plumbing systems shall be installed in a manner conforming to this code, the applicable standards, and the manufacturer's installation instructions. In instances where these differ, the more stringent provisions shall apply.

**Reason:** This is better and more concise code language. The conditions of listing do not and should not create code compliance criteria. This section can be rewritten without an exemption.

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposed text could conflict with current Section 102.8 and does not add clarity. The term "plumbing systems" is too broad and could include too many different manufacturers' instructions.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

*Public Comment 1:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Approval as Submitted.**

**Commenter's Reason:** This simple re-wording of existing text is an excellent clarification of an IPC Section that is often misinterpreted. The new text says what it means and leaves no room for misapplication. It actually takes an exception that is utilized more than the rule and incorporates it into the rule.

*Public Comment 2:*

**Michael Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Modified by this public comment.**

Modify proposal as follows:

~~**301.7 Conflicts.** Plumbing systems shall be installed in a manner conforming to this code, the applicable standards, and the manufacturer's installation instructions. In instances where these differ conflicts occur between this code and the manufacturer's installation instructions, the more restrictive stringent provisions shall apply.~~

**Commenter's Reason:** I am the proponent of this change and would like to correct my language to address the Committee's reasons that the originally proposed text could conflict with current Section 102.8 as the code, not the standards, actually set the minimum requirements. The term "plumbing systems" in the original change was also suggested to be too broad. This section could still be greatly simplified and rewritten without an exception, and the terms "plumbing systems" and "applicable standards" can be stricken, as in this AMPC. The conditions of listing do not and should not create code compliance criteria.

**"102.8 Referenced codes and standards.** The codes and standards referenced in this code shall be those that are listed in Chapter 13 and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference. Where the differences occur between provisions of this code and the referenced standards, the provisions of this code shall be the minimum requirements."

Final Action: AS AM AMPC\_\_\_\_\_ D

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## **P17-06/07, Part I**

### **305.8**

#### *Proposed Change as Submitted:*

**Proponent:** Jud Collins, JULYCO

#### **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 shield plates. Protective shield plates shall be a minimum of 0.062-inch-thick (1.6 mm) steel, shall cover the area of the pipe where the member is notched or bored, and shall extend a minimum of 2 inches (51 mm) 4 inches (102 mm) above sole plates, ~~and~~ below top plates and to each side of a stud, joist or rafter.

**Reason:** This change coordinates the plumbing provisions with the gas piping provisions for piping penetration protection. When first included in the plumbing code, the current text was borrowed from the fuel gas provisions in an earlier edition of the mechanical code. The fuel gas provisions for the size of the protective plates have changed but the plumbing provisions have not. Current plumbing provisions do not require the protective plates to extend to the sides of the structural member thus allowing a fastener installed at only a slight angle to possibly damage the piping material.

**Cost Impact:** This proposal will cause a slight increase in the cost of construction.

#### **Committee Action:**

**Approved as Submitted**

**Committee Reason:** The proposed revision is consistent with Section 404.5 of the IFGC and will protect piping from nails and screws that are installed at angles other than perpendicular to the face of the structural member.

#### **Assembly Action:**

**Disapproved**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a floor action was successful and public comments were submitted.**

#### *Public Comment 1:*

**Lawrence Brown, CBO, National Association of Home Builders, requests Disapproval for Part I.**

**Commenter's Reason:** There is no need to correlate the plumbing provisions with the fuel gas provision for the protection of pipes. The IFGC is for gas piping - not water and DWV piping. No information was provided to substantiate there is a problem in the field with water pipes causing leaks using plates that extend 2 inches on either side of a pipe penetration. Also, "A slight angle" from the current 2-inches away will not cause a water pipe to be breached with a typical 1-5/8 Inch screw through 1/2 inch drywall. This change is not needed as the minimum safety standard for water piping.

#### *Public Comment 2:*

**Gary Kozan, Ridgeway Plumbing, Inc., requests Disapproval for Part I.**

**Commenter's Reason:** The IPC Committee approved this proposal, noting that it is consistent with Section 404.5 of the fuel gas code. But with fuel gas, the degree of hazard is greater, and the affected piping is significantly less. And most gas systems still utilize steel pipe to sidestep the protection requirement.

This proposal was (correctly) disapproved by the IRC-PM Committee. It conflicts with the current IPC, IMC, and IRC requirements, as well as with the National Electrical Code – none of which require protection beyond the edge of a framing member.

It is unreasonable and unnecessary to shield plumbing pipes a full 4 inches beyond either edge of a stud. This proposal would mandate striker plates in excess of 9 inches wide, everywhere a plumbing pipe passes through a stud (this includes drain lines as well as water lines.) Even modest jobs would take lots of expensive, "super-sized" stud guards. Ironically, this "extra" protection will in fact increase the plumbing contractor's liability for damages when screws and nails substantially miss their mark.

Plumbing pipes do not need protection beyond what is currently required for similar mechanical or electrical components. Current code text is sufficient and provides greater consistency. This proposal should be disapproved.

Final Action:        AS            AM            AMPC\_\_\_\_        D

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## **P19-06/07**

### **310.5**

#### *Proposed Change as Submitted:*

**Proponent:** Lawrence Brown, CBO, National Association of Home Builders (NAHB)

#### **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, readily cleanable and nonabsorbent finish surfaces.~~ 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 text of the second sentence is stricken as it is not necessary. IPC Section 310.3 already requires that, "the interior finish surfaces of toilet rooms shall comply with the International Building Code." IBC Section 1210.2 states: "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." Please note that Section 310.3 also applies to the partitions for water closet compartment surfaces covered by Section 310.4. As there is no need for this repetitive text to be contained within Section 310.4, there should no need to include it in Section 310.5.

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The current text of the IPC should remain because it is specific to urinals and addresses partitions. There is no need to mirror the general text in the IBC.

**Assembly Action:**

**None**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Lawrence Brown, CBO, National Association of Home Builders, requests Approval as Submitted.**

**Commenter's Reason:** There is no reason to duplicate this text in this Section. Also, this text does not correlate with the mandatory provisions in the IBC. As shown in the supporting statement for this Proposal, the text of the second sentence is stricken as it is not necessary. Please note the underlined text shown below. IPC Section 310.3 already requires the interior finish surfaces of toilet rooms to comply with the International Building Code provisions for walls adjacent to urinals and water closets. IBC Section 1210.2 requires the walls within 2 feet (610 mm) of urinals and water closets to have a smooth, hard, nonabsorbent surface.

**(IPC) 310.3 Interior finish.** Interior finish surfaces of toilet rooms shall comply with the *International Building Code*.

**(IBC)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.

Exceptions:

1. Dwelling units and sleeping units.
2. Toilet rooms that are not accessible to the public and which have not more than one water closet.  
Accessories such as grab bars, towel bars, paper dispensers and soap dishes, provided on or within walls, shall be installed and sealed to protect structural elements from moisture.

Please note that IPC Section 310.3 would also apply to the partitions for urinal partitions the same as it does for water closet compartment surfaces covered by IPC Section 310.4. As there was never shown to be a need to include this type of requirement in IPC Section 310.4 for water closet compartments (because it is already covered under IPC Section 310.3), there should no need to include it in Section 310.5 for urinal partitions.

Most important is the fact that the provisions of the IBC have now been amended by the provisions of the IPC. The IBC requires a, "smooth, hard, nonabsorbent surface...that is not adversely affected by moisture". The IPC requires a, "waterproof, smooth, readily cleanable and nonabsorbent finish surfaces." The walls (partitions) would now be required to also be "readily cleanable". If any change is needed, it should be proposed for Section 1210.2 of the IBC.

Final Action: AS AM AMPC \_\_\_\_\_ D

## P26-06/07

### Table 403.1 (IBC Table [P] 2902.1)

*Proposed Change as Submitted:*

**Proponent:** Ed Roether, Hellmuth, Obata and Kassabaum – Sport/Venue/Event

**Revise table as follows:**

**TABLE 403.1  
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup>  
(See Section 403.2 and 403.3)**

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSET (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
1	Assembly (see Sections 403.2, 403.4 and 403.4.1)	A-4	Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,500 and 1 per 60 for the remainder exceeding 1,500	1 per 200	1 per 150	—	1 per 1,000	1 service sink
		A-5	Stadiums, amusement parks, bleachers and grandstands for outdoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,500 and 1 per 60 for the remainder exceeding 1,500	1 per 200	1 per 150	—	1 per 1,000	1 service sink

(Portions of table not shown do not change)

**Reason:** The purpose of this proposed change is twofold: first to simplify how the minimum number of plumbing fixtures is established and then second to reduce the cost burden placed on smaller seating assemblies.

There are many small assembly occupancies across the nation that is significantly affected by the excessive number of plumbing fixtures required for the first 1,500 occupants. There is no justification for small high school baseball parks or tennis courts having a greater percentage of plumbing fixtures than would larger professional facilities, especially when they typically do not have the level of amenities provided these larger facilities.

There are a great number of small facilities that are being constructed for schools, municipalities and even small communities that are not being provided the amount of concessions being provided larger collegiate and professional facilities. In addition, these smaller facilities often times prohibit the consumption of alcohol. However, without this proposed change these same facilities would be required to provide significantly more plumbing fixtures. For example, a 2,500 seat high school stadium, where alcohol would be prohibited, would require 48 water closets or urinals. A 25,000 seat professional stadium, where alcohol is sold, 10 times as large, would require 333 water closets or urinals. Proportionately, the small high school stadium requires 45% more water closets or urinals than would the larger professional stadium. The discrepancy is even greater the larger the stadium gets. The required number of plumbing fixtures by this

proposed change would still exceed the number of plumbing fixtures provided many of the recently constructed professional facilities that are found across the nation. However, it would not place the significant burden that the current requirements do on smaller facilities.

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

**Committee Action:** **Disapproved**

**Committee Reason:** The ICC ad hoc committee for fixture requirements had justified the sliding scale (two ratio) approach of current code. Experience shows that toilet facilities are not in excess numbers as evidenced by waiting lines that form in modern facilities.

**Assembly Action:** **Approved as Submitted**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a floor action was successful and public comments were submitted.**

*Public Comment 1:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, representing himself, requests Approval as Submitted.**

**Commenter's Reason:** The initial requirements were based on a study by Hellmuth, Obata and Kassabaum. Because the study started at assembly buildings having an occupant load of greater than 1500 people, the table was subdivided for fixture requirements. The proponent's justification supports this change.

*Public Comment 2:*

**Ed Roether, Hellmuth, Obata and Kassabaum, requests Approval as Submitted.**

**Commenter's Reason:** This proposal should be approved as submitted. It is overly restrictive for smaller facilities without this change. Resulting ratios in smaller facilities create a hardship that strains their financial viability due to the excessive numbers of fixtures without having the demand. For comparison:

	<b>Without Approval of the Proposed Change</b>	
	Required Men's Water Closets (Resulting Ratio)	Required Women's Water Closets (Resulting Ratio)
70,000 seat NFL Stadium	299 (1:117)	596 (1:59)
42,000 seat Major League Ballpark	183 (1:115)	363 (1:58)
20,000 seat NBA Arena	91 (1:110)	179 (1:56)
2,500 seat High School Stadium	17 (1:75)	31 (1:40)
	<b>Proposed Change Approved</b>	
	Required Men's Water Closets (Resulting Ratio)	Required Women's Water Closets (Resulting Ratio)
70,000 seat NFL Stadium	292 (1:120)	584 (1:60)
42,000 seat Major League Ballpark	175 (1:120)	350 (1:60)
20,000 seat NBA Arena	84 (1:120)	167 (1:60)
2,500 seat High School Stadium	11 (1:120)	21 (1:60)

There is negligible difference for the larger facilities; however there is significant difference for the smaller ones. Please keep in mind that most of these smaller facilities across the nation do not serve alcohol on the premises, thereby reducing the demand for water closets. They also do not typically provide the level of concessions that is provided the larger facilities. This has been a significant issue across the nation and this proposed change deserves approval.

During the hearing, it appeared that most of the committee discussion lacked first hand familiarity with facilities that would be

impacted by this proposed change. The committee disapproved it. However, members of the floor had experience with these smaller facilities and recognized the need for approval. After the committee vote, a member of the floor, other than the proponent, brought the vote to the floor and it was approved as submitted.

Final Action: AS AM AMPC\_\_\_\_\_ D

## P28-06/07

### 403.1.1 (IBC [P] 2902.1.1)

#### *Proposed Change as Submitted:*

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

#### **Revise as follows:**

**403.1.1 Unisex toilet and bath fixtures.** Fixtures located within unisex toilet and bathing rooms required by Section 1109.2.1 of the *International Building Code* complying with Section 404 are permitted to be included in determining the minimum required number of fixtures for deducted from the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies.

**Reason:** Currently you can calculate the fixture requirement by using various methods; this can result in different fixture requirements. This proposed change provides a uniform method of calculation for the plumbing fixtures and realigns the sections involving this calculation.

For example, an occupancy requires 5 female water closets and 5 male water closets for a total of 10 water closets. The water closet installed in the unisex toilet room required by the IBC can be deducted from the total for either sex, resulting in 5 water closets for females and 4 water closets

for males or vise-versa. The 9 water closets plus the one water closet in the unisex room results in the same total of 10 water closets. If a water closet is deducted from each sex, the total would be 9 water closets which is less than the original requirement of 10. The reference to Section 404 is an unnecessary step since 404 simply references the IBC.

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

#### **Committee Action:**

**Approved as Modified**

#### **Modify the proposal as follows:**

**403.1.1 Unisex toilet and bath fixtures.** Fixtures located within unisex toilet and bathing rooms required by Section 1109.2.1 of the *International Building Code* are permitted to be included in deducted from the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies.

**Committee Reason:** The current code is silent on whether the unisex toilet fixtures can be deducted from the required number of fixtures for either sex or both sexes. By allowing the unisex fixtures to count toward the required number for only one of the sexes, the total number of fixtures required by Table 403.1 is preserved. The modification makes it clear that "deductions" are not lessening the required number of fixtures.

#### **Assembly Action:**

**None**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

#### *Public Comment:*

**James Anjam, Arlington County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Approval as Modified by this public comment.**

Further modify proposal as follows:

**403.1.1 Unisex toilet and bath fixtures.** Fixtures located within unisex toilet and bathing rooms required by Section 1109.2.1 of the *International Building Code* are permitted to be included in contribute to the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies.

**Commenter's Reason:** The rewording that was approved as modified during the Public Comment hearings did not fix the issue that this proposal was submitted to correct. This new modification is a much needed clarification of an IPC Section that is often misinterpreted and difficult to enforce. The new text says what it means and leaves no room for misapplication.

Final Action: AS AM AMPC\_\_\_\_ D

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## **P33-06/07**

### **403.4 (IBC [P] 2902.4)**

#### *Proposed Change as Submitted:*

**Proponent:** Joel E. Shelton, R.P.S., R.P.E.S., J.E.S.AFEHEALTH, LLC

#### **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 required facilities shall be accessible from within the building or from the exterior of the building, provided that the path of travel does not exceed the maximum distances specified by Sections 403.4.1 and 403.4.2. 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:** The purpose of this proposed change is to provide clarification to the code that has not been previously addressed, implied or otherwise specified. Currently, the primary focus on location of required facilities is on the path of travel in distance and the limitation on path of travel through areas of the building not intended for patron access. This added language will provide needed clarification and eliminate guesswork as to the intent of the code. This clarification can provide economic relief to small businesses, particularly those that might be retrofitting to a change in occupancy of an existing building space by providing flexibility to the compliance formula.

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

#### **Committee Action:**

**Disapproved**

**Committee Reason:** Concerns were raised regarding the occupants having legal access to the required facilities and having access during all hours of occupancy.

#### **Assembly Action:**

**None**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

#### *Public Comment 1:*

**Guy McMann, Jefferson County, Colorado, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO), requests Approval as Submitted.**

**Commenter's Reason:** The word "in" in the first sentence tends to indicate that the facilities must be entered from within the space or building. This is not the case. There is nothing prohibiting exterior access to facilities. Section 403.4.1 states that the facilities are required to be no more than one story above or below. In a strip mall, exterior access might apply. Also, temporary school buildings sometimes have no facilities. How about some gas stations? This change will simply clear up a misconception.

#### *Public Comment 2:*

**Joel E. Shelton, RPS, RPES, J.E.S. AFEHEALTH, LLC, requests Approval as Submitted.**

**Commenter's Reason:** The proposed change does not conflict with the current intent of section 403.4, where the focus of the intent is on the public's path of travel, both in distance and location. The intent is to insure that the required facilities are not located at distances that would be impractical for the public use, and that the path of travel does not take the public through areas not intended for access by the public. Where the proposal adds clarification is that the facilities could be feasibly accessible from the outside of the building as well as from the inside. The committee's concerns are not relevant to the point of the proposed change. Whether the entrance to the required facilities is located from within the building, or from an entrance located on the outside of the building, does not change the public's legal rights to access. Furthermore, when the structure is open for public access, restroom facilities would be open to the public, when closed, the facilities would be closed! This change merely clarifies that the entrance to a restroom could be designed as a separate outside

entrance. The existing text does not provide an answer to the question: Can the entrance to restroom facilities be designed for access whereby the user must exit the building and re-enter through a doorway dedicated for the restroom facilities only? This proposal provides this answer.

*Public Comment 3:*

**Guy Tomberlin, Fairfax County, Virginia, representing himself requests Approval as Modified by this public comment.**

**Modify proposal 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, or other property. Access to the required toilet facilities shall be provided at all times during occupancy. Access to the required facilities shall be accessible from within the building or from the exterior of the building, provided that the path of travel does not exceed the maximum distances specified in Section 403.4.1 and 403.4.2. Employees shall be provided with toilet facilities in all occupancies. The number of fixtures located within the required toilet facilities shall be provided in accordance with Section 403.4.1 and 403.4.2. Employee toilet facilities shall be either separate or combined employee and public toilet facilities.

**Commenter's 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 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.

Final Action: AS AM AMPC\_\_\_ D

**P35-06/07, Part I**

**408.3, 416.5, 424.1, 424.1.2, 424.3, 424.5, 425.3.1, 607.4, 608.15, 613.1, Chapter 13**

*Proposed Change as Submitted:*

**Proponent:** Sally Remedios, Delta Faucet Company

**PART I – IPC**

**1. Revise as follows:**

**408.3 Bidet water temperature.** The discharge water temperature from a bidet fitting shall be limited to a maximum temperature of 110°F (43°C) by a water temperature limiting device conforming to ASSE 1070, ASME A112.18.1/CSA B125.1, ASSE 1016, or CSA B125.3.

**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.

**424.1 Approval.** Faucets and fixture fittings shall conform to ASME A112.18.1/ CSA B125.1 ~~or CSA B125.~~ 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.

**424.1.2 Waste 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 Tables 702.1 and 702.4 for above-ground drainage and vent pipe and fittings.

**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 ~~CSA B125~~ ASME A112.18.1/CSA B125.1 and 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.

**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 B125.3. The fill valve backflow preventer shall be located at least 1 inch (25 mm) above the full opening of the overflow pipe.

