2006/2007 PROPOSED CHANGES TO THE INTERNATIONAL RESIDENTIAL CODE

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TENTATIVE ORDER OF DISCUSSION

2006-2007 PROPOSED CHANGES TO THE INTERNATIONAL RESIDENTIAL CODE

PLUMBING/MECHANICAL

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

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

IRC PLUMBING

- P14-06/07, Part II
- P20-06/07, Part II
- P21-06/07, Part II
- P17-06/07, Part II

RP1-06/07, Part I

- P35-06/07, Part II

RP2-06/07

- P40-06/07, Part II

RP3-06/07

RP4-06/07

- P41-06/07, Part II
- P42-06/07, Part II

RP5-06/07

RP6-06/07

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- P52-06/07, Part II

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- P47-06/07, Part II
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- P51-06/07, Part II

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- P89-06/07, Part II
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- P100-06/07, Part II

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- P72-06/07, Part II
- P73-06/07, Part II
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- P104-06/07, Part II
- P70-06/07, Part II

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- P111-06/07, Part II
- P110-06/07, Part II

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- P120-06/07, Part II
- P121-06/07, Part II

RP27-06/07

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- P135-06/07, Part II
- P136-06/07, Part II
- P137-06/07, Part II

IRC MECHANICAL

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- M94-06/07, Part II
- M100-06/07, Part III
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- M95-06/07, Part II

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- RB131-06/07, Part II
- M102-06/07, Part II
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- M105-06/07, Part II
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RM30-06/07

RP1–06/07
P2603.2.1, M1308.2; IPC 305.8; IFGC 404.5; IMC 305.5

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

THIS PROPOSAL IS ON THE AGENDA OF THE IRC-P, IPC, IFGC AND THE IMC CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IRC PLUMBING

Revise as follows:

P2603.2.1 Protection against physical damage. In concealed locations, where piping, other than cast-iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than 1.5 inches (38 mm) from the nearest edge of the member, the pipe shall be protected by shield plates. Protective shield plates shall be a minimum of ~~0.062~~ 0.054-inch-thick (~~1.6~~ 1.37 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) above sole plates and below top plates.

M1308.2 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~~ 0.054-inch-thick (~~1.6~~ 1.37 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) above sole plates and below top plates.

PART II – 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~~ 0.054-inch-thick (~~1.6~~ 1.37 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) above sole plates and below top plates.

PART III – IFGC

Revise as follows:

404.5 Protection against physical damage. In concealed locations, where piping other than black or galvanized steel is installed through holes or notches in wood 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. Shield plates shall be a minimum of ~~1/16~~ 0.54-inch-thick (~~1.6~~ 1.37 mm) steel, shall cover the area of the pipe where the member is notched or bored and shall extend a minimum of 4 inches (102 mm) above sole plates, below top plates and to each side of a stud, joist or rafter.

PART IV – IMC

Revise as follows:

305.5 Protection against physical damage. In concealed locations where piping, other than cast-iron or 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~~ 0.54-inch-thick (~~1.6~~ 1.37 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) above sole plates and below top plates.

Reason: Revise outdated material

This section of the Code seems to be based on a nominal 1/16" steel thickness which approximates a 16 gauge steel thickness. Fractional and gauge thickness references are an obsolete method of specifying sheet steel. The current unit for designating steel thickness is in decimals of an inch or mils.

The current provision of a minimum of 0.062-inch-thick steel (62 mils) is generally unavailable from steel mills. To meet current code provisions, shield plates would have to be manufactured out of 0.068-inch (14 gauge) steel. 14 gauge steel shield plates is not the intent of the current code provisions.

There is also a conflict with provisions within Chapter 6. Section R602.6.1 requires a "tie of not less than 0.054 inch thick (16 ga)" when the top plate is cut or notched for piping. This change will allow the same product to be used to meet both sections, thereby saving materials and money.

Table A5.1-1 of the 2001 Standard for Cold Formed Steel Framing provides current designations in mils for "old reference gauge number". 16 gauge is currently designated as 54 mils in this table. Table R603.2(2) also lists the minimum uncoated thickness of 0.054 inches as equivalent to 16 reference gage.

Bibliography: Table A5.1-1, *Standard for Cold Formed Steel Framing – General Provisions – 2001,* American Iron and Steel Institute, 1140 Connecticut Ave, Suite 705, Washington, DC 20036

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

PART I – IRC

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

PART II – IPC

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

PART III – IFGC

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

PART IV – IMC

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

RP2–06/07
P2705.1

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

Revise as follows:

P2705.1General. The installation of fixtures shall conform to the following:

1. Floor-outlet or floor-mounted fixtures shall be secured to the drainage connection and to the floor, where so designed, by screws, bolts, washers, nuts and similar fasteners of copper, brass or other corrosion-resistant material.
2. Wall-hung fixtures shall be rigidly supported so that strain is not transmitted to the plumbing system.
3. Where fixtures come in contact with walls and floors, the contact area shall be water tight.
4. Plumbing fixtures shall be usable.
5. ~~The centerline of water closets or bidets shall not be less than 15 inches (381 mm) from adjacent walls or partitions or not less than 15 inches (381 mm)from the centerline of a bidet to the outermost rim of an adjacent water closet. There shall be at least 21 inches (533 mm) clearance in front of the water closet, bidet or lavatory to any wall, fixture or door.~~
5. Water closets, urinals, lavatories and bidets. A water closet, urinal, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction, or closer than 30 inches (762 mm) center-to-center between adjacent fixtures. There shall be at least a 21-inch (533 mm)clearance in front of the water closet, urinal, lavatory or bidet to any wall, fixture or door. Water closet compartments shall be not less than 30 inches (762 mm) wide and 60 inches (1524 mm) deep.
6. The location of piping, fixtures or equipment shall not interfere with the operation of windows or doors.
7. In areas prone to flooding as established by Table R301.2(1), plumbing fixtures shall be located or installed in accordance with Section R323.1.5.
8. Integral fixture-fitting mounting surfaces on manufactured plumbing fixtures or plumbing fixtures constructed on site, shall meet the design requirements of ASME A112.19.2 or ASME A112.19.3.