**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 ~~CSA B125~~ ASME A112.18.1/CSA 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 in accordance with ASME A112.18.1/CSA B125.1.

**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. Such devices shall not be installed at the point of use.

## 2. Add standards to Chapter 13 as follows:

### CSA

<u>CSA B 125.1–05</u>	<u>Plumbing Supply Fittings</u>
<u>CSA B 125.2–05</u>	<u>Plumbing Waste Fittings</u>
<u>CSA B 125.3–05</u>	<u>Plumbing Fittings</u>

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

**408.3:** The current code language restricts the allowable devices to those meeting one particular standard. There are other devices that have been used for many years to protect a user from scalding temperatures such as those included in ASSE1016 for individual shower valves. In addition there are other standards which provide means of restricting the outlet temperature to a specific value but are not specifically designed for individual shower valves. These are covered in the CSA B125.3 standard.

The additional standards being proposed all include devices that will provide the protection being specified for bidet valves. The new harmonized standard includes individual shower devices similar to ASSE 1016 devices.  
A device that protects an individual bather should be a suitable device to protect a bidet user

**416.5:** The current code language restricts the allowable devices to those meeting one particular standard. There are other standards which 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.

**424.1, P2722.1:** 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 and fixture fittings 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.

**424.1.2:** The ASME A112.18.2 and CSA B125 standards have been harmonized into the now ASME A112.18.2/CSA B125.2 standard.

**424.3:** The CSA B125 standard has been combined into a harmonized standard with the ASME A112.18.1 standard to form the new ASME A112.18.1/CSA B125.1 standard that incorporates requirements for individual shower and tub-shower combination valves of the balanced-pressure, thermostatic or combination balanced-pressure/thermostatic valves type.

**424.5:** The current code language restricts the allowable devices to those meeting one particular standard. There are other standards which 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.

**425.3.1:** 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.

**607.4:** The CSA B125 standard has been harmonized with the ASME A112.18.1 standard to form the new ASME A112.18.1/CSA B125.1 and continues to include requirements for shower and tub/shower mixing valves.

**608.15:** Section 608.2 of the current code recognizes that plumbing fixture fittings shall have backflow protection in accordance with ASME A112.18.1. This standard has now been harmonized with the CSA B125 standard to form the ASME A112.18.1/CSA B125.1 standard. The requirements for backflow protection within the new 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.

**613.1:** 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.

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** Review of the proposed new standards indicated that, in the opinion of ICC Staff, the standards did comply with ICC standards criteria.

**Committee Action:**

**Disapproved**

**Committee Reason:** Some committee members did not receive copies of the standards for their review.

**Assembly Action:**

**None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Sally Remedios, Delta Faucet Company, requests Approval as Modified by this public comment for Part I.**

**Modify Part I of proposal as follows:**

**408.3 Bidet water temperature.** The discharge water temperature from a bidet fitting shall be limited to a maximum temperature of 110°F (43°C) by a water temperature limiting device conforming to ASSE 1070 ~~ASME A112.18.1/CSA B125.1, ASSE 1016~~ or CSA B125.3.

(Portions of proposal not shown remain unchanged)

**Commenter's Reason:** The reason that this code change was disapproved was quoted as "some committee members did not receive copies of the standards for their review".

Neither ASME nor CSA forwarded these standards to ICC or the IPC code committee. Just before the hearings this error was discovered and these standards were submitted as indicated in the Note included in the published hearing results. The IPC committee members had belatedly received electronic copies of these standards, before the hearings, but due to problems with downloading 100 pages, some felt hard copies should have been provided. We apologize for this occurrence and a hard copy will be made available for review on the table at the back of the final public hearing room in Rochester.

The purpose of these code changes was to update the code language to recognize the work that has gone on for over 5 years in harmonizing presently referenced standards in the IPC into three separate documents which cover plumbing supply fittings, plumbing waste fittings, and other plumbing fittings.

The current IPC-2006 references ASME A112.18.1-2003, ASME A112.18.2-2002, and CSA B125-01 all standards dealing with valves, fittings and faucets. The culmination of the harmonization efforts resulted in the three new standards being proposed to be referenced into the IPC. These standards are the revised harmonized standards ASME A112.18.1-2005/CSA C125.1-05, "Plumbing Supply Fittings"; ASME A112.18.2-2005/CSA B125.2-05 "Plumbing Waste Fittings" and the new CSA B125.3-05 "Plumbing Fittings". This latter standard covers devices left over from the scope of the old CSA B125-01 after the fittings covered by the scopes of the ASME standards were moved into the .1 and .2 standards.

Because only one issue seemed to culminate in testimony opposed to these updates, that being the proposal to include ASME A112.18.1/CSA B125.1 and ASSE 1016 as suitable automatic compensating valves for bidet fittings, we would ask for a modification to be accepted by the membership on this item.

The rationale for this change is similar to the rationale for accepting the ASSE 1070 standard in the present code language. An ASSE 1070 valve provides scald protection and can be set to not exceed a given outlet temperature. In addition it limits the outlet temperature to  $\pm 7^{\circ}\text{F}$  through a range of pressure and temperature variation tests much like the ASSE 1016 standard does for individual shower and tub/shower valves, except in this case the outlet temperature for showers is limited to  $\pm 3^{\circ}\text{F}$  ( $\pm 3.6^{\circ}\text{F}$  in the 2005 edition).

The CSA B125.3 standard maintains the same requirements as was previously in CSA B125-01 for automatic compensating valves. However since the scope of the harmonized ASME A112.18.1/CSAB125.1 and ASSE 1016 standards only allows these automatic compensating valves to be used for wall-mounted shower heads, these same requirements were also included in CSA B125.3 so they could be used for other applications such as lavatories, bathtub and bidets. The devices in CSA B125.3 are automatic compensating valves which provide scald protection and can be set to not exceed a given outlet temperature. In addition the valve limits the outlet temperature to  $\pm 3.6^{\circ}\text{F}$  through a range of pressure and temperature variation tests similar to those in ASSE 1070.

At the public hearings in Orlando there was misleading testimony given about these valves and the CSA B125.3 standard, primarily from people who had not been involved in the harmonization process and were not as familiar with the types of valves covered in the scope of CSA B125.3 or of the development of the standard.

The devices specified in ASSE 1016 and ASME A112.18.1/CSA B125.1 are technically suitable for use with bidets but several presenters made the point that the scope of these standards do not allow their use for other than wall mounted showers, so we are proposing to delete them for this proposal in order to remove this opposition.

The proposal to add the automatic compensating valves in CSA B125.3 for the protection of a bidet remains as an equivalent to the ASSE 1070 standard presently referenced in the IPC Section **408.3**.

It is also proposed in Section **416.5** to add these types of valves for use in public hand washing facilities supplying tempered water. The outlet temperature of these valves can be limited to a pre-set temperature. This provides adequate scald protection. Tests within the CSA B125.3 standard confirm this limitation.

Similarly in Section 424.5 it is also proposed to add these types of valves for use in bathtubs and whirlpool bathtub valves, where the code requires the temperature to be limited to 120°F (49°C). A valve would have a listing indicating its suitability for this limitation.

In Section 424.3 the proposal is to include the reference to the new harmonized standard ASME A112.18.1/CSA B125.1 which was developed around the existing requirements for shower valves in CSA B125-01 and in addition, technically harmonized with ASSE 1016 for all temperature variations and means to limit the maximum setting of the valve to 120°F (49°C). Both the ASME A112.18.1/CSA B125.1 and ASSE 1016 standard have temperature variations of ± 3.6°F through the same range of pressure and temperature variation tests.

Section 607.4 similarly adds the devices in the harmonized standard as in Section 424.3.

Final Action: AS AM AMPC\_\_\_\_\_ D

## P35-06/07, Part II

### IRC Table P2701.1, P 2702.2, P2708.3, P2713.3, P2722.1, P2722.2, P2902.4.2, Table P2902.3, Chapter 43

*Proposed Change as Submitted:*

**Proponent:** Sally Remedios, Delta Faucet Company

#### PART II – IRC PLUMBING

**Revise as follows:**

**TABLE P2701.1  
PLUMBING FIXTURES, FAUCETS AND FIXTURE FITTINGS**

MATERIAL	STANDARD
Individual shower control valves anti-scald	ASSE 1016/ <del>CSA B125.1</del> , <del>CSA B125</del>
Plumbing fixture fittings	ASME A112.18.1M/ <del>CSA B125.1</del> , <del>CSA B125</del>
Plumbing fixture waste fittings	ASME A112.18.2, ASTM F 409, <del>CSA B125</del>
Water closet flush tank fill valves	ASSE 1002, <del>CSA B125</del>

(Portions of table not shown do not change)

**P2702.2 Waste fittings.** Waste fittings shall conform to ASME A112.18.2/~~CSA B125.1~~, 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.

**P2708.3 Shower control valves.** Individual shower and tub/shower combination valves shall be equipped with control valves of the pressure-balance, thermostatic-mixing or combination pressure-balance/thermostatic-mixing valve types with a high limit stop in accordance with ASSE 1016 or ~~CSA B125~~ ASME A112.18.1/CSA B125.1. The high limit stop shall be set to limit water temperature to a maximum of 120°F (49°C). In-line thermostatic valves shall not be used for compliance with this section.

**P2713.3 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 P2708.3.

**P2722.1 General.** Fixture supply valves and faucets shall comply with ASME A112.18.1/~~CSA B125.1~~ or CSA 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.

**P2722.2 Hot water.** Fixture fittings and faucets that are supplied with both hot and cold water shall be installed and adjusted so that the left-hand side of the water temperature control represents the flow of hot water when facing the outlet.

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

**P2902.4.1 Fill valves.** Flush tanks shall be equipped with an antisiphon fill valve conforming to ASSE 1002 or CSA 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 standards to Chapter 43 as follows:

### CSA

<u>CSA B 125.1-05</u>	<u>Plumbing Supply Fittings</u>
<u>CSA B 125.2-05</u>	<u>Plumbing Waste Fittings</u>
<u>CSA B 125.3-05</u>	<u>Plumbing Fittings</u>

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

**408.3:** The current code language restricts the allowable devices to those meeting one particular standard. There are other devices that have been used for many years to protect a user from scalding temperatures such as those included in ASSE1016 for individual shower valves. In addition there are other standards which provide means of restricting the outlet temperature to a specific value but are not specifically designed for individual shower valves. These are covered in the CSA B125.3 standard.

The additional standards being proposed all include devices that will provide the protection being specified for bidet valves. The new harmonized standard includes individual shower devices similar to ASSE 1016 devices.

A device that protects an individual bather should be a suitable device to protect a bidet user

**416.5:** The current code language restricts the allowable devices to those meeting one particular standard. There are other standards which 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.

**424.1, P2722.1:** 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 and fixture fittings 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.

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

**424.3:** The CSA B125 standard has been combined into a harmonized standard with the ASME A112.18.1 standard to form the new ASME A112.18.1/CSA B125.1 standard that incorporates requirements for individual shower and tub-shower combination valves of the balanced-pressure, thermostatic or combination balanced-pressure/thermostatic valves type.

**424.5:** The current code language restricts the allowable devices to those meeting one particular standard. There are other standards which 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.

**425.3.1:** 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.

**607.4:** The CSA B125 standard has been harmonized with the ASME A112.18.1 standard to form the new ASME A112.18.1/CSA B125.1 and continues to include requirements for shower and tub/shower mixing valves.

**608.15:** Section 608.2 of the current code recognizes that plumbing fixture fittings shall have backflow protection in accordance with ASME A112.18.1. This standard has now been harmonized with the CSA B125 standard to form the ASME A112.18.1/CSA B125.1 standard. The requirements for backflow protection within the new 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.

**613.1:** 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.

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** Review of the proposed new standards indicated that, in the opinion of ICC Staff, the standards did comply with ICC standards criteria.

**Committee Action:**

**Disapproved**

**Committee Reason:** The committee did not receive copies of the standards for their review.

**Assembly Action:**

**None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Sally Remedios, Delta Faucet Company, requests Approval as Modified by this public comment for Part II.**

Modify Part II of proposal as follows:

**TABLE P2701.1  
PLUMBING FIXTURES, FAUCETS AND FIXTURE FITTINGS**

<b>MATERIAL</b>	<b>STANDARD</b>
Individual shower control valves anti-scald	ASSE 1016, <u>ASME A112.18.1/CSA B125.1</u>
Plumbing fixture fittings	ASME A112.18.1M/CSA B125.1
Plumbing fixture waste fittings	ASME A112.18.2/CSA B125.2, ASTM F 409
Water closet flush tank fill valves	ASSE 1002, <u>CSA B125.3</u>

(Portions of table not shown do not change)

(Portions of proposal not shown remain unchanged)

**Commenter's Reason:** There were several editorial errors in the published Code Change Proposal book which were brought to the attention of ICC staff and are documented here for completeness.

Based on the above justifications and previous **reasons** documented in the published Code Change Proposal book, we would like to ask the membership to approve the proposals as modified.

Final Action:        AS            AM            AMPC \_\_\_\_        D

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## **P36-06/07, Part I 410.1, 410.2**

*Proposed Change as Submitted:*

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

### **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 dispensers shall not be installed in public restrooms.

**Reason:** Part I. This section would be revised to allow the full use of water coolers and dispensers in lieu of drinking fountains. In addition, it would extend the prohibition of drinking fountains in public restrooms to specifically prohibit water coolers and dispensers.

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

**Committee Action:** **Disapproved**

**Committee Reason:** The 50% substitution limit was recently added to the code to make sure that at least one drinking fountain will be present in spaces requiring them. This text should remain to serve occupants when bottled water has been discontinued.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

*Public Comment 1:*

**Michael A. Baker, City of Prescott, Arizona, representing Arizona Building Officials, requests Approval as Submitted for Part I.**

**Commenter's Reason:** Providing water for the public's consumption is definitely a reasonable request. Currently the International Plumbing Code requires all occupancies to provide one drinking fountain for the public's use. ADA requirements specify that hi-lo drinking fountains shall be installed to serve the public; this minimally requires the installation of two drinking fountains. ADA permits one bottled water dispenser as a substitution.

Small occupant load users such as; accounts, dentist, insurance office, title agencies etc. would be required to install two drinking fountains. This increases the initial cost of construction by thousands of dollars. Large occupant users such as, box retail, sports facilities, schools, public buildings, etc. will not typically use this allowance.

The rationale from the committee is "to make sure at least one drinking fountain will be present in spaces requiring them". If that is the case then we need to revisit and rework the numbers in the table, as there is no where in the code where we accept a 50-50 code compliance option. If we apply the same rationale to occupancies requiring two exit doors we would wind up with a potentially hazardous situation, this is not the case with bottled water dispensers.

*Public Comment 2:*

**Bruce Dimmig, Ellerman Schick and Bruno Architects, requests Approval as Submitted for Part I.**

**Commenter's Reason:** Providing water for the public's consumption is definitely a reasonable request. Currently the International Plumbing Code requires all occupancies to provide one drinking fountain for the public's use. We have two exceptions, one that allows for a substitution of up to 50% of the required drinking fountains with a bottled water dispenser. Applying the exception for 50% of the required drinking fountains makes no sense. There is no data to indicate that water dispensers fail 50% more often than drinking fountains. We do this to suppress our own comfort level of how the building will be used in the future. There is no guarantee that any fixture will not be removed once the C of O has been issued.

The rationale from the committee is "to make sure at least one drinking fountain will be present in spaces requiring them". If that is the case then we need to revisit and rework the numbers in the table, as there is no where in the code where we accept a 50-50 code compliance option. Apply the same rationale to occupancies requiring two exit doors. As long as we're ensured one will remain they can eliminate the other one after we leave and it's not a big deal. That is not the case for exit doors and should not be extended to bottled water dispensers.

In addition we never install one drinking fountain. ADA requirements specify that a hi-lo drinking fountain shall be installed to serve the public. This requires the installation of two drinking fountains.

The second half of the committee's reason was "this text should remain to serve occupants when bottled water has been discontinued". How can we be so sure the bottled water will be discontinued and not the drinking fountain disconnected? There are many cities across the nation where the drinking water does not taste good and the first thing to corrode, leak and be disconnected is the drinking fountain.

We are taught that if the building is compliant when the C of O is issued then we are not liable for what the occupant alters later without permits. In this instance we are looking forward and assuming the occupants will discontinue the bottled water. The same assumption can be made about the drinking fountain, as we have no provisions for the drinking fountain to be maintained operational. So now we are looking for one drinking fountain in occupancies that require two and have no way of ensuring the drinking fountain will be maintained operational.

Sanitation of drinking fountains is a major challenge in all occupancies. Hospitals and doctor's offices have regularly scheduled cleaning programs for the drinking fountains. Their reasoning: to stop the spread of germs and viruses via the drinking fountains. Think about how many times you have walked up to a drinking fountain to take a drink and the water pressure is extremely low and requires you to put your lips almost onto the spigot to get a drink. Also think of the people who sneeze or cough before touching the faucet handle when using the drinking fountain.

Dental and oral surgery offices deal with a more significant sanitation issues. Bio-hazard generated from work performed within the mouth. The possibility of contaminating the drinking fountain is significantly higher in these occupancies as they may be contaminated with blood born pathogens. By allowing bottled water dispensers or bottled water coolers the bottles and cups are disposable and significantly reduce the risk of contamination.

Again think about how many times you or a friend has approached a drinking fountain to find someone's cigar butt, food wrappers, chewing tobacco and yes, even the remnants of the thoughtful person who spit into the fountain. These reasons alone should convince you of allowing alternative systems to supply safe drinking water to the public.

Final Action:        AS            AM            AMPC\_\_\_\_        D

**P36-06/07, Part II  
IBC [P] 2903.1 (New), [P] 2903.2**

*Proposed Change as Submitted:*

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

**PART II – IBC GENERAL**

**Add new text 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.

**Reason:** Part II. Currently similar language exists in the *International Plumbing Code*. Many jurisdictions do not adopt the IPC and are unable to use the exception as indicated in the heading of Table 2902. This section would allow us to use the drinking fountain requirements.

**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.

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposed text is too restrictive and drinking fountain requirements do not belong in the IBC.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

*Public Comment 1:*

**Michael A. Baker, City of Prescott, Arizona, representing Arizona Building Officials, requests Approval as Submitted for Part II.**

**Commenter's Reason:** Providing water for the public's consumption is definitely a reasonable request. Currently the International Plumbing Code requires all occupancies to provide one drinking fountain for the public's use. ADA requirements specify that hi-lo drinking fountains shall be installed to serve the public; this minimally requires the installation of two drinking fountains. ADA permits one bottled water dispenser as a substitution.

Small occupant load users such as; accounts, dentist, insurance office, title agencies etc. would be required to install two drinking fountains. This increases the initial cost of construction by thousands of dollars. Large occupant users such as, box retail, sports facilities, schools, public buildings, etc. will not typically use this allowance.

The rationale from the committee is "to make sure at least one drinking fountain will be present in spaces requiring them". If that is the case then we need to revisit and rework the numbers in the table, as there is no where in the code where we accept a 50-50 code compliance option. If we apply the same rationale to occupancies requiring two exit doors we would wind up with a potentially hazardous situation, this is not the case with bottled water dispensers.

*Public Comment 2:*

**Bruce Dimmig, Ellerman Schick and Bruno Architects, requests Approval as Submitted for Part II.**

**Commenter's Reason:** Providing water for the public's consumption is definitely a reasonable request. Currently the International Plumbing Code requires all occupancies to provide one drinking fountain for the public's use. We have two exceptions, one that allows for a substitution of up to 50% of the required drinking fountains with a bottled water dispenser. Applying the exception for 50% of the required drinking fountains makes no sense. There is no data to indicate that water dispensers fail 50% more often than drinking fountains. We do this to suppress our own comfort level of how the building will be used in the future. There is no guarantee that any fixture will not be removed once the C of O has been issued.

The rationale from the committee is "to make sure at least one drinking fountain will be present in spaces requiring them". If that is the case then we need to revisit and rework the numbers in the table, as there is no where in the code where we accept a 50-50 code compliance option. Apply the same rationale to occupancies requiring two exit doors. As long as we're ensured one will remain they can eliminate the other one after we leave and it's not a big deal. That is not the case for exit doors and should not be extended to bottled water dispensers.

In addition we never install one drinking fountain. ADA requirements specify that a hi-lo drinking fountain shall be installed to serve the public. This requires the installation of two drinking fountains. The second half of the committee's reason was "this text should remain to serve occupants when bottled water has been discontinued". How can we be so sure the bottled water will be discontinued and not the drinking fountain disconnected? There are many cities across the nation where the drinking water does not taste good and the first thing to corrode, leak and be disconnected is the drinking fountain.

We are taught that if the building is compliant when the C of O is issued then we are not liable for what the occupant alters later without permits. In this instance we are looking forward and assuming the occupants will discontinue the bottled water. The same assumption can be made about the drinking fountain, as we have no provisions for the drinking fountain to be maintained operational. So now we are looking for one drinking fountain in occupancies that require two and have no way of ensuring the drinking fountain will be maintained operational.

Sanitation of drinking fountains is a major challenge in all occupancies. Hospitals and doctor's offices have regularly scheduled cleaning programs for the drinking fountains. Their reasoning: to stop the spread of germs and viruses via the drinking fountains. Think about how many times you have walked up to a drinking fountain to take a drink and the water pressure is extremely low and requires you to put your lips almost onto the spigot to get a drink. Also think of the people who sneeze or cough before touching the faucet handle when using the drinking fountain.

Dental and oral surgery offices deal with a more significant sanitation issues. Bio-hazard generated from work performed within the mouth. The possibility of contaminating the drinking fountain is significantly higher in these occupancies as they may be contaminated with blood born pathogens. By allowing bottled water dispensers or bottled water coolers the bottles and cups are disposable and significantly reduce the risk of contamination.

Again think about how many times you or a friend has approached a drinking fountain to find someone's cigar butt, food wrappers, chewing tobacco and yes, even the remnants of the thoughtful person who spit into the fountain. These reasons alone should convince you of allowing alternative systems to supply safe drinking water to the public.

Final Action: AS AM AMPC\_\_\_\_\_ D

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## **P38-06/07**

### **412.2**

#### *Proposed Change as Submitted:*

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

#### **Revise as follows:**

**412.2 Floor drains.** Floor drains shall have removable strainers. The floor drain shall be constructed so that the drain is capable of being cleaned. Ready access shall be provided to the drain inlet.

**Exception:** The drain inlet of floor drains serving refrigerated display cases shall be provided with access.

**Reason:** Current text would actually permit a floor drain to mistakenly be installed beneath an appliance such as a water heater or furnace. This proposal prevents such installations from occurring unless it is serving refrigerated case drains. It is not reasonable to permit drains to be "out of sight" because they will surely be "out of mind" and the potential for sanitary problems is likely.

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

**Analysis:** See parallel proposal for Section P2719.1 of the IRC.

#### **Committee Action:**

**Approved as Submitted**

**Committee Reason:** Floor drains need to be readily accessible for cleaning and drain rodding. This revision will prevent floor drains from being hidden under appliances, within wall cavities and similar inappropriate places. In mercantile occupancies, it is necessary to locate floor drains under display cases and such drains can be serviced by removal of a display case panel.

#### **Assembly Action:**

**None**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

#### *Public Comment:*

**Jud Collins, Mannford, Oklahoma, representing himself, requests Approval as Modified by this public comment.**

**412.2 Floor drains.** Floor drains shall have removable strainers. The floor drain shall be constructed so that the drain is capable of being cleaned. ~~Ready~~ Access shall be provided to the drain inlet. Ready access shall be provided to floor drains.

**Exception:** ~~The drain inlet of~~ Floor drains serving refrigerated display cases shall be provided with access.

**Commenter's Reason:** Requiring ready access to a drain inlet is not necessary. Access is all that is required. By definition in the IPC, access can require the removal or movement of a panel, door, or similar obstruction. A water heater, the example used in the reason of the proposed change, does not fall within the term, "similar obstruction". It can be argued that the drain inlet for a floor drain is the pipe at the lowest point of the bowl of the floor drain. The IPC defines a drain as, "any pipe that carries wastewater or water-borne wastes in a building drainage system". Therefore the drain inlet is the inlet to the pipe at the bottom of the bowl of the floor drain. If the proposed change is successful, the required strainer on floor drains would violate the new provisions. The proposed modification makes it very clear that the floor drain itself is what is required to have ready access.

Final Action: AS AM AMPC\_\_\_\_\_ D

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## **P39-06/07**

### **413.4**

#### *Proposed Change as Submitted:*

**Proponent:** Todd M. Stephens, REHS, South Carolina Department of Health and Environmental Control, representing Division of Food Protection

#### **Revise as follows:**

**413.4 Water supply required.** All food waste grinders shall be provided with a supply of cold water. The water supply shall be protected against backflow by an air gap or backflow preventer in accordance with Section 608.

**Reason:** This addition provides consistency with dishwashing machines, Section 409, and garbage can washers, Section 414.

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

#### **Committee Action:**

**Approved as Submitted**

**Committee Reason:** This new text will make the backflow prevention coverage for garbage disposals consistent with the coverage in Sections 409.2 and 414.1.

#### **Assembly Action:**

**None**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

#### *Public Comment:*

**Lawrence Brown, CBO, National Association of Home Builders, requests Disapproval.**

**Commenter's Reason:** The proposed wording is somewhat poorly written as to the use of terms in the IPC. For instance, as to what the term "water supply" applies is not defined. Is it the actual fixture/appliance, or to the building "water distribution piping". This should be made clear as the IPC already requires this prevention for the potable water supply. If this is the case, this proposal will not provide any additional prevention against contamination of the potable water supply than already provided for in the IPC. Section 608, particularly 608.3.1, already fully covers the protection of the water supply from contamination. The proposed text should not be accepted until text more specific to the food waste grinder is submitted.

Final Action:      AS              AM              AMPC\_\_\_\_\_      D

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## **P40-06/07, Part I**

### **415 and various other sections**

#### *Proposed Change as Submitted:*

**Proponent:** Kenny Bedford, Prince William County, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

#### **PART I – IPC**

#### **Revise as follows:**

Section 415 and various other sections. Throughout the code, replace the term "laundry tray" with the term "laundry tub" wherever it appears.

**Reason:** This is to make the code consistent with the industry standard term laundry tub. That is actually what the fixture is, it is not a tray it is a tub.

Sections P2706.2.1, 2706.3 and the new IRC Appendix O all refer to the term laundry tray. ICC staff can perform a global search and replace the term laundry "tray" with the term laundry "tub" as found in Sections P3201.6, P3201.7, 2715 and Table P3004.1.

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

**Analysis:** If this proposal is approved, staff will search the applicable code and substitute the term “laundry tub” for the term “laundry tray” wherever it appears.

**Committee Action:** **Disapproved**

**Committee Reason:** The term “laundry tray” is universally understood, therefore, there is no need to change it.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Cecil F. Hardee, Jr., County of Fairfax, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Approval as Submitted for Part I.**

**Commenter’s Reason:** The reason for disapproval was solely based on floor testimony that only confused this simple issue. The opposition stated that “internet” research produced results that the term should be laundry “sink.” Years ago the IPC plumbing fixture chart had several entries for several different types of sinks. Between the Ad Hoc committee on fixtures and the public comment process it was determined that a sink is a sink and all the entries were deleted. This proposal attempts to gain uniformity and consistency and not take the IPC/IRC back in time. It is utilizing current up to date terminology only to clarify a formatting issue. The code should not use different terms to describe the same thing in different sections.

Contrary to the opponents statement there is confusion with regards the terms “tray” and “tub”. A tray is defined as a flat object that has shallow sides and will only retain a small amount of discharge. A tub is defined as a large open container that is designed to hold larger amounts of discharge. Some even interpret the tray as the receptacle where the automatic clothes washer connects the supply and drainage systems, this is actually the standpipe.

Final Action:        AS            AM            AMPC\_\_\_\_\_        D

**P40-06/07, Part II  
P2706.2.1 and various other sections**

*Proposed Change as Submitted:*

**Proponent:** Kenny Bedford, Prince William County, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

**PART II – IRC PLUMBING**

**Revise as follows:**

Section P2706.2.1 and various other sections. Throughout the code, replace the term “laundry tray” with the term “laundry tub” wherever it appears.

**Reason:** This is to make the code consistent with the industry standard term laundry tub. That is actually what the fixture is, it is not a tray it is a tub.

Sections P2706.2.1, 2706.3 and the new IRC Appendix O all refer to the term laundry tray. ICC staff can perform a global search and replace the term laundry “tray” with the term laundry “tub” as found in Sections P3201.6, P3201.7, 2715 and Table P3004.1.

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

**Analysis:** If this proposal is approved, staff will search the applicable code and substitute the term “laundry tub” for the term “laundry tray” wherever it appears.

**Committee Action:** **Disapproved**

**Committee Reason:** The fixture goes by many names, including tub, sink, basin and tray. There should be no preference for any of the names.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Cecil F. Hardee, Jr., County of Fairfax, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMA), requests Approval as Submitted for Part II.**

**Commenter's Reason:** The reason for disapproval was solely based on floor testimony that only confused this simple issue. The opposition stated that "internet" research produced results that the term should be laundry "sink." Years ago the IPC plumbing fixture chart had several entries for several different types of sinks. Between the Ad Hoc committee on fixtures and the public comment process it was determined that a sink is a sink and all the entries were deleted. This proposal attempts to gain uniformity and consistency and not take the IPC/IRC back in time. It is utilizing current up to date terminology only to clarify a formatting issue. The code should not use different terms to describe the same thing in different sections.

Contrary to the opponents statement there is confusion with regards the terms "tray" and "tub". A tray is defined as a flat object that has shallow sides and will only retain a small amount of discharge. A tub is defined as a large open container that is designed to hold larger amounts of discharge. Some even interpret the tray as the receptacle where the automatic clothes washer connects the supply and drainage systems, this is actually the standpipe.

Final Action: AS AM AMPC\_\_\_\_\_ D

**P43-06/07  
419.1, Chapter 13**

*Proposed Change as Submitted:*

**Proponent:** Robert Friedlander, Construction Code Consultants, representing Falcon Waterfree Technologies

**1. Revise as follows:**

**419.1 Approval.** Urinals shall conform to ANSI Z124.9, ASME A112.19.2M, ASME A112.19.19, CSA B45.1 or CSA B45.5. Urinals shall conform to the water consumption requirements of Section 604.4. Water supplied urinals shall conform to the hydraulic performance requirements of ASME A112.19.6, CSA B45.1 or CSA B45.5.

**2. Add standard to Chapter 13 as follows:**

**ASME**

A112.19.19-06 Vitreous China Non-Water Urinals

**Reason:** Include an American National (consensus) Standard for urinals. This standard should be published by the time of the code change hearings.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** Review of the proposed new standard indicated that, in the opinion of ICC Staff, the standard did not comply with ICC standards criteria.

**Committee Action:** **Disapproved**

**Committee Reason:** The proposed standard is not yet published.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

Public Comment:

**Daniel Gleiberman, Falcon Waterfree Technologies, requests Approval as Submitted.**

**Commenter's Reason:** The ASME A112.19.19 Standard, an ANSI national consensus standard, was approved just after the code hearing and published on November 30, 2006. This standard should therefore be incorporated into the IPC.

Final Action: AS AM AMPC\_\_\_\_\_ D

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**P49-06/07  
504.6**

*Proposed Change as Submitted:*

**Proponent:** Rand Ackroyd, Rand Engineering, Inc.

**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 in a pan as described in Section 504.7.

**Reason:** Clarify the Code

Discharging a relief valve in to a pan is an incorrect installation but all too common. The minimum discharge line from a pan per section 504.7.1 is only .75 inches. The discharge from the relief valves is from a .75 diameter pipe under pressure. The pan cannot handle the flow from the relief valve. Water and structural damage often results.

Section 504.6 item 6 states "Discharge in a manner that does not cause personal injury or structural damage".

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

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** The water heater pan required by Section 504.7 is intended to receive condensate and tank leakage. It is not intended to receive and cannot handle the discharge from a T & P relief valve.

**Assembly Action:**

**Disapproved**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a floor action was successful and public comments were submitted.**

*Public Comment 1:*

**Jud Collins, Mannford, Oklahoma, representing himself, requests Approval as Modified by this public comment.**

**Modify Item 14 proposal as follows:**

14. Not terminate in any pan as described in Section 504.7 provided under a water heater.

**Commenter's Reason:** The proposed language seems to indicate that Section 504.7 describes the TPRV drain terminating in the pan. That obviously is not the case. This proposed modification, clearly states the intent of the proposed change.

*Public Comment 2:*

**David C. Delaquila, Gas Appliance Manufacturing Association (GAMA), requests Disapproval.**

**Commenter's Reason:** GAMA supports the floor action to disapprove.

*Public Comment 3:*

**Cecil F. Hardee, Jr., County of Fairfax, Virginia, Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Disapproval.**

**Commenter's Reason:** The assembly action was to disapprove this proposal. Prohibiting the discharge of the T&P relief valve from being routed to the drain pan as an approved receptor increases the cost for a water heater installation and replacement. When existing heaters are replaced this new requirement is going to cause great hardship in many applications that do not have access to the drainage system. This installation has been an accepted common practice for many years with a very limited number of incidents according to the proponent. The drain pan serving a water heater is installed for emergency leakage. In the rare occurrence of a full discharge from a T & P, even a 2 inch trap is not likely to accommodate the flow of steam/water or high pressure of water that is experienced. In addition the IPC drainage system requirements prohibit the discharge temperature of water or steam greater than 140°F (Section 803.1).

Final Action:            AS                    AM                    AMPC\_\_\_\_            D

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**P52-06/07, Part I  
504.7**

*Proposed Change as Submitted:*

**Proponent:** Guy Tomberlin, Fairfax County, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

**PART I – IPC**

**Revise as follows:**

**504.7 Required pan.** ~~Where Water heaters or and 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 thickness of 24 gage, or other pans designed approved for such use.~~

**Exception:** A pan shall not be required where an approved drain is provided and it can be demonstrated that leakage will flow by gravity to such drain without any accumulation of water or damage to the structure or property. The drain shall be located within the limited space designated specifically for the placement of the water heater or storage tank.

**Reason:** The intent of this section is to require pans for all applications. The terms “will cause damage” insinuates all heaters need a pan because no matter what, if a tank leaks, it will cause some type of damage. This is the way many jurisdictions are interrupting this currently. This is just an attempt to have the code say what it means. The exception is for areas such as an unfinished basement where a sump pit and/or drain is installed that will handle any tank leakage with no possibility of damage to anything else. The additional requirement to provide the drain specifically within the area of the tank is to prevent having a drain an excessive distance from the tank in an unfinished basement that may potentially be converted to finished areas

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

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** The proposed revision clarifies the intent to require a pan wherever leakage would cause damage. Except as allowed by the exception, a pan should be required because leakage in any location has the potential to cause damage. The exception allows discharge to the floor in locations such as basements and garages.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

*Public Comment 1:*

**Michael A. Baker, City of Prescott, Arizona, representing Arizona Building Officials, requests Approval as Modified by this public comment for Part I.**

Replace proposal with the following:

**504.7 Required pan.** Water heaters and hot water storage tanks shall be installed in a drain pan designed for such use. Drain pans shall discharge to the outdoors or other approved locations.

**Commenter's Reason:** The proponent states: "The intent of this section is to require pans for all applications. The term "will cause damage" insinuates all heaters need a pan because no matter what, if a tank leaks, it will cause some type of damage." Damages caused by a leaking water heater include such items as mold, mildew, personal property and potential structural damage.

*Public Comment 2:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, requests Disapproval for Part I.**

**Commenter's Reason:** This change will have a serious impact on replacement water heaters. Many water heaters are installed in basements that do not have a floor drain. This change would require the water heaters to have a sump installed to accommodate a floor drain, or a drain from a pan. There has been no reported problem of building damage from concrete floors in the basement. Most water heaters discharge minimal amounts of water when the relief valve discharges. This will add significant cost to construction by requiring floor drains that are not currently required.

Final Action:        AS            AM            AMPC\_\_\_\_        D

**P52-06/07, Part II**

**P2801.5**

*Proposed Change as Submitted:*

**Proponent:** Guy Tomberlin, Fairfax County, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

**PART II – IRC PLUMBING**

**Revise as follows:**

**P2801.5 Required pan.** ~~Where Water heaters or and 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 thickness of 24 gage (0.016 inch) (0.4 mm) or other pans designed for such use. Listed pans shall comply with CSA LC3.

**Exception:** A pan shall not be required where an approved drain is provided and it can be demonstrated that leakage will flow by gravity to such drain without any accumulation of water or damage to the structure or property. The drain shall be located within the limited space designated specifically for the placement of the water heater or storage tank.

**Reason:** The intent of this section is to require pans for all applications. The terms "will cause damage" insinuates all heaters need a pan because no matter what, if a tank leaks, it will cause some type of damage. This is the way many jurisdictions are interrupting this currently. This is just an attempt to have the code say what it means. The exception is for areas such as an unfinished basement where a sump pit and/or drain is installed that will handle any tank leakage with no possibility of damage to anything else. The additional requirement to provide the drain specifically within the area of the tank is to prevent having a drain an excessive distance from the tank in an unfinished basement that may potentially be converted to finished areas

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposed text would require a floor drain in a garage.

**Assembly Action:**

**Approved as Submitted**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a floor action was successful and public comments were submitted.**

*Public Comment 1:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Approval as Submitted for Part II.**

**Commenter's Reason:** There was a successful Floor Action to Approve part II As Submitted. The IPC committee approved part I of this proposal. It clarifies and identifies the exact intent of what the code currently states. This language eliminates inconsistent and non-uniform application of the code requirements relating to water heater pans. The published opposition to this language is that a floor drain would be required in a garage. This assertion is incorrect. If proper drainage for the removal of water is available without causing damage then a floor drain would not be required.

*Public Comment 2:*

**Michael A. Baker, City of Prescott, Arizona, representing Arizona Building Officials requests Approval as Modified by this public comment for Part II.**

**Replace proposal with the following:**

**P2801.5 Required pan.** Water heaters and hot water storage tanks shall be installed in a drain pan designed for such use. Drain pans shall discharge to the outdoors or other approved locations.

**Commenter's Reason:** The proponent states: "The intent of this section is to require pans for all applications. The term "will cause damage" insinuates all heaters need a pan because no matter what, if a tank leaks, it will cause some type of damage." Damages caused by a leaking water heater include such items as mold, mildew, personal property and potential structural damage.

*Public Comment 3:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, requests Disapproval for Part II.**

**Commenter's Reason:** This change will have a serious impact on replacement water heaters. Many water heaters are installed in basements that do not have a floor drain. This change would require the water heaters to have a sump installed to accommodate a floor drain, or a drain from a pan. There has been no reported problem of building damage from concrete floors in the basement. Most water heaters discharge minimal amounts of water when the relief valve discharges. This will add significant cost to construction by requiring floor drains that are not currently required.

Final Action:        AS            AM            AMPC\_\_\_\_        D

**P54-06/07  
604.9**

*Proposed Change as Submitted:*

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

**Revise as follows:**

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

**Reason:** Quick-closing valves are installed in many applications and there has not been any data showing that water hammer resulted in any damage to the plumbing system. Requiring water hammer arrestors in all cases is overly restrictive and the requirement should be removed.

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

**Analysis:** See parallel code change proposal for Section P2903.5 of the IRC.

**Committee Action:** **Disapproved**

**Committee Reason:** Water hammer arrestors are necessary to protect water supply systems from the shock waves that result from abrupt deceleration of water flow.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

*Public Comment 1:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Approval as Submitted.**

**Commenter's Reason:** This mandated requirement was introduced into the IPC with no supporting data demonstrating that water piping systems are failing everywhere, or anywhere for that matter, due to excessive water hammer. It only became a mandate because of an effort put forth to remove terms like "where approved by the code official" and "unless otherwise approved."

By definition a flushvalve is not considered to be quick closing, so what is a quick closing valve in a commercial application? There are numerous examples of inconsistent application of this current requirement again with absolutely no justification of system failures due to "water hammer". Some say any solenoid is "quick closing." However there are solenoids manufactured that actually close in stages to avoid "quick close" the same as a flushvalve. According to current text a small humidifier or domestic ice maker located in an IPC regulated facility requires a water hammer arrester. Some say a ball valve is a quick closing valve just because you can turn it to the off position "quickly" with only a quarter turn.

In addition, it would seem that without the statistics illustrating that water systems are failing due to "water hammer," proper installation and strapping piping systems correctly in accordance with this code and the manufacturer's installation instructions would alleviate the problem.

This proposal still provides the guidance on what type of arrestor must be installed when the designers and installers choose to utilize them. Another flaw with this particular code section is that the first sentence indicates that you can control velocity in a water distribution system by installing a water hammer arrestor. You can in fact reduce and control the "shock" pressure with the use of these devices but you control the velocity in the system by proper design and sizing. This same section never addresses a private water supply system that may have a bladder type pressure tank installed serving the entire system.

This same proposal gained approval from the IRC committee during public comment.

*Public Comment 2:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, requests Approval as Modified by this public comment.**

**Modify proposal as follows:**

**604.9 Water hammer.** The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A water-hammer arrestor shall be installed where pressure surges exceed 150 psi. Water-hammer arrestors shall be installed in accordance with the manufacturer's installation instructions specifications. Water-hammer arrestors shall conform to ASSE 1010.

**Commenter's Reason:** The proponent is correct that the current requirement is overly restrictive. Not all quick closing valves will cause hydraulic shock (water hammer). It would be more appropriate, however, to add the surge pressure threshold. The design parameters of ASSE 1010 are based on controlling the surge pressure to a maximum of 150 psi. Hence, water hammer arrestors are only required when the surge pressure may exceed 150 psi.

Final Action:      AS              AM              AMPC\_\_\_\_\_      D

# P68-06/07, Part I

## 605.7; IRC P2903.9.4

*Proposed Change as Submitted:*

**PART II DID NOT RECEIVE A PUBLIC COMMENT AND WAS WITHDRAWN BY THE PROPONENT. PART II IS REPRODUCED HERE FOR INFORMATIONAL PURPOSES ONLY.**

**Proponent:** Jeremy Brown, NSF International

### **PART I – IPC**

**Revise as follows:**

**605.7 Valves.** All valves shall be of an approved type and compatible with the type of piping material installed in the system. Ball valves, gate valves, globe valves, ~~and~~ plug valves, butterfly valves, check valves, double check valves, and reduced pressure principal backflow preventers intended to supply drinking water shall meet the requirements of NSF 61.

### **PART II – IRC PLUMBING**

**Revise as follows:**

**P2903.9.4 Valve requirements.** Valves shall be of an approved type and compatible with the type of piping material installed in the system. Ball valves, gate valves, globe valves, ~~and~~ plug valves, butterfly valves, check valves, double check valves, and reduced pressure principal backflow preventers intended to supply drinking water shall meet the requirements of NSF 61.

**Reason:** The purpose is to protect public health by expanding the list of valves that are required to meet health effect requirements of NSF/ANSI Standard 61.

The additional valves are used in drinking water systems and have the potential to leach harmful levels of lead or other contaminants into the drinking water supply. NSF/ANSI Standard 61 helps to ensure that these plumbing products do not leach harmful levels of contaminants into drinking water.

NSF/ANSI Standard 61 Drinking Water System Components-Health Effects is already a requirement for all pipe, fittings, faucets and many types of fittings. This change only increases the number of products for which the requirement applies.

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

**Analysis:** Backflow prevention devices are not typically referred to as valves and may be out of place in this section. It is not clear why only two types of backflow prevention devices are addressed.

### **PART I – IPC**

**Committee Action:**

**Disapproved**

**Committee Reason:** Some of the listed devices may not be available as compliant with NSF 61. Backflow preventers are out of place in a code section addressing valves.

**Assembly Action:**

**None**

### **PART II — IRC PLUMBING**

**Withdrawn by Proponent**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Jeremy Brown, National Sanitation Foundation International, requests Approval as Modified by this public comment for Part I.**

**Modify proposal as follows:**

**605.7 Valves.** All valves shall be of an approved type and compatible with the type of piping material installed in the system. Ball valves, butterfly valves, gate valves, globe valves, and plug valves, butterfly valves, check valves, double check valves, and reduced pressure principal backflow preventers intended to supply drinking water shall meet the requirements of NSF 61.

**Commenter's Reason:** NSF/ANSI Standard 61 is already a code requirement for pipes, fittings, faucets and many valves used in drinking water systems. This proposal simply clarifies the requirements for butterfly valves as well. NSF/ANSI Standard 61 helps to ensure plumbing products do not leach harmful levels of contaminants into drinking water.

Final Action: AS AM AMPC\_\_\_\_ D

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## **P69-06/07 605.7**

*Proposed Change as Submitted:*

**Proponent:** Rand Ackroyd, Rand Engineering, Inc.

**Revise as follows:**

**605.7 Valves.** All valves shall be of an approved type and compatible with the type of piping material installed in the system. Ball valves, gate valves, globe valves and plug valves installed in the cold water portion of the plumbing system, and intended to supply drinking water shall meet the requirements of NSF 61.

**Reason:** Clarify the Code. Hot water is not intended for drinking water.

Section 607.1 of the IPC states: "hot water shall be supplied to all plumbing fixtures and equipment utilized for bathing, washing, culinary purposes, cleaning, laundry or building maintenance." There is no mention of hot water for drinking purposes

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The requirement for compliance with NSF 61 should not be limited to cold water applications. People consume hot water in beverages, cooking and baby formulas.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Rand Ackroyd, Rand Engineering, representing himself, requests Approval as Submitted.**

**Commenter's Reason:** Drinking from the hot water side of a faucet is not the norm and certainly not in the same quantity as cold water. Assumptions for water consumption quantity in NSF 61 per day are based on cold water. Faucet covered under NSF 61 are not tested for hot water contact.

Final Action: AS AM AMPC\_\_\_\_ D

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## **P70-06/07, Part I 605.10 (New), 705.1.1 (New)**

*Proposed Change as Submitted:*

**Proponent:** Cecil F. Hardee, Jr., County of Fairfax, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

**PART I – IPC**

**Add new text as follows:**

**605.10 Threaded joints, general.** Pipe and fitting threads shall be tapered.

**705.1.1 Threaded joints, general.** Pipe and fitting threads shall be tapered.

**Reason:** Clarifying the reference reduces the possibility of misinterpreting the intent of the code section with regards to pipe threads. This change is broad in scope and covers many sections.

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

**Committee Action:** **Disapproved**

**Committee Reason:** ASME B1.20.1 is referenced in the threaded joints sections of the code, thus providing the necessary coverage. Some threaded joints employ a gasket to make the seal and tapered threads are not needed.

**Assembly Action:** **None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

*Public Comment 1:*

**Cecil F. Hardee, Jr., County of Fairfax, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA), requests Approval as Submitted for Part I.**

**Commenter's Reason:** The ASME B1.20.1 standard is for all threads. Not clarifying that only tapered threads are allowed leaves open the possible use of running threads. The tapered thread joint uses the tape or thread sealant to aid in making the friction joint seal in case there are minor imperfections in the threads. The committee indicated that "some threaded joints employ a gasket to make the seal and tapered threads are not needed" however this type of fitting is a mechanical joint with and elastomeric seal not a pipe joint. Traps sometimes use a beveled flange the same as a union to make a seal not the threads. This change was approved by the IRC Plumbing Committee at the Public Hearings in Florida. This change was to clarify that running threads are not allowed to be used in any threaded pipe joint.

*Public Comment 2:*

**Michael Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Disapproval for Part I.**

**Commenter's Reason:** Adding the requirement that all threaded joints be tapered into the IRC section on sanitary drainage, joints and connections, could conflict with existing P-traps and other non-tapered style fittings already in use.

Final Action:      AS              AM              AMPC\_\_\_\_              D

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## **P70-06/07, Part II**

### **P3003.1.1 (New)**

*Proposed Change as Submitted:*

**Proponent:** Cecil F. Hardee, Jr., County of Fairfax, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

#### **PART II – IRC PLUMBING**

**Add new text as follows:**

**P3003.1.1 Threaded joints, general. Pipe and fitting threads shall be tapered.**

**Reason:** Clarifying the reference reduces the possibility of misinterpreting the intent of the code section with regards to pipe threads. This change is broad in scope and covers many sections.

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

**Committee Action:** **Approved as Submitted**

**Committee Reason:** The proposed text clarifies the intent of the code to require that pipe and fitting threads be tapered. The intent is understood but not stated.

**Assembly Action:** **None**

## Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

**Michael Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Disapproval for Part II.**

**Commenter's Reason:** Adding the requirement that all threaded joints be tapered into the IRC section on sanitary drainage, joints and connections, could conflict with existing P-traps and other non-tapered style fittings already in use.

Final Action:      AS                  AM                  AMPC\_\_\_\_                  D

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## **P79-06/07, Part I** **605.17.2, Chapter 13**

*Proposed Change as Submitted:*

**PART II DID NOT RECEIVE A PUBLIC COMMENT AND IS ON THE CONSENT AGENDA. PART II IS REPRODUCED ONLY FOR INFORMATIONAL PURPOSES.**

**Proponent:** William Chapin, Cash Acme

### **PART I – IPC**

#### **1. Revise as follows:**

**605.17.2 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, ~~and~~ ASTM F 2080, and ASSE 1061 shall be installed in accordance with the manufacturer's instructions.

#### **2. Add standard to Chapter 13 as follows:**

##### **ASSE**

1061–06 Performance Requirements for Removable and Non Removable Push Fit Fittings

### **PART II – IRC PLUMBING**

#### **1. 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, ~~and~~ ASTM F 2080, and ASSE 1061 shall be installed in accordance with the manufacturer's installation instructions.

#### **2. Add standard to Chapter 43 as follows:**

##### **ASSE**

1061–06 Performance Requirements for Removable and Non Removable Push Fit Fittings

**Reason:** This code change will recognize the new technologies for connection systems that comply with appropriate performance standards.

ASSE 1061 is the appropriate standard for this type of fitting.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** Review of the proposed new standard indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

**PART I – IPC**

**Committee Action:**

**Disapproved**

**Committee Reason:** Disapproval is consistent with the committee recommendation for P78-06/07. The action taken on P61-06/07 already covers the intent of this proposal.

**Assembly Action:**

**None**

**PART II — IRC PLUMBING**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** The proposed standard appears to comply with ICC policy for referenced standards. Approval as Submitted is consistent with the committee recommendation for P62-06/07 and P63-06/07.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**William Chapin, Cash Acme, requests Approval as Modified by this public comment.**

**Modify proposal as follows:**

**605.17.2 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 F877, ASTM F1807, ASTM F1960, ASTM F2080 and ASSE 106+~~ shall be listed to a standard referenced in Table 605.5 and installed in accordance with the manufacturer's instructions.

**Commenter's Reason:** The Committee indicates the reason for Disapproval was based upon the action taken with P74; however, the intention of this proposal was to add a new National Consensus Standard to the existing list of standards published in 605.17.2, and not to add language defining a mechanical joint. The Committee went on to approval identical language for Section 605.17.2 in proposals P81 and P82. The only difference was the standard itself.

While the additional language for PEX fittings is probably not needed in this section now that standards are listed in Table 605.5, if the Committee needs to keep the existing language, the proposed modification will eliminate the need to revisit this code section every time a new fitting standard is adopted into the code.

Final Action:      AS              AM              AMPC\_\_\_\_\_              D

**P80-06/07, Part I**

**605.17.2**

*Proposed Change as Submitted:*

**Proponent:** Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA)

**PART I – IPC**

**Revise as follows:**

**605.17.2 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, and ASTM F 2080 shall be installed in accordance with the manufacturer's instructions. PEX tubing shall be factory marked with the appropriate standards for the fittings with which the tubing is approved for use.

**Reason:** To make sure proper combinations of pipe and fittings for PEX are used.  
This language will help insure that PEX pipe and fitting systems are properly selected.  
PEX pipe is commonly marked with the fittings systems that are approved for use with the pipe.

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

**Analysis:** The term “approved” is defined in the code and appears to be used in the wrong context. The tubing manufacturer determines the type of fittings to be used.

**Committee Action:**

**Approved as Modified**

**Modify the proposal as follows:**

**605.17.2 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, and ASTM F 2080 shall be installed in accordance with the manufacturer’s instructions. PEX tubing shall be factory marked with the appropriate standards for the fittings ~~with which the tubing is~~ are approved for use.

**Committee Reason:** This proposed text will help ensure that the correct combination of tubing and fittings will be installed. The modification was intended to clarify that it is the fittings that are approved for use with the tubing rather than the tubing being approved for use with the fittings.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Michael Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Modified by this public comment for Part I.**

**Modify proposal as follows:**

**605.17.2 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, and ASTM F 2080 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 which are approved for use with the tubing.

**Commenter’s Reason:** I am the proponent of this change and erroneously used the term “approved”. ICC has informed me that “approved” is a term they reserve for the code official and is incorrect terminology to use. It is the PEX manufacturer that specifies the proper marking on the tubing. This correction cleans up the code language.

Final Action: AS AS AMPC \_\_\_ D

**P80-06/07, Part II**  
**P2904.9.1.4.2**

*Proposed Change as Submitted:*

**Proponent:** Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA)

**PART II – IRC PLUMBING**

**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, and ASTM F 2080 shall be installed in accordance with the manufacturer’s installation instructions. PEX tubing shall be factory marked with the appropriate standards for the fittings with which the tubing is approved for use.

**Reason:** To make sure proper combinations of pipe and fittings for PEX are used.  
This language will help insure that PEX pipe and fitting systems are properly selected.  
PEX pipe is commonly marked with the fittings systems that are approved for use with the pipe.

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

**Analysis:** The term “approved” is defined in the code and appears to be used in the wrong context. The tubing manufacturer determines the type of fittings to be used.

**Committee Action:**

**Approved as Modified**

**Modify proposal 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, and ASTM F 2080 shall be installed in accordance with the manufacturer's installation instructions. PEX tubing shall be factory marked with the appropriate standards for the fittings ~~with which the tubing is~~ are approved for use.

**Committee Reason:** This proposed text will help ensure that the correct combination of tubing and fittings will be installed. The modification was intended to clarify that it is the fittings that are approved for use with the tubing rather than the tubing being approved for use with the fittings.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Michael Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Modified by this public comment for Part II.**

**Modify proposal 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, and ASTM F 2080 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 which are approved for use with the tubing.

**Commenter's Reason:** I am the proponent of this change and erroneously used the term "approved". ICC has informed me that "approved" is a term they reserve for the code official and is incorrect terminology to use. It is the PEX manufacturer that specifies the proper marking on the tubing. This correction cleans up the code language.

Final Action:      AS              AM              AMPC \_\_\_\_              D

**P90-06/07  
608.13.5**

*Proposed Change as Submitted:*

**Proponent:** Rand Ackroyd, Rand Engineering, Inc.

**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. ASSE 1020 and CSA B64.1.2 vacuum breakers are recommended for outdoor installation only.

**Reason:** Clarify the Code. ASSE 1020 and CSA standards for Pressure vacuum breakers allow water discharge

The Pressure Type Vacuum breakers have special requirements for re-pressurizing. When a building is de-pressurized for work on the plumbing system the vacuum breaker vent opens. Before the building is re-pressurized the shut off on the inlet vacuum breaker must be closed. After the plumbing system is back to full pressure then the pressure vacuum breaker can be re-pressurized by the plumber. If the system is pressurized slowly and the pressure vacuum breaker is not isolated a tremendous amount of water can discharge from the vent until there is enough pressure to cause the vent on the pressure vacuum breaker to close. In a office complex the plumber may not know there is a pressure vacuum breaker in one or more of the offices.

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

**Analysis:** Recommendations are not consistent with ICC code text style and format and are not enforceable.

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposed revision conflicts with the product standard and is stated as an unenforceable recommendation.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Rand Ackroyd, Rand Engineering, representing himself, requests Approval as Submitted.**

**Commenter's Reason:** It is important to show the distinction between the two type of pressure vacuum breakers. The ASSE 1056 spill resistant Vacuum breaker was developed because of flooding problems associated with ASSE 1020 pressure vacuum breakers being installed indoors.

Final Action:      AS                  AM                  AMPC\_\_\_\_                  D

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**P95-06/07**

**608.15.4**

*Proposed Change as Submitted:*

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

**Revise as follows:**

**608.15.4 Protection by a vacuum breaker.** Openings and outlets shall be protected by atmospheric-type or pressure-type vacuum breakers. The critical level of the vacuum breaker shall be set a minimum of 6 inches (152 mm) above the flood level rim of the fixture or device. Fill valves shall be set in accordance with Section 425.3.1. Vacuum breakers shall not be installed under exhaust hoods or similar locations that will contain toxic fumes or vapors. Pipe-applied vacuum breakers shall be installed not less than 6 inches (152 mm) above the flood level rim of the fixture, receptor or device served. The critical level of a vacuum breaker serving a urinal shall be a minimum of 6 inches (152 mm) above the highest point of the urinal served.

**Reason:** The installation of the critical level for the flushometer valve serving a urinal is not the same as other fixtures and should not be lumped together under one design. The current code language is not sufficiently clear. For example the rules that govern the installation of a water closet with a flushometer valve generally are always ok if installed with the critical level at least six (6) inches above the overflow rim of the bowl. To install a urinal with a flushometer valve using the same design would be incorrect. As stated in the change submitted, the correct installation of a flushometer valve's critical level must be not less than six (6) inches above the fixture.

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

**Committee Action:** **Disapproved**

**Committee Reason:** The proposed revision exceeds the minimum requirements for such devices as stated in current code text.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Lawrence Suggars, South Salt Lake City, Utah, representing Utah Chapter, requests Approval as Submitted.**

**Commenter's Reason:** The committee reason that this "exceeds minimum requirements...", is incorrect. Atmospheric type vacuum breakers are required to be installed their listings. The current language is too vague. The proposed code change will eliminate the confusion.

Final Action:      AS                  AM                  AMPC\_\_\_\_                  D

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## P96-06/07

### 608.16.1

#### *Proposed Change as Submitted:*

**Proponent:** Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C.

#### **Revise as follows:**

**608.16.1 Beverage dispensers.** The water supply connection to beverage dispensers shall be protected against backflow by a backflow preventer conforming to ASSE 1022, CSA B64.3.1 or by an air gap. The portion of the backflow preventer device downstream from the second check valve and the piping downstream therefrom shall not be affected by carbon dioxide gas.

**Reason:** I submitted this change originally. I have found that the section is not always being properly interpreted regarding the backflow preventer. Some ASSE 1022 devices have brass components in the area of the first check valve and the intermediate opening to the outside. The use of brass in these areas has no impact of the quality of the water supplying the carbonated beverage dispenser. The important components required to have non-copper or copper alloy material are from the second check valve and downstream from that check. This is the part of the system that can come in contact with carbonated water that may still be used in a carbonated beverage.

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

#### **Committee Action:**

**Approved as Submitted**

**Committee Reason:** The proposed revision is consistent with the requirements of ASSE 1022 and provides a needed clarification regarding what parts must be unaffected by carbon dioxide gas.

#### **Assembly Action:**

**None**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

#### *Public Comment:*

**Rand Ackroyd, Rand Engineering, representing himself, requests Disapproval.**

**Commenter's Reason:** It is not appropriate to add a design requirement for a backflow preventer to the Code. The specific requirement for materials of construction for the backflow preventer is already in ASSE 1022 Standard referenced in the Code

Final Action:        AS            AM            AMPC\_\_\_\_        D

## P97-06/07

### 608.16.1

#### *Proposed Change as Submitted:*

**Proponent:** Paul Bladdick and Barry Pines, Code Study Development Group of Southeast Michigan

#### **Revise as follows:**

**608.16.1 Beverage dispensers.** The water supply connection to beverage dispensers shall be protected against backflow by a backflow preventer conforming to ASSE 1022, ~~CSA B64.3.1~~ or by an air gap. The backflow preventer device and the piping downstream there from shall not be affected by carbon dioxide gas.

**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 B64.3.1-01'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.

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

**Committee Action:** **Disapproved**

**Committee Reason:** Disapproval is consistent with the committee recommendation for P88-06/07.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, representing American Beverage Association, requests Approval as Submitted.**

**Commenter's Reason:** The American Beverage Association (formerly called the National Soft Drink Association) only recognizes ASSE 1022 backflow preventers as being acceptable for carbonated beverage dispensers.

Final Action:      AS              AM              AMPC\_\_\_\_              D

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**P102-06/07  
701.9**

*Proposed Change as Submitted:*

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

**Delete without substitution:**

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

**Reason:** This is a health department issue that needs to be left up to the health departments. What is a working area? Many restaurants choose open ceiling design. Piping located in that type environment should not be a plumbing code violation. Piping systems are not installed with the intent they are going to leak or fail; otherwise the code would require a secondary source of containment for all piping systems. What is the difference if a piece of ceiling tile is installed under to pipe? Does that make it safer? All that means is that in the unfortunate event of a pipe failure the tile gets wet first before the area below.

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

**Committee Action:** **Disapproved**

**Committee Reason:** Removing this protection from the code will increase the potential risk to human health.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Approval as Submitted.**

**Commenter's Reason:** The ROP states that the committee believed removal of these provisions will lessen the protection of health that the plumbing code provides. This is not the case. This section currently prohibits exposed piping above working, storage, or eating surface in food service establishments. However, several fundamental flaws exist with this text. First of all there is no definition of the term "exposed." If a pipe is painted does that mean that is isn't exposed anymore? Are we to believe that a painted waste line is more

protective to health than an unpainted waste line? Next, the plumbing code does not define the term “food service establishments.” What are “storage” areas? The text also never describes what “above” these spaces means. What if a waste line is installed above a cooking area but it is 20 feet to one side or another. Isn’t this still above the surface? What possible increased health effect would the installation of a ceiling do in this example? However, inconsistent enforcement actions are routinely occurring as a result from this code section. Open ceilings have become increasingly popular in the restaurant industry today. These overly restrictive requirements are an unnecessary prohibition that restrains new innovative designs that the design community has been embracing for quite sometime with no negative health impact. Piping systems are not installed with the intent that they are going to leak. That’s exactly why the code provides specific types of piping materials and joints and connections and supporting provisions to maintain the systems longevity. This code section assumes that a waste line is going to leak and cause an unsanitary condition no matter what. Nevertheless, how does the installation of gypsum or ceiling tile under a waste line create a safer environment? The reality is, if a waste line does happen to leak, and gypsum is installed underneath it, the leak may occur for an extended period of time before it leaks through and someone detects it. Isn’t a leak still a leak? Concealing the pipe just causes it to take longer to notice and creates more damage in the meantime. The accumulation of water that is undetected for extended periods of time are linked to accelerating development of molds and bacteria that may adversely impact many people who may visit these establishments and not even be aware of it until they see it leaking through the material below it. The net effect is a leak will occur for a longer period of time before someone notices the problem area and more damage will occur.

Final Action: AS AM AMPC\_\_\_\_ D

**P105-06/07**  
**702.4, Table 702.4**

*Proposed Change as Submitted:*

**Proponent:** Guy Tomberlin, Fairfax County, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMA) and the Virginia Building Code Officials Association (VBCOA)

**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 the applicable standards listed in Table 702.4.

**TABLE 702.4**  
**PIPE FITTINGS**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM D 3311; <u>ASTM F 628</u> , CSA B181.1
<u>Asbestos Cement</u>	<u>ASTM C 428</u>
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; <u>ASTM F 628</u>
Coextruded composite PVC DWV schedule 40 IPS-DR, PS140, PS200 (solid or cellular core)	ASTM D 2665; ASTM D 3311; <u>ASTM F 894</u>
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; <u>ASTM D 2949</u> ; ASTM D 2665; ASTM D 3034; ASTM D 3311; <u>ASTM F 1866</u>
<u>PVC fabricated fittings</u>	<u>ASTM F 1866</u>
Stainless steel drainage systems, Types 304 and 316L	ASME A 112.3.1
Steel	ASME B 16.9; ASME B16.11; ASME B16.28
<u>Vitrified Clay</u>	<u>ASTM C 700</u>

**Reason:** This is a clean up action consistent with the activity on water system fittings. Fittings need to comply with the applicable fitting standard not pipe standards.

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

**Committee Action:** **Disapproved**

**Committee Reason:** The committee was not comfortable with the possibility of unforeseen ramifications in the proposal. The proposal should be refined and brought back in a public comment.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

*Public Comment 1:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA), requests Approval as Submitted.**

**Commenter's Reason:** This was a simple clean up action consistent what was done with water fittings. Unfortunately, industry wanted some other materials referenced in the table that were not reflected in the original proposal. This caused confusion within the IPC Committee. As submitted is what was approved by the IRC Committee. We urge approval as submitted and industry can alter the materials as they see fit in future code cycles. It is more important to get the text corrected than adding materials. The current text permits the construction of fittings made of pipe and listed as pipe that in no way conform to the fitting standards required by the pipe manufacturers. This is the basis for this proposal.

*Public Comment 2:*

**Jeremy Brown, National Sanitation Foundation (NSF), requests Approval as Modified by this public comment.**

**Modify proposal as follows:**

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

**TABLE 702.4  
PIPE FITTINGS**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic	ASTM D 2661; ASTM D 3311; ASTM F 628, CSA B181.1; <u>ASTM D2751</u>
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 (solid or cellular core)	ASTM D 2661; ASTM D 3311
Coextruded composite PVC DWV schedule 40 IPS-DR, PS140, PS200 (solid or cellular core)	ASTM D 2665; ASTM D 3311; <u>ASTM D2949</u>
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
<b>PVC fabricated fittings</b>	<b><u>ASTM F1866</u></b>
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

**Commenter's Reason:** This change is to clarify that fittings need to comply with fitting standards and not pipe standards.

All standards being added to the table (with the exception of ASTM F1866) cover both pipe and fittings, so are appropriately referenced in this fittings table. None of these standards are new. They are already present in the pipe tables (702.1, 702.2 or 702.3).

ASTM F1866 is simply being relocated to more accurately describe its use.

ASTM F891 is being removed because this standard does not contain fitting requirements.

The original proposal only required slight modification. During the committee meeting, a more confusing modification was entertained. The "Committee Reason" published in the Report on Public Hearing describes the reason the committee rejected the confusing modification and should not reflect poorly on the intent of the original proposal.

This public comment is consistent with committee actions taken on P-66 for the water supply products.

Final Action: AS AM AMPC\_\_\_\_\_ D

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## **P106-06/07, Part I**

### **705.18.4, 707.1, Chapter 13**

#### *Proposed Change as Submitted:*

**Proponent:** Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA)

#### **PART I – IPC**

##### **1. Revise as follows:**

**705.18.4 Plastic pipe or tubing to other piping material.** Joints between different types of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

**Exception:** Adapter fittings shall not be required for transitions between ABS and PVC drain, waste and vent pipe where solvent cement joints are made with solvent cement conforming to ASTM D3138.

**707.1 Prohibited joints.** The following types of joints and connections shall be prohibited:

1. Cement or concrete joints.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not approved for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe.
6. Saddle-type fittings.

**Exception:** Solvent cement transitions between ABS and PVC drain, waste and vent pipe made with solvent cement conforming to ASTM D3138.

##### **2. Add standard to Chapter 13 as follows:**

#### **ASTM**

D 3138–04 Standard Specification for Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Non-Pressure Piping Components

**Reason:** To allow the use of transition cement in the IPC for joining DWV PVC to DWV ABS systems where such systems intersect.

The practice of making a single transition solvent welded joint when changing from an ABS to a PVC DWV system is acceptable in another code and has been used for many years with success. ASTM D 3138 for transition solvent cement, originally published in 1972, explains the intent of the product and applications it is to be used in – for making one "transition" solvent cement type joint between ABS and PVC DWV systems.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** Review of the proposed new standard indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

**Committee Action:**

**Disapproved**

**Committee Reason:** The standard does not take into account the “real world” application of solvent cements such as occurs on the jobsite. Further study of the product performance is needed before allowing its use in the field.

**Assembly Action:**

**None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

*Public Comment 1:*

**Jeremy Brown, National Sanitation Foundation (NSF), requests Approval as Modified by this public comment for Part I.**

**Modify proposal as follows:**

**705.18.4 Plastic pipe or tubing to other piping material.** Joints between different types of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

~~**Exception:** Adapter fittings shall not be required for transitions between ABS and PVC drain, waste and vent pipe where solvent cement joints are made with solvent cement conforming to ASTM D3138~~

**Exception:** An approved adapter fitting shall not be required for a single transition between ABS and PVC building drain or building sewer systems where green solvent cement conforming to ASTM D3138 is used.

**707.1 Prohibited joints.** The following types of joints and connections shall be prohibited:

1. Cement or concrete joints.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not approved for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe.
6. Saddle-type fittings.

~~**Exception:** Solvent cement transitions between ABS and PVC drain, waste and vent pipe made with solvent cement conforming to ASTM D3138.~~

**Exception:** An approved adapter fitting shall not be required for a single transition between ABS and PVC building drain or building sewer systems where green solvent cement conforming to ASTM D3138 is used.

**Commenter's Reason:** The use of this solvent cement as a transition from PVC to ABS is a viable option.

ASTM D3138 is approved for use in the National Plumbing Code of Canada, Uniform Plumbing Code and the National Standard Plumbing Code. This modification was approved by the IRC Code Committee in P106 Part II.

The “committee reason” that the standard does not take into account “real world” applications is not reasonable to exclude the standard since the standard refers to the same basic tests as all other solvent cements referenced in the IPC/IRC. ASTM D3138 was originally published in 1972, so the standard is not new technology. NSF has been testing and certifying products to this standard for over 25 years.

*Public Comment 2:*

**Michael Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Modified by this public comment for Part I.**

**Modify proposal as follows:**

**705.18.4 Plastic pipe or tubing to other piping material.** Joints between different types of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

~~**Exception:** Adapter fittings shall not be required for transitions between ABS and PVC drain, waste and vent pipe where solvent cement joints are made with solvent cement conforming to ASTM D3138~~

**Exception:** An approved adapter fitting shall not be required for a single transition between ABS and PVC building drain or building sewer systems where green solvent cement conforming to ASTM D3138 is used.

**707.1 Prohibited joints.** The following types of joints and connections shall be prohibited:

1. Cement or concrete joints.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not approved for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.

5. Solvent-cement joints between different types of plastic pipe.
6. Saddle-type fittings.

~~**Exception:** Solvent cement transitions between ABS and PVC drain, waste and vent pipe made with solvent cement conforming to ASTM D3138.~~

**Exception:** A single solvent cement transition between ABS and PVC building drain or building sewer systems shall be allowed where green solvent cement conforming to ASTM D3138 is used.

(Portions of proposal not shown remain unchanged)

**Commenter's Reason:** According to the ROH, the floor modified submittal was not approved by the IPC committee because the standard does not take into account the "real world" application of solvent cement on the jobsite, and that further study is needed before allowing its use. Fortunately, another model code has allowed the use of these products for many years, indicating they do function as intended. NSF has five products listed to the standard.

Transition cements have been produced since 1971, and an ASTM standard for the products was developed in 1972, and the cements have been used where ABS house DWV piping transitions to PVC building sewers are common as an option to other methods of mechanical joining.

The IRC's reason for approval in the ROH was so concise; it deserves to be repeated here:

**"Committee Reason:** The proposed text provides a viable option where such material transitions are necessary. The modification limits the application to the single joint between a building drain and a building sewer so as to not allow such transitions to occur throughout a plumbing system. "

Transition cement should be a choice in the IPC. Please allow these exceptions and reconsider this change.

*Public Comment 3:*

**Paul Hayward, Farmington City, Utah, representing Bonneville Chapter ICC, requests Approval as Modified by this public comment for Part I.**

**Modify proposal as follows:**

**705.18.4 Plastic pipe or tubing to other piping material.** Joints between different grades of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

~~**Exception:** Adapter fittings shall not be required for transitions between ABS and PVC drain, waste and vent pipe where solvent cement joints are made with solvent cement conforming to ASTM D3138.~~

**Exception:** An adapter fitting shall not be required for a single transition between ABS and PVC building drain or building sewer systems where green solvent cement conforming to ASTM D3138 is used.

**707.1** The following types of joints and connections shall be prohibited:

1. Cement or concrete joints.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not approved for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe.
6. Saddle-type fittings.

~~**Exception:** Solvent cement transitions between ABC and PVC drain, waste and vent pipe made with solvent cement conforming to ASTM D3138.~~

**Exception:** A single solvent cement transition between ABS and PVC building drain or building sewer systems shall be allowed where green solvent cement conforming to ASTM D3138 is used.

**Commenter's Reason:** The IRC Plumbing Committee recognized the very limited application of this method and the benefits of allowing such. In addition, the Standards do comply with ICC Guidelines. This provision will be helpful to most jurisdictions in the country and should therefore be approved for use with the IPC.

Final Action:        AS                    AM                    AMPC \_\_\_\_        D

# P106-06/07, Part II

## P2904.17.2, P3003.2, Chapter 43

### *Proposed Change as Submitted:*

**Proponent:** Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA)

### **PART II – IRC PLUMBING**

#### **1. Revise as follows:**

**P2904.17.2 Plastic pipe or tubing to other piping material.** Joints between different grades of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

**Exception:** Adapter fittings shall not be required for transitions between ABS and PVC drain, waste and vent pipe where solvent cement joints are made with solvent cement conforming to ASTM D3138

**P3003.2 Prohibited joints.** Running threads and bands shall not be used in the drainage system. Drainage and vent piping shall not be drilled, tapped, burned or welded.

The following types of joints and connections shall be prohibited:

1. Cement or concrete.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not approved for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe.
6. Saddle-type fittings.

**Exception:** Solvent cement transitions between ABS and PVC drain, waste and vent pipe made with solvent cement conforming to ASTM D3138.

#### **2. Add standard to Chapter 43 as follows:**

##### **ASTM**

D 3138–04 Standard Specification for Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Non-Pressure Piping Components

**Reason:** To allow the use of transition cement in the IPC for joining DWV PVC to DWV ABS systems where such systems intersect.

The practice of making a single transition solvent welded joint when changing from an ABS to a PVC DWV system is acceptable in another code and has been used for many years with success. ASTM D 3138 for transition solvent cement, originally published in 1972, explains the intent of the product and applications it is to be used in – for making one “transition” solvent cement type joint between ABS and PVC DWV systems.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the “Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards” provided at the code development hearings.

**Analysis:** Review of the proposed new standard indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

#### **Committee Action:**

**Approved as Modified**

#### **Modify the proposal as follows:**

**P2904.17.2 Plastic pipe or tubing to other piping material.** Joints between different grades of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

**Exception:** Adapter fittings shall not be required for transitions between ABS and PVC drain, waste and vent pipe where solvent cement joints are made with solvent cement conforming to ASTM D3138. An adapter fitting shall not be required for a single transition between ABS and PVC building drain or building sewer systems where green solvent cement conforming to ASTM D3138 is used.

**P3003.2 Prohibited joints.** Running threads and bands shall not be used in the drainage system. Drainage and vent piping shall not be drilled, tapped, burned or welded.

The following types of joints and connections shall be prohibited:

1. Cement or concrete.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not approved for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe.
6. Saddle-type fittings.

Exception: Solvent cement transitions between ABS and PVC drain, waste and vent pipe made with solvent cement conforming to ASTM D3138. A single solvent cement transition between ABS and PVC building drain or building sewer systems shall be allowed where green solvent cement conforming to ASTM D3138 is used.

**Committee Reason:** The proposed text provides a viable option where such material transitions are necessary. The modification limits the application to the single joint between a building drain and a building sewer so as not to allow such transitions to occur throughout a plumbing system.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMA), requests Disapproval for Part II.**

**Commenter's Reason:** The Part I item of this proposal was disapproved by the IPC Committee. The proposed Standard does not address the real world applications that this proposal covers. There needs to be more rigorous testing required of the cement when used to connect ABS to PVC. The standard's requirements are extremely limited to lab type conditions that do not reflect real conditions in which this cement will be utilized.

Further the proponent's modification is not a reasonable approach to joints and connections. They requested this joint be limited to only one transition between the building drain and building sewer. This will create an enforcement nightmare. How can a joint be acceptable for just this one transition? They submitted no justification for this application. The one applicable joint that they reference is usually outside underground and is not in a location that is easily accessed. Failures of these joints are going to create excessive cost to the end user when they are required to go back and make the necessary repairs. This tactic is only to get this joining method and Standard reference into the code and the next step is going to be to say "look it is already approved for this one instance" why not use it anywhere?

Final Action:      AS                  AM                  AMPC \_\_\_\_                  D

**P108-06/07**

**Table 709.1, 709.4.1 (New)**

*Proposed Change as Submitted:*

**Proponent:** Jerry N. Farmer, Sr., C.P.D., Gulf States Plumbing & Mechanical, Inc.

**Add new text as follows:**

**709.4.1 Clearwater waste receptors.** Where indirect waste receptors such as floor drains, floor sinks and hub drains are installed in mercantile occupancies and receive only clear water waste from display cases, refrigerated display cases, ice bins, coolers, freezers and similar equipment, such receptors shall have a drainage fixture unit value of 0.5.

**Revise table as follows:**

**TABLE 709.1  
DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS**

FIXTURE TYPE	DRAINAGE FIXTURE UNIT VALUE AS LOAD FACTORS	MINIMUM SIZE OF TRAP (inches)
Floor drains <sup>h</sup>	2 <sup>h</sup>	2
Floor sinks	Note h	2

(Portions of table not shown do not change)

For SI: 1 inch = 25.4 mm, 1 gallon = 3.785 L (gpf = gallon per flushing cycle).

a. and b. (No change to current text)

c. See Sections 709.2 through ~~709.4~~ 709.4.1 for methods of computing unit value of fixtures not listed in this table or for rating of devices with intermittent flows.

d. through g. (No change to current text)

h. See Sections 709.4 and 709.4.1.

**Reason:** Display cases and refrigerated cases do not typically discharge any more waste than a drinking fountain. Most of the time, display cases and refrigerated cases in grocery stores and similar establishments are drained to combination waste and vent systems into a 3" P-trap that has a 5 DFU value from Table 709.2. In this circumstance, we need to use the proposed drainage fixture unit, not the existing 3" P-trap DFU to keep from oversizing the system. Many grocery stores and similar establishments today have as many as 70 to 200 refrigerated cases, display cases and coils. In these situations, by today's code, the fixture unit value of all the P-traps on a combination waste and vent system could be as much as 115 DFU to 325 DFU.

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

**Committee Action:**

**Approved as Modified**

**Modify the proposal as follows:**

**709.4.1 Clearwater waste receptors.** Where indirect waste receptors such as floor drains, floor sinks and hub drains are installed in mercantile occupancies and receive only clear water waste from display cases, refrigerated display cases, ice bins, coolers, and freezers and similar equipment, such receptors shall have a drainage fixture unit value of 0.5.

**Committee Reason:** Grocery stores and similar mercantile occupancies may have a large number of display cases that drip into a combination waste and vent system through a floor drain or floor sink. Using the DFU values for floor drains or traps from Tables 709.1 and 709.2, an excessively large and unrealistic drainage load results. This unrealistic load can result in larger than necessary piping and excess cost. The actual loading effect of a display case drain is no more than that of a drinking fountain. The modification removes the open-ended reference to "similar equipment" which could be misapplied to equipment with larger drainage discharge.

**Assembly Action:**

**Disapproved**

### Individual Consideration Agenda

**This item is on the agenda for individual consideration because an assembly action was successful and a public comment was submitted.**

*Public Comment:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, representing himself, requests Approval as Modified by this public comment.**

**Further modify proposal as follows:**

**709.4.1. Clear water waste receptors.** Where indirect waste receptors such as floor drains, floor sinks and hub drains ~~are installed in mercantile occupancies and~~ receive only clear water waste from display cases, refrigerated display cases, ice bins, coolers, and freezers, such receptors shall have a drainage fixture unit value of 0.5.

**TABLE 709.1  
DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS**

FIXTURE TYPE	DRAINAGE FIXTURE UNIT VALUE AS LOAD FACTORS	MINIMUM SIZE OF TRAP (inches)
Floor drains <sup>h</sup>	2 <sup>d</sup>	2
Floor sinks	Note h	2

(Portions of table not shown do not change)

For SI: 1 inch = 25.4 mm, 1 gallon = 3.785 L (gpf = gallon per flushing cycle).

a. and b. (No change to current text)

c. See Sections 709.2 through 709.4.1 for methods of computing unit value of fixtures not listed in this table or for rating of devices with intermittent flows.

d. through g. (No change to current text)

h. See Sections 709.4 and 709.4.1.

**Commenter's Reason:** These items are installed in buildings other than mercantile occupancies. If the code recognizes a lower DFU value, it should apply for all installations, not just mercantile.

Final Action: AS AM AMPC\_\_\_\_ D

# P110-06/07, Part I

## 715.1

### *Proposed Change as Submitted:*

**Proponent:** Paul Hayward, City of Farmington, Utah

### **PART I – IPC**

#### **Revise as follows:**

**715.1 Sewage backflow.** Where the flood level rims of plumbing fixtures are below the elevation of the manhole cover of the next upstream manhole in the public sewer, such fixtures shall be protected by a backwater valve installed in the building drain, branch of the building drain or horizontal branch serving such fixtures. ~~Plumbing fixtures having flood level rims above the elevation of the manhole cover of the next upstream manhole in the public sewer shall not discharge through a backwater valve.~~

**Reason:** To allow the installation of backwater valves such that it serves an entire system, rather than requiring multiple separate systems.

~~Requiring separate systems is not cost effective and serves no useful purpose. Multiple systems cost money and a single system will be protected by the backwater valve. This will save money for owners during construction.~~

There is no technical change to the performance of the drainage system, so no substantiation is provided.

**Bibliography:** No prior action has been found in the last two code editions regarding this matter.

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

#### **Committee Action:**

**Disapproved**

**Committee Reason:** In the event of a sewer blockage, the current text protects the occupants of lower story dwelling units by preventing sewage from upper story units from backing up into the fixtures of the lower story units. This same protection is afforded to multi-story single family homes. This protection should not be removed from the code.

#### **Assembly Action:**

**None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

#### *Public Comment 1:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, representing himself, requests Approval as Submitted for Part I.**

**Commenter's Reason:** There is no justification for double piping plumbing fixtures on the same level, just because some have an outlet below the elevation of a manhole, while others have an outlet above the elevation of the manhole. All the fixtures should be permitted to discharge through the backwater valve if the design professional and installer so choose.

#### *Public Comment 2:*

**Paul Hayward, Farmington City, Utah, requests Approval as Submitted for Part I.**

**Commenter's Reason:** There is a whole-sale lack of understanding of the problem that this problem is attempting to address. All of the floor discussion and committee deliberation dealt with two issues: A) Why back-flow valves are necessary, and B) How the devices prevent lower levels of fixture from being flooded by upper fixtures when a blockage occurs in the building sewer.

To begin with, NO ONE is suggesting in this proposal that back-flow valves be eliminated. In fact, the proposal would include additional fixtures. A Plumbing Engineer was consulted and his opinion was the more flow through the valve the better. So this proposal will help the valve performed better.

Secondly, the valve is not designed to address flows WITHIN the structure. It is designed to prevent flow from the public main from going back into the building. If the valve fails, it allows the sludge into the building, but IT IS NOT DESIGNED to deal with floor-to-floor waste within the building itself. The only way it can fail, is to FAIL OPEN. That is contrary and just opposite to the reason the committee did not vote in favor of the proposal. How many instances are on record of a sewer the system being backed up and the valve worked and the resultant flow from the building caused flooding with the structure? I have NEVER heard of one.

The only horror stories and experience on the street is either no valve was installed or it failed opening, resulting in LOSS CAUSED by the SEWER MAIN BACK-UP, not the building drain being unable to function. The written reason is all supposition by those wishing to hold onto tradition when the fact is the provision will be better for the valve's performance. We must entertain more than one way of looking at things if we want to produce the best code possible. IRC Plumbing Committee recognized the very limited application of this

method and the benefits of allowing such. In addition, the Standards do comply with ICC Guidelines. This provision will be helpful to most jurisdictions in the country and should therefore be approved.

This provision will allow all the fixtures to drain through a single building drain, using a back-water valve. IT DOES NOT eliminate the requirements for the valve. IT ALSO ALLOWS just those below the flood rim level of the next lower street manhole to go through the valve, AS THE CODE NOW IS WRITTEN. THAT PROVISION IS NOT LOST! And those areas where it is very expensive to install two separate systems, due to topography, will still have the back-water protection.

Don't make the code provide protection for "what-if's" that are contrary to what was originally intended and have no record of ever happening just because "it's always been that way."

Final Action: AS AM AMPC\_\_\_ D

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## P110-06/07, Part II

### P3008.1

#### *Proposed Change as Submitted:*

**Proponent:** Paul Hayward, City of Farmington, Utah

#### **PART II – IRC PLUMBING**

#### **Revise as follows:**

**P3008.1 General.** Fixtures that have flood level rims located below the elevation of the next upstream manhole cover of the public sewer serving such fixtures shall be protected from backflow of sewage by installing an approved backwater valve. ~~Fixtures having flood level rims above the elevation of the next upstream manhole shall not discharge through the backwater valve.~~ Backwater valves shall be provided with access.

**Reason:** To allow the installation of backwater valves such that it serves an entire system, rather than requiring multiple separate systems.

~~Requiring separate systems is not cost effective and serves no useful purpose. Multiple systems cost money and a single system will be protected by the backwater valve. This will save money for owners during construction.~~

There is no technical change to the performance of the drainage system, so no substantiation is provided.

**Bibliography:** No prior action has been found in the last two code editions regarding this matter.

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The current text provides necessary protection from waste backup into lower stories and should remain in the code.

**Assembly Action:**

**None**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because public comments were submitted.**

#### *Public Comment 1:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, representing himself, requests Approval as Submitted for Part II.**

**Commenter's Reason:** There is no justification for double piping plumbing fixtures on the same level, just because some have an outlet below the elevation of a manhole, while others have an outlet above the elevation of the manhole. All the fixtures should be permitted to discharge through the backwater valve if the design professional and installer so choose.

#### *Public Comment 2:*

**Paul Hayward, Farmington City, Utah, requests Approval as Submitted for Part II.**

**Commenter's Reason:** There is a whole-sale lack of understanding of the problem that this problem is attempting to address. All of the floor discussion and committee deliberation dealt with two issues: A) Why back-flow valves are necessary, and B) How the devices prevent lower levels of fixture from being flooded by upper fixtures when a blockage occurs in the building sewer.

To begin with, NO ONE is suggesting in this proposal that back-flow valves be eliminated. In fact, the proposal would include additional fixtures. A Plumbing Engineer was consulted and his opinion was the more flow through the valve the better. So this proposal will help the valve performed better.

Secondly, the valve is not designed to address flows WITHIN the structure. It is designed to prevent flow from the public main from going back into the building. If the valve fails, it allows the sludge into the building, but IT IS NOT DESIGNED to deal with floor-to-floor waste within the building itself. The only way it can fail, is to FAIL OPEN. That is contrary and just opposite to the reason the committee did not vote in favor of the proposal. How many instances are on record of a sewer system being backed up and the valve worked and the resultant flow from the building caused flooding with the structure? I have NEVER heard of one. Why are we changing from the code mandate of protecting property owners from backed-up sewer systems (public or private) and deciding we are protecting individual homeowners from themselves in the very unlikely event that the sewer system will be plugged and the back-water valve is working properly? How long will the main likely be plugged? And at what cost is this "added protection" that will never be used? Please see reason for P110-06/07 Part I.

Final Action: AS AM AMPC\_\_\_\_\_ D

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## **P111-06/07, Part I**

### **715, Appendix H (New)**

*Proposed Change as Submitted:*

**Proponent:** Paul Hayward, City of Farmington, Utah

#### **PART I – IPC**

**Delete without substitution and place into an Appendix Chapter H:**

#### **SECTION 715** **BACKWATER VALVES**

~~**715.1 Sewage backflow.** Where the flood level rims of plumbing fixtures are below the elevation of the manhole cover of the next upstream manhole in the public sewer, such fixtures shall be protected by a backwater valve installed in the building drain, branch of the building drain or horizontal branch serving such fixtures. Plumbing fixtures having flood level rims above the elevation of the manhole cover of the next upstream manhole in the public sewer shall not discharge through a backwater valve.~~

~~**715.2 Material.** All bearing parts of backwater valves shall be of corrosion-resistant material. Backwater valves shall comply with ASME A112.14.1, CSA B181.1 or CSA B181.2.~~

~~**715.3 Seal.** Backwater valves shall be so constructed as to provide a mechanical seal against backflow.~~

~~**715.4 Diameter.** Backwater valves, when fully opened, shall have a capacity not less than that of the pipes in which they are installed.~~

~~**715.5 Location.** Backwater valves shall be installed so that access is provided to the working parts for service and repair.~~

#### **APPENDIX H** **BACKWATER VALVES**

#### **SECTION H715** **BACKWATER VALVES**

**H715.1 Sewage backflow.** Where the flood level rims of plumbing fixtures are below the elevation of the manhole cover of the next upstream manhole in the public sewer, such fixtures shall be protected by a backwater valve installed in the building drain, branch of the building drain or horizontal branch serving such fixtures. Plumbing fixtures having flood level rims above the elevation of the manhole cover of the next upstream manhole in the public sewer shall not discharge through a backwater valve.

**H715.2 Material.** All bearing parts of backwater valves shall be of corrosion-resistant material. Backwater valves shall comply with ASME A112.14.1, CSA B181.1 or CSA B181.2.

**H715.3 Seal.** Backwater valves shall be so constructed as to provide a mechanical seal against backflow.

**H715.4 Diameter.** Backwater valves, when fully opened, shall have a capacity not less than that of the pipes in which they are installed.

**H715.5 Location.** Backwater valves shall be installed so that access is provided to the working parts for service and repair.

**Reason:** To make the installation of backwater valves optional for a local jurisdiction.

~~Currently some Water Reclamation Districts (sewer) are requiring the installation of backwater valves. Some cities are including the practice and others are resisting it. The decision is being made in the political arena, rather than based upon merit. Placing the requirement in the appendix will allow those jurisdictions who do not wish to enforce it the opportunity to follow their desires. Those who want to enforce it may then simply adopt it as an appendix chapter.~~

There is no technical change to the code requirements in the proposal for those wishing to require the valves, so no substantiation is provided.

**Bibliography:** No prior action has been found in the last two code editions regarding this matter.

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

**Committee Action:** **Disapproved**

**Committee Reason:** Disapproval is consistent with the committee recommendation for P110-06/07.

**Assembly Action:** **None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Paul Hayward, Farmington City, Utah, representing Bonneville Chapter ICC, requests Approval as Submitted for Part I.**

**Commenter's Reason:** Large areas of the country are not installing the code-mandated back-water valve. It is dangerous and reckless from a legal standpoint to ignore code provisions because "we don't like them" or they're "unpopular to enforce." Have the guts to say—"OK, I'm voting to put this in the appendix so that those who want it may adopt it" and those who don't won't have to cower into a corner and say "I'm just not enforcing it." Get real with what you do, folks, starting with P111. See P111-06/07 Part II.

Final Action:      AS              AM              AMPC\_\_\_\_\_      D

## **P111-06/07, Part II P3008, Appendix S (New)**

*Proposed Change as Submitted:*

**Proponent:** Paul Hayward, City of Farmington, Utah

### **PART II – IRC PLUMBING**

**Delete without substitution and place into an Appendix Chapter S:**

#### **SECTION P3008 BACKWATER VALVES**

**P3008.1 General.** ~~Fixtures that have flood level rims located below the elevation of the next upstream manhole cover of the public sewer serving such fixtures shall be protected from backflow of sewage by installing an approved backwater valve. Fixtures having flood level rims above the elevation of the next upstream manhole shall not discharge through the backwater valve. Backwater valves shall be provided with access.~~

**P3008.2 Construction.** ~~Backwater valves shall have noncorrosive bearings, seats and self-aligning discs, and shall be constructed to ensure a positive mechanical seal. Valve access covers shall be water tight.~~

**APPENDIX S**  
**BACKWATER VALVES**

**SECTION AS3008**  
**BACKWATER VALVES**

**AS3008.1 General.** Fixtures that have flood level rims located below the elevation of the next upstream manhole cover of the public sewer serving such fixtures shall be protected from backflow of sewage by installing an approved backwater valve. Fixtures having flood level rims above the elevation of the next upstream manhole shall not discharge through the backwater valve. Backwater valves shall be provided with access.

**AS3008.2 Construction.** Backwater valves shall have noncorrosive bearings, seats and self-aligning discs, and shall be constructed to ensure a positive mechanical seal. Valve access covers shall be water tight.

**Reason:** To make the installation of backwater valves optional for a local jurisdiction.

~~Currently some Water Reclamation Districts (sewer) are requiring the installation of backwater valves. Some cities are including the practice and others are resisting it. The decision is being made in the political arena, rather than based upon merit. Placing the requirement in the appendix will allow those jurisdictions who do not wish to enforce it the opportunity to follow their desires. Those who want to enforce it may then simply adopt it as an appendix chapter.~~

There is no technical change to the code requirements in the proposal for those wishing to require the valves, so no substantiation is provided.

**Bibliography:** No prior action has been found in the last two code editions regarding this matter.

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

**Committee Action:**

**Disapproved**

**Committee Reason:** Placing code requirements in an appendix means that the AHJ would have to specifically adopt the appendix to utilize the text. Backwater valves are needed to protect dwellings from sewer flooding. The code currently makes it clear where BW valves are required and where they are not.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Paul Hayward, Farmington City, Utah, representing Bonneville Chapter ICC, requests Approval as Submitted for Part II.**

**Commenter's Reason: This proposal doesn't take away anything from those who want or need back-water valves!**

Not everyone sees the need for these types of valves. Many areas of the country are not installing the code-mandated back-water valve, sometimes in neighboring jurisdictions served by the same waste-water district. It is dangerous and reckless from a legal standpoint to ignore code provisions because "we don't like them" or they're "unpopular to enforce." Why not say—"OK, I'm voting to put this in the appendix so that those who want it may adopt it" and those who don't won't have to cower into a corner and say "I'm just not enforcing it." *Time to end the hypocrisy and double standards we all seem to so much enjoy.* Get real, starting with P111. See P111-06/07 Part I.

Final Action:      AS              AM              AMPC\_\_\_\_              D

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**P117-06/07**  
**914 (New)**

*Proposed Change as Submitted:*

**Proponent:** Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C.

**Add new text as follows:**

**SECTION 914**  
**SINGLE STACK VENT SYSTEM**

**914.1 Where permitted.** A drainage stack shall be permitted to 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 considered to 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. A maximum of two water closets shall be permitted to discharge into a 3-inch stack. 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.

**TABLE 914.2**  
**SINGLE STACK SIZE**

<b>Stack Size (inches)</b>	<b>Maximum Connected Drainage Fixture Units</b>		
	<b>Stacks Less than 75 Feet in Height</b>	<b>Stacks 75 Feet to Less than 160 Feet in Height</b>	<b>Stacks 160 Feet and Greater in Height</b>
<u>3</u>	<u>24</u>	<u>NP</u>	<u>NP</u>
<u>4</u>	<u>225</u>	<u>24</u>	<u>NP</u>
<u>5</u>	<u>480</u>	<u>225</u>	<u>24</u>
<u>6</u>	<u>1,015</u>	<u>480</u>	<u>225</u>
<u>8</u>	<u>2,320</u>	<u>1,015</u>	<u>480</u>
<u>10</u>	<u>4,500</u>	<u>2,320</u>	<u>1,015</u>
<u>12</u>	<u>8,100</u>	<u>4,500</u>	<u>2,320</u>
<u>15</u>	<u>13,600</u>	<u>8,100</u>	<u>4,500</u>

**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 within 18 inches (457.2 mm) developed length of the stack horizontally shall discharge into a 3 inch (76.2 mm) horizontal branch. A water closet within 18 inches (457.2 mm) developed length of a stack horizontally and not more than one fixture with a maximum fixture drain size of 1 1/2 inch (38.1 mm) shall be permitted to discharge to a 3 inch (76.2 mm) horizontal branch where connection to the stack is 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 closets shall be a maximum of 4 feet (1219 mm) in developed length horizontally from the stack.

**Exception:** Water closets shall be permitted to be a maximum of 8 feet (2438 mm) in developed length horizontally from the stack where connection is made with a sanitary tee.

**914.4.2 Fixture connections.** Fixtures other than water closets shall be located a maximum of 12 feet (3657 mm) in developed length 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 horizontal distance from the stack.

**914.5 Minimum vertical piping size from fixture.** The vertical portion of piping in a fixture drain to a horizontal branch connection shall be a minimum of 2 inches (50.8 mm). The minimum size of the vertical portion of piping for a urinal or standpipe shall be 3 inches (76.2 mm).

**914.6 Additional fixture connections.** Additional fixtures not vented by the single stack venting system shall be permitted to discharge into the single stack vent. The fixtures 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 venting of these fixtures shall terminate to a branch vent, vent stack, stack vent, air admittance valve, or outdoors to the open air.

**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 connected below a horizontal offset in a stack, the offset shall be vented in accordance with Section 915. Fixtures shall not connect 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:** Both the *Uniform Plumbing Code* and the *National Standard Plumbing Code* have adopted the single stack venting system. Only the *International Plumbing Code* is behind in regulating single stack venting systems.

This proposal will add a single stack vent system for the entire drainage system, including water closets and urinals. This proposed change is based on the Philadelphia Plumbing Code, which has used single stack vent systems successfully for over 100 years. The stacks are oversized to provide for the flow of liquid waste, solid waste, and air. The lengths of trap arms are limited and the vertical drops from fixture traps are oversized to prevent the trap from self-siphoning. Fixture drains that do not meet the requirements for a single stack venting system must be conventionally vented in accordance with the other Sections of Chapter 9.

Note that the trap sizes in the one pipe vent system are comparable to those in Chapter 7 and are not oversized. What is oversized is any vertical drop that forms an "S" trap.

The following is a comparison of the DFU stack loading allowed by the various model plumbing codes for conventionally vented drainage systems, compared to a single stack vent system less than 75 feet in height.

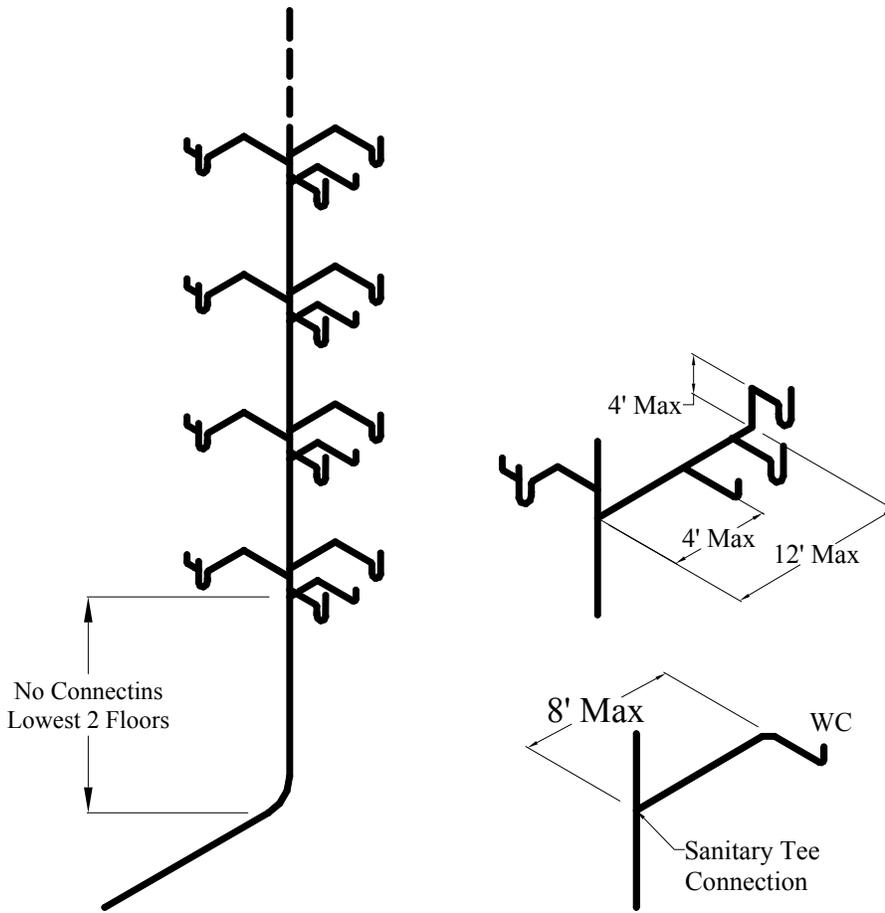
STACK SIZE	PROPOSED SINGLE STACK	PHILADELPHIA PLUMBING CODE	2006 IPC (a)	2006 NSPC (a)	2006 UPC (a)
3"	24 (b)	75	72	72	48
4"	225	225	500	500	256
5"	480	480	1100	1100	600
6"	1015	1015	1900	1900	1380
8"	2320	2320	3600	3600	3600
10"	4500	4500	5600	5600	5600
12"	8100	8100	8400	8400	8400
15"	13,600	13,600			

The Philadelphia Plumbing Code allows 75 DFU and six (6) water closets on a 3" stack, which is comparable to a conventionally vented drainage system. This proposal limits a 3" stack to 24 DFU and two (2) water closets, which is comparable to an average dwelling unit.

In the Table above, the allowable DFU loading on 3", 4", 5", and 6" stacks in the proposed single stack vent system is 50% or less of that allowed in a conventionally vented system. The percentage of oversize diminishes in the 8", 10" and 12" stacks. However, stacks that large will be taller than 75 feet or 160 feet and Section 911.2 will require that they be increased one or two pipe sizes, making the stack loading 50% or less for all stack sizes.

Although the pipe sizing is larger in a single stack vent system, it results in construction cost savings by reducing the amount of vent piping required.

A typical riser diagram with details would look, as follows:



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

**Analysis:** Does this system require a vent stack in accordance with Section 903.2? In proposed Section 914.8, is the “10 pipe diameters” referring to the diameter of the stack or the building drain? (e.g., see Section 903.4.) How does proposed Section 914.4.1 correlate with current Section 906.1, exception?

**Committee Action:** **Disapproved**

**Committee Reason:** Chapter 9 currently provides for practically unlimited design freedom and choices of venting methods, therefore, it is not apparent why this additional method is needed. Proposed Section 914.4.1 is in conflict with the exception to current Section 906.1.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, representing himself, requests Approval as Submitted.**

**Commenter's Reason:** There was no technical justification provided for denying this code change. The committee merely thought there were enough options. This is an inappropriate statement to make. All viable options should be included in the code.

There is not a conflict between the horizontal distance from a stack to a water closet versus the distance from trap to vent for a water closet. This is a special venting system that has special requirements for a single stack system to properly perform. This system is unique compared to other venting systems. As such, the special requirements are identified in the proposed new section.

Final Action: AS AM AMPC\_\_\_ D

**P121-06/07, Part I**  
**1002.4, Chapter 13**

*Proposed Change as Submitted:*

**Proponent:** Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C.

**PART I – IPC**

**1. Revise as follows:**

**1002.4 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 a trap seal protection device shall be installed. A trap seal primer valve 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

**Reason:** I withdrew this code change during the last cycle since the standard was not completed prior to the hearings. Since the standard has been completed, I am resubmitting the change.

One of the newest devices is a floor drain trap seal protection device. ASSE has developed a new standard to regulate 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 were 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.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the “Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards” provided at the code development hearings.

**Analysis:** There was no review of the proposed new standard since the standard was not submitted.

**Committee Action:**

**Disapproved**

**Committee Reason:** The committee did not receive a copy of the standard for their review.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, representing Sure Seal, requests Approval as Submitted for Part I.**

**Commenter’s Reason:** At the time of the first hearing, ASSE 1072 had not completed the balloting. The standard has since been completed. Therefore, the change should be approved.

Final Action: AS AM AMPC\_\_\_\_\_ D

**P121-06/07, Part II**  
**P3201.2, Chapter 43**

*Proposed Change as Submitted:*

**Proponent:** Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C.

**PART II – IRC PLUMBING**

**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). Traps for floor drains shall be fitted with a trap primer or a trap seal protection device or shall be of the deep seal design. 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 withdrew this code change during the last cycle since the standard was not completed prior to the hearings. Since the standard has been completed, I am resubmitting the change.

One of the newest devices is a floor drain trap seal protection device. ASSE has developed a new standard to regulate 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.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** There was no review of the proposed new standard since the standard was not submitted.

**Committee Action:**

**Disapproved**

**Committee Reason:** The committee did not receive a copy of the standard for their review. There is concern over the life-span of such devices and the restriction they create in the drain inlets.

**Assembly Action:**

**None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Julius Ballanco, PE, JB Engineering and Code Consulting, PC, representing Sure Seal, requests Approval as Submitted for Part II.**

**Commenter's Reason:** At the time of the first hearing, ASSE 1072 had not completed the balloting. The standard has since been completed. Therefore, the change should be approved.

Final Action: AS AM AMPC\_\_\_\_ D

## P122-06/07

### 1003.3

#### *Proposed Change as Submitted:*

**Proponent:** Rand Ackroyd, Rand Engineering, Inc.

#### **Revise as follows:**

**1003.3 Grease interceptors.** Hydro Mechanical Type I grease interceptors shall comply with the requirements of Sections 1003.3.1 through 1003.3.5.

**Reason:** Update and Clarify the Code.

Because of past confusion with different types of grease interceptors the new fuller descriptive name has been adopted by the industry and standards G101 and ASME A112.14.4.

The new description has become the industry standard. See attached excerpts from PDI G101 and ASME A112.14.4.

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

#### **Committee Action:**

**Disapproved**

**Committee Reason:** The proposed term is not defined and there is no industry consensus on the term's application.

#### **Assembly Action:**

**None**

#### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

#### *Public Comment:*

**Rand Ackroyd, Rand Engineering, representing himself requests Approval as Submitted.**

**Commenter's Reason:** Hydro Mechanical is an accepted industry term. The title of PDI G101 is: *Standard PDI-G 101 Revised 2007 Testing and Rating Procedure for Type 1 Hydro Mechanical Grease Interceptors with Appendix of Installation and Maintenance*

Final Action:        AS            AM            AMPC\_\_\_\_        D

## P123-06/07

### 1003.3.1

#### *Proposed Change as Submitted:*

**Proponent:** Billy Smith and Max Weiss, Jay R. Smith Mfg., Co.

#### **Revise as follows:**

**1003.3.1 Grease interceptors, and automatic grease removal devices and fat, oil and grease disposal systems required.** A grease interceptor, or automatic grease removal device or fat, oil and grease disposal system 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 and fat, oil and grease disposal systems shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged.

**Reason:** Add new requirements to the code.

The proposed text provides consistency with proposed new section.

This code change will bring Chapter 10 in line with the newest ASME national consensus standards relative to Grease Interceptor technologies.

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

**Committee Action:** **Approved as Submitted**

**Committee Reason:** The proposed revision is part of a group of related proposals that will update Chapter 10 relative to the latest grease interceptor technologies.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Disapproval.**

**Commenter's Reason:** This is a reference to a process that may incorporate enzymes and bacteria for grease removal. Sewage Treatment facilities must be the ones that determine if such removal process is acceptable not the plumbing code. Some treatment facilities may not accept this type process be utilized for waste being processed at their plants. The practice of using enzymes and bacteria to remove grease in a system may also produce a negative impact on a private sewage disposal system as well. Widespread use of this technology can have a detrimental impact on treatment plants. It is unclear why the proponent never actually describes the process that they are proposing. This proposal contains useful information when addressing fats, oils and grease in a plumbing system but this needs to be an alternate approved system approved from the treatment facility. This would be setting up a terrible situation where the plumbing code recognizes something but yet another industry (the treatment facility) does not. Designers may utilize this technology and get started on a project only to find they will never be able to finish because another department in a jurisdiction does not accept this design. Unfortunately, in this case this is information that that is better left in the Standards that it was extracted from. It is information that is impossible to utilize and more importantly impossible to enforce in real world conditions. It is performance based criteria not prescriptive. Grease removal systems must be designed and installed appropriately prior to occupancy. The particulate measurement referenced is not something a plumbing inspector/plan reviewer/engineer/architect can go back and take samples and then write corrective measures. This information may be important to sewage treatment facilities and health departments but only relating to the maintenance plumbing systems, not the new construction provisions that the plumbing code is designed to address.

Final Action: AS AM AMPC\_\_\_ D

**P126-06/07**  
**1003.3.3**

*Proposed Change as Submitted:*

**Proponent:** Billy Smith and Max Weiss, Jay R. Smith Manufacturing, Co.

**Revise as follows:**

**1003.3.3 Grease interceptors, ~~and automatic grease removal devices~~ and disposal systems not required.** A grease interceptor, ~~or an automatic grease removal device~~ or a fat, oil and grease disposal system shall not be required for individual dwelling units or any private living quarters.

**Reason:** Add new requirements to the code.  
The proposed text provides consistency with proposed new section.  
This code change will bring Chapter 10 in line with the newest ASME national consensus standards relative to Grease Interceptor technologies.

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

**Committee Action:** **Approved as Submitted**

**Committee Reason:** The proposed revision is part of a group of related proposals that will update Chapter 10 relative to the latest grease interceptor technologies.

**Assembly Action:** **None**

## Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

*Public Comment:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Disapproval.**

**Commenter's Reason:** This is a reference to a process that may incorporate enzymes and bacteria for grease removal. Sewage Treatment facilities must be the ones that determine if such removal process is acceptable not the plumbing code. Some treatment facilities may not accept this type process be utilized for waste being processed at their plants. The practice of using enzymes and bacteria to remove grease in a system may also produce a negative impact on a private sewage disposal system as well. Widespread use of this technology can have a detrimental impact on treatment plants. It is unclear why the proponent never actually describes the process that they are proposing. This proposal contains useful information when addressing fats, oils and grease in a plumbing system but this needs to be an alternate approved system approved from the treatment facility. This would be setting up a terrible situation where the plumbing code recognizes something but yet another industry (the treatment facility) does not. Designers may utilize this technology and get started on a project only to find they will never be able to finish because another department in a jurisdiction does not accept this design. Unfortunately, in this case this is information that that is better left in the Standards that it was extracted from. It is information that is impossible to utilize and more importantly impossible to enforce in real world conditions. It is performance based criteria not prescriptive. Grease removal systems must be designed and installed appropriately prior to occupancy. The particulate measurement referenced is not something a plumbing inspector/plan reviewer/engineer/architect can go back and take samples and then write corrective measures. This information may be important to sewage treatment facilities and health departments but only relating to the maintenance plumbing systems, not the new construction provisions that the plumbing code is designed to address.

Final Action:           AS           AM           AMPC\_\_\_\_           D

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## P127-06/07

### 1003.3.4, Chapter 13

*Proposed Change as Submitted:*

**Proponent:** Billy Smith and Max Weiss, Jay R. Smith Mfg., Co.

#### 1. Revise as follows:

**1003.3.4 Grease interceptors, and automatic grease removal devices and fat, oil and grease disposal systems.** Grease interceptors, or automatic grease removal devices or fat, oil and grease disposal systems shall conform to PDI G101, ASME A112.14.3, or ASME A112.14.4 or ASME A112.14.6 and shall be installed in accordance with the manufacturer's instructions.

#### 2. Add standard to Chapter 13 as follows:

##### ASME

A112.14.6-06 FOG (Fats, Oils and Greases) Disposal Systems

**Reason:** Add new requirements to the code.

The proposed text provides consistency with proposed new section.

This code change will bring Chapter 10 in line with the newest ASME national consensus standards relative to Grease Interceptor technologies.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** Review of the proposed new standard indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** The proposed revision is part of a group of related proposals that will update Chapter 10 relative to the latest grease interceptor technologies.

**Assembly Action:**

**None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Disapproval.**

**Commenter's Reason:** This is a reference to a process that may incorporate enzymes and bacteria for grease removal. Sewage Treatment facilities must be the ones that determine if such removal process is acceptable not the plumbing code. Some treatment facilities may not accept this type process be utilized for waste being processed at their plants. The practice of using enzymes and bacteria to remove grease in a system may also produce a negative impact on a private sewage disposal system as well. Widespread use of this technology can have a detrimental impact on treatment plants. It is unclear why the proponent never actually describes the process that they are proposing. This proposal contains useful information when addressing fats, oils and grease in a plumbing system but this needs to be an alternate approved system approved from the treatment facility. This would be setting up a terrible situation where the plumbing code recognizes something but yet another industry (the treatment facility) does not. Designers may utilize this technology and get started on a project only to find they will never be able to finish because another department in a jurisdiction does not accept this design. Unfortunately, in this case this is information that that is better left in the Standards that it was extracted from. It is information that is impossible to utilize and more importantly impossible to enforce in real world conditions. It is performance based criteria not prescriptive. Grease removal systems must be designed and installed appropriately prior to occupancy. The particulate measurement referenced is not something a plumbing inspector/plan reviewer/engineer/architect can go back and take samples and then write corrective measures. This information may be important to sewage treatment facilities and health departments but only relating to the maintenance plumbing systems, not the new construction provisions that the plumbing code is designed to address.

Final Action:      AS              AM              AMPC\_\_\_\_              D

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## **P128-06/07**

### **1003.3.6 (New), Chapter 13**

*Proposed Change as Submitted:*

**Proponent:** Billy Smith and Max Weiss, Jay R. Smith Manufacturing, Co.

**1. Add new text as follows:**

**1003.3.6 Fat, oil and grease disposal systems.** The sizing, application and installation of fat, oil and grease disposal systems utilized as wastewater discharge pretreatment devices shall be in accordance with this section. Fat, oil and grease disposal systems shall be considered engineered systems and shall comply with the requirements of this chapter. Fat, oil and grease disposal systems shall be engineered, sized and installed in accordance with the manufacturer's specifications. Fat, oil and grease disposal systems shall comply with the provisions of ASME A112.14.3, ASME A114.14.6 and PDI G101 or other approved national consensus standards applicable to fat, oil and grease disposal systems discharging not more than 100 mg/L of fats, oils and greases.

**2. Add standard to Chapter 13 as follows:**

**ASME**

A112.14.6-06 Fog (Fats, Oils and Greases) Disposal Systems

**Reason:** Add new requirements to the code.

Fat, oil and grease disposal systems are designed as wastewater pretreatment devices and are not covered in other sections of this code. Fat, oil and grease disposal systems are subject to national consensus standards ASME A112.14.3 and ASME A112.14.6. Absence of explicit application requirements invites an hoc system modification compromising manufacturer's design parameters and system performance. Application of general code requirements to engineered systems may compromise performance or integrity of the system, thereby endangering public health and safety. Misapplication of the code to a fat, oil and grease disposal system could result in the operator of the system being subject to civil and or criminal penalties for unlawful pollutant discharge. Misapplication of the code to a fat, oil and grease disposal system without opportunity of designer or manufacturer inspection and authorization could subject the designer, engineer and manufacturer to civil action of system failure and or collateral property damage from overflow or back up. Proposed code additions and revisions provide clarification and harmonization with national consensus standards.

This code change will bring Chapter 10 in line with the newest ASME national consensus standards relative to Grease Interceptor technologies.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** Review of the proposed new standard indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

**Committee Action:** **Approved as Submitted**

**Committee Reason:** The proposed new text is part of a group of related proposals that will update Chapter 10 relative to the latest grease interceptor technologies.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Disapproval.**

**Commenter's Reason:** This is a reference to a process that may incorporate enzymes and bacteria for grease removal. Sewage Treatment facilities must be the ones that determine if such removal process is acceptable not the plumbing code. Some treatment facilities may not accept this type process be utilized for waste being processed at their plants. The practice of using enzymes and bacteria to remove grease in a system may also produce a negative impact on a private sewage disposal system as well. Widespread use of this technology can have a detrimental impact on treatment plants. It is unclear why the proponent never actually describes the process that they are proposing. This proposal contains useful information when addressing fats, oils and grease in a plumbing system but this needs to be an alternate approved system approved from the treatment facility. This would be setting up a terrible situation where the plumbing code recognizes something but yet another industry (the treatment facility) does not. Designers may utilize this technology and get started on a project only to find they will never be able to finish because another department in a jurisdiction does not accept this design. Unfortunately, in this case this is information that that is better left in the Standards that it was extracted from. It is information that is impossible to utilize and more importantly impossible to enforce in real world conditions. It is performance based criteria not prescriptive. Grease removal systems must be designed and installed appropriately prior to occupancy. The particulate measurement referenced is not something a plumbing inspector/plan reviewer/engineer/architect can go back and take samples and then write corrective measures. This information may be important to sewage treatment facilities and health departments but only relating to the maintenance plumbing systems, not the new construction provisions that the plumbing code is designed to address.

Final Action:        AS            AM            AMPC\_\_\_\_        D

**P131-06/07  
1101.9**

*Proposed Change as Submitted:*

**Proponent:** David M. Wenzlaff, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

**Revise as follows:**

**1101.9 Backwater valves.** Backwater valves shall be installed in a storm drainage system ~~shall conform to in accordance with~~ Section 715.

**Reason:** This is a clarification that all the requirements of Section 715 are applicable to backwater valves installed in a storm system.

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

**Committee Action:** **Approved as Submitted**

**Committee Reason:** The proposed revision clarifies that the backwater valve and the installation of the valve must comply with Section 715.

**Assembly Action:** **None**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Guy Tomberlin, Fairfax County, Virginia, representing Virginia Building and Code Officials Association (VBCOA) and Virginia Plumbing and Mechanical Inspectors Association (VPMIA), requests Approval as Modified by this public comment.**

**Modify proposal as follows:**

~~1101.9 Backwater valves. Backwater valves shall be installed in a storm drainage system in accordance with Section 715. Storm drainage systems shall be provided with backwater valves as required for sanitary drainage systems in accordance with Section 715.~~

**Commenter's Reason:** This proposal was approved as submitted at the public comment hearings in FL. This minor modification is only to clarify the intent of the original proposal. This way the section can not be read to only require the installation itself to comply with 715, but to state when backwater valves are actually required in a storm system.

Final Action:      AS                  AM                  AMPC\_\_\_\_\_                  D

**P132-06/07**

**Table 1102.4, Chapter 13**

*Proposed Change as Submitted:*

**Proponent:** Steven G. Matczak, Advanced Drainage Systems, Inc.

**1. Revise as follows:**

**TABLE 1102.4  
BUILDING STORM SEWER PIPE**

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe	ASTM F 2306/F 2306M

(Portions of table not shown do not change)

**2. Add standard to Chapter 13 as follows:**

**ASTM**

F 2306/F 2306M-05 12" to 60" annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications

**Reason:** Add a storm sewer pipe material to Table 1102.4 with the corresponding ASTM standard.

This code change is proposed because there is currently an ASTM Standard specification for this pipe material. HDPE pipe has been used in gravity-flow storm sewer drain applications (both watertight and soiltight) for over 20 years. HDPE pipe is included in the IPC Storm Drain section for subsoil drain pipe applications with the appropriate ASTM standard. Now that an ASTM standard for gravity-flow storm sewer pipe exists it seems natural for the material to be included in Table 1102.4 of the IPC. The acceptance of the proposed change will enable manufacturers with products that meet the requirements of the ASTM standards to have their products used. This change will also allow the authorities having jurisdiction to permit the use of products that meet the ASTM standards.

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

**Analysis:** Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings.

**Analysis:** Review of the proposed new standard indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposal fails to provide coverage for fittings for use with the proposed pipe.

**Assembly Action:**

**None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Timothy K. Edwards, PE, Advanced Drainage Systems, requests Approval as Modified by this public comment.**

**Modify proposal as follows:**

**TABLE 1102.4  
BUILDING STORM SEWER PIPE**

<b>MATERIAL</b>	<b>STANDARD</b>
Polyethylene (PE) plastic pipe	ASTM F 2306/F 2306M

(Portions of table not shown do not change)

**TABLE 1102.7  
PIPE FITTINGS**

<b>MATERIAL</b>	<b>STANDARD</b>
Polyethylene (PE) plastic pipe	ASTM F 2306/F 2306M

(Portions of table not shown do not change)

#### **ASTM**

F 2306/F 2306M-0512" to 60" annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications

**Commenter's Reason:** This proposed modification to the original Public Code Change Proposal Form is requesting the addition of new text into Table 1102.7 Pipe Fittings that would include the material Polyethylene (PE) Plastic Pipe with Standard ASTM F 2306/ F 2306M-05.

During the ICC meeting in September 2006 a submittal was made to add Polyethylene (PE) Plastic Pipe with reference standard ASTM F2306/ F 2306M-05 to table 1102.4 Building Storm Sewer Pipe and to Chapter 13 Referenced Standards of the IPC Standards. The original submittal of Standard ASTM F 2306/ F 2306M-05 received comment from the ICC staff, in the ROH, that "the standard did comply with ICC Standards criteria". The committee reason stated that "the proposal fails to provide coverage for fittings for use with the proposed pipe."

Standard ASTM F2306/ F 2306M-05 does cover fittings within the specification, however, it was an oversight by the submitter that a request for addition to Table 1102.7 Pipe Fittings also be made at the time of the original Public Code Change Proposal Form.

It is therefore requested that this addition to the original proposal be allowed and that this proposal be approved for addition into the IPC.

Final Action: AS AM AMPC\_\_\_\_\_ D

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## **P133-06/07**

### **1106.2, Table 1106.2**

*Proposed Change as Submitted:*

**Proponent:** Daniel J. Walker, P.E., Metal Building Manufacturers Association (MBMA)

**Revise as follows:**

**1106.2 Vertical conductors and leaders.** Circular vertical conductors and leaders shall be sized for the maximum projected roof area, in accordance with Table 1106.2. Rectangular and square vertical conductors and leaders shall be sized using the Equations 11-1 and 11-2 respectively:

(Rectangular Equation 11-1):

$$D_e = \sqrt{s_1 s_2}$$

(Square Equation 11-2):

$$D_e = s_1$$

Where:

- $D_e$  = The equivalent diameter in inches to be used with Table 1106.2.
- $s_1$  = The dimension of a side of the square or rectangular cross-section of the leader.
- $s_2$  = The dimension of a side adjacent to  $s_1$ .

Revise as follows:

**TABLE 1106.2  
SIZE OF VERTICAL CONDUCTORS AND LEADERS**

DIAMETER OF OF LEADER (inches) <sup>a,b</sup>	HORIZONTALLY PROJECTED ROOF AREA (square feet)												
	Rainfall rate (inches per hour)												
	1	2	3	4	5	6	7	8	9	10	11	12	
(Portions of table not shown do not change)													

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929m<sup>2</sup>.

- 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.
- b. Interpolation is permitted for leader sizes that fall between those listed in this table.

**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 was not derived using 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 and 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. The following is a geometrical argument, which provides a reasonable design of rectangular leaders. Applied in the practical range of rectangular leader cross-section geometry, this method will be conservative, i.e. flow in the rectangular leader will be more than the equivalent circular leader. A simplistic way of looking at this in terms of equivalent flow capacity is to imagine you are deforming a circular leader into an ellipse and fitting it inside 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 assumptions applied are: (1) The inscribed elliptical area provides a conservative estimate of flow through the rectangular area, and (2) The equivalent circle is based on setting the area of the ellipse equal to the area of the equivalent circle. For the inscribed ellipse,

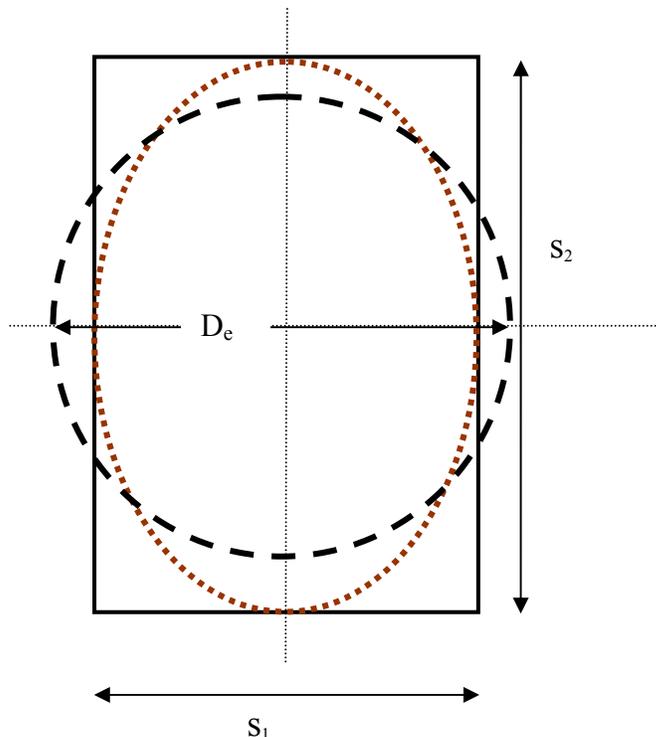
$$A_{\text{ellipse}} = A_{\text{equivalent circle}}$$

$$\pi \left( \frac{s_1}{2} \right) \left( \frac{s_2}{2} \right) = \frac{\pi D_e^2}{4}$$

By algebraic simplification,  $D_e = \sqrt{s_1 s_2}$

$D_e$  is the equivalent diameter of the effective circular cross section for the rectangular leader, and  $s_1$  and  $s_2$  are the length of the sides of the rectangular leader. Table 1106.2 can then be used to determine the maximum horizontal projected roof area that can be drained using the rectangular leader.

## Rectangular and Equivalent Circular Leaders



For the inscribed ellipse,

$a = \frac{1}{2} (s_1) =$  minor axis of ellipse.

$b = \frac{1}{2} (s_2) =$  major axis of ellipse.

Then, for area equivalence,

$$A_{\text{ellipse}} = A_{\text{equivalent circle}}$$

$$\pi ab = \frac{\pi D_e^2}{4}$$

$$\pi \left( \frac{s_1}{2} \right) \left( \frac{s_2}{2} \right) = \frac{\pi D_e^2}{4}$$

By algebraic simplification,

$$D_e = \sqrt{s_1 s_2}$$

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The committee felt that there was a lack of substantiation for the allowance of an inscribed ellipse.

**Assembly Action:**

**None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

**Daniel J. Walker, PE, Thomas Associates, Inc., representing Metal Building Manufacturers Association, Inc., requests Approval as Submitted.**

**Commenter's Reason:** This code change provides a rational method for designers to determine an equivalent circular area for rectangular downspouts, which are commonplace in commercial construction. The code currently allows the use of any shape conductor or leader, but requires that the flow of these be determined by a circular shape inscribed inside the desired shape. That provision will remain in place, but the change we propose will allow designers to take advantage of the additional area a rectangular leader provides by inscribing an ellipse instead, which is still conservative. The proposal also allows for the interpolation for circular diameters that fall between those found in the table.

Final Action:      AS              AM              AMPC \_\_\_\_              D

# PSD5-06/07

## 103.2, 103.3, 103.4

### *Proposed Change as Submitted:*

**Proponent:** Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

### **Revise as follows:**

#### **SECTION 103 DEPARTMENT OF PRIVATE SEWAGE DISPOSAL INSPECTION**

**103.2 Appointment.** ~~The code official shall be appointed by the chief appointing authority of the jurisdiction, and the code official shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges by and before the appointing authority.~~

**103.3 Deputies.** In accordance with the prescribed procedures of the jurisdiction and with the concurrence of the appointing authority, the code official shall have the authority to appoint a deputy code official, other related technical officers, inspectors and other employees. Such employees shall have powers as delegated by the code official.

**103.4 Liability.** The code official, member of the board of appeals officer or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission required or permitted in the discharge of official duties.

Any suit instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code; ~~and any officer of the Department of Private Sewage Disposal Inspection, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.~~

**Reason:** Consistency and coordination among the I-Codes is one of the cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established the Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in each code in the International Codes family and improve the correlation among the I-Codes through the code development process. In order to ensure that this correlation process will continue in an orderly fashion, it is also anticipated that future code development and maintenance of the administrative provisions of the I-Codes family will be overseen by a single, multi-discipline code development committee.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes using existing I-Code texts, as noted. The intent of this correlation effort is not to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes. While some proposed text may be "new" because it was judged by the AHC to be necessary to this particular code, it is not new to the I-Code family, since it already exists in one or more of the International Codes. Unless otherwise noted, there are no technical changes being proposed to these sections. A comparative matrix of current I-Codes Chapter 1 text may be found on the ICC website at [iccsafe.org/cs/cc/admin/](http://iccsafe.org/cs/cc/admin/).

This proposal focuses on the code enforcement agency provisions of the IPSCD. A section-by-section discussion follows:

**103.2:** The purpose of this change is to correlate with current Section 103.2 of the *International Building Code*, *International Residential Code* and *International Existing Building Code*, and Section 301.2 of the *ICC Electrical Code---Administrative Provisions*.

The AHC felt that text relating to the removal of the code official should be deleted because it is a local personnel procedural matter that is outside the scope of the code. Removal from office is not usually associated with an administrative code chapter, but is more frequently found in state statute, a union contract or civil service law.

A similar correlating proposal has also been submitted to the *International Fire Code*, *International Mechanical Code*, *International Plumbing Code*, *International Property Maintenance Code*, *International Wildland-Urban Interface Code*, *International Fuel Gas Code*.

**103.3:** The purpose of this proposed change is to provide correlation with Section 103.3 of the *International Building Code*, *International Residential Code* and *International Existing Building Code*, and Section 301.3 of the *ICC Electrical Code---Administrative Provisions*.

The new text provides the code official with an important administrative tool in assigning personnel to assist with the administration and enforcement of the code within the department.

A similar correlating proposal has also been submitted to the *International Fire Code*, *International Mechanical Code*, *International Plumbing Code*, *International Property Maintenance Code*, *International Wildland-Urban Interface Code* and *International Fuel Gas Code*.

**103.4:** The purpose of this proposed change is to provide correlation with Section 104.8 of the *International Building Code*, *International Residential Code*, *International Existing Building Code*, the texts of which the AHC felt provide a more logical presentation of the provision. It will also afford important protection to members of the appeals board who typically serve voluntarily and might not personally have the liability protection afforded by the revised text.

A similar correlating proposal has been submitted to the *International Fire Code*, *International Mechanical Code*, *International Plumbing Code*, *International Property Maintenance Code*, *International Wildland-Urban Interface Code* and *International Fuel Gas Code*.

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

**Committee Action:**

**Disapproved**

**Committee Reason:** The committee felt that it is inappropriate for the IPSDC to limit the personal liability of members of a board of appeals. Code official protection could be diminished by this proposal.

**Assembly Action:**

**None**

### *Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted.**

*Public Comment:*

#### **Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) requests Approval as Submitted.**

**Commenter's Reason:** The ICC Ad-Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) was tasked with reviewing Chapter 1 administrative provisions in each of the I-Codes and attempting to correlate applicable provisions through the code development process.

This change was proposed by the AHC-Admin to correlate the IPSDC with Sections 103.2, 103.3 and 104.8 of the IBC, IRC and IEBC. Specifically, the language in 103.2 was struck because the committee felt that removal of the code official is an administrative personnel matter and, therefore, does not belong in the code. Section 103.3 spells out that employees shall have powers as delegated by the code official, thus enhancing the code official's ability to efficiently manage the department.

Importantly, the changes to Section 103.4 would include the board of appeals members along with the code official and department employees that are protected from personal liability in the discharge of their duties for those actions performed in accordance with the code in a reasonable and lawful manner. In most jurisdictions, the board of appeals members are citizen volunteers and should be protected from liability exposure. Without such protection, it would be difficult to attract volunteers to serve on the board of appeals.

The committee's stated reason for disapproval was that extending liability protection to board of appeals members was inappropriate and would somehow diminish the protection of the code official. The AHC-Admin disagrees and requests that the committee action be overturned and that PSD5-06/07 be approved as submitted so that this important and reasonable protection will be provided for volunteer members of the board of appeals and the IPSDC will be correlated with Sections 103.2, 103.3 and 104.8 of the IBC, IRC and IEBC.

Final Action:      AS              AM              AMPC\_\_\_\_              D

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