Reason: This is the text that was approved in the IPC last code cycle. It provides clear, appropriate information and guidance that needs to provided in the IRC.

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

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

RP3–06/07
P2706.2.1

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

Revise as follows:

P2706.2.1 Laundry ~~tray~~ tub connection. A laundry ~~tray~~ tub waste line is permitted to connect into a standpipe for the automatic clothes washer drain. The standpipe~~s~~ shall ~~not be~~ extend not less than 30 inches (762 mm) ~~as measured from~~ above the ~~crown~~ trap weir~~.~~ and shall extend above the flood level rim of the laundry tub The outlet of the laundry tray shall be a maximum horizontal distance of 30 inches (762 mm) from the standpipe trap.

Reason: The laundry tub is a reservoir that can attempt to handle a large quantity of water in a short period of time. It also can hold a large amount of water. If the standpipe terminates below the flood level rim of the laundry tub and the laundry tub is full, the discharge from the laundry tub itself could overflow the standpipe. The text is also revised to imitate the standpipe height measurement found in Section P2706.2.

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

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

RP4–06/07
P2706.3

Proponent: Charles E. Gerber, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

Revise as follows:

P2706.3 Prohibited waste receptors. Plumbing fixtures that are used for ~~domestic or culinary~~ washing or bathing purposes shall not be used to receive the discharge of indirect waste piping.

Exceptions:

1. A kitchen sink trap is acceptable for use as a receptor for a dishwasher.
2. A laundry tray is acceptable for use as a receptor for a clothes washing machine.

Reason: The existing terms are typically associated with commercial applications. The terms washing and bathing are more appropriate for residential installations.

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

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

RP5–06/07
P2717.1

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)

Revise as follows:

P2717.1 Protection of water supply. The water supply for dishwashers shall be protected by an air gap ~~or integral backflow preventer~~.

Reason: This is to clarify when Backflow Preventers are used with dishwashers.

Section 2902.3.1 for Air Gaps states the standard that Air Gaps must meet and how to measure and calculate for an Air Gap. This section also says that “Air gap devices shall be incorporated in dishwashing and clothes washing appliances” but doesn’t require backflow preventers.

Different sections of the code that reference the same equipment, appliances or other devices need to be consistent when requiring protection of the potable water supply. Leaving the section as it is will cause confusion for contractors and code officials when enforcing the provisions of the code.

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

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

RP6–06/07
P2718.2 (New)

Proponent: Kevin W. Ezell, Town of Dryden, New York, representing Lynn Day, Southern Tier Building Officials Association

Add new text as follows:

P2718.2 Pan required. Where installed on a wood framed floor, clothes washing machines shall be provided with a pan in accordance with Sections P2801.5.1 and P2801.5.2. Pans shall be drained by an indirect waste pipe having a minimum diameter of 3/4 inches (19 mm).

Reason: Pan is required by the Plumbing code in this location but this is not in the *International Residential Code*. This is bringing clarity.

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

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

RP7–06/07
P2719.1

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)

Revise as follows:

P2719.1 Floor drains. Floor drains shall have waste outlets not less than 2 inches (51 mm) in diameter and shall be provided with a removable strainer. The floor drain shall be constructed so that the drain is capable of being cleaned. Ready access shall be provided to the drain inlet.

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. When the drain mistakenly ends up under a furnace some times the suggested fix is to cut an access panel in the bottom of the furnace housing. This is a huge problem. 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. You do not want to work on a sanitary blockage or backup through the appliance that is actually supplying the air throughout the residence.

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

Analysis: See parallel proposal for Section 412.2 of the IPC.

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

RP8–06/07
P2720.1

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

Revise as follows:

P2720.1 Access to pump. Access shall be provided to circulation pumps in accordance with the fixture or pump manufacturer’s ~~installation~~ instructions. Where the manufacturer’s instructions do not specify the location and minimum size of field fabricated access openings, a 12-inch by 12-inch (304 mm by 304 mm) minimum size opening shall be installed to provide access to the circulation pump. Where pumps are located more than 2 feet (609 mm) from the access opening, an 18-inch by 18-inch (457 mm by 457 mm) minimum size opening shall be installed. A door or panel shall be permitted to close the opening. In all cases, the access opening shall be unobstructed and be of the size necessary to permit the removal and replacement of the circulation pump.

Reason: The modification shown above is to correlate this same provision with the text of the IPC Section 421.5. This modification was made by the Final Action Agenda on Proposal P27-04/05. The term “pump” is added as a replacement pump may have requirements that differ from those of the whirlpool bathtub (fixture) manufacturer. Deleting the term “installation” provides more appropriate text relating to all of the instructions for the installation of appliances, and correlates with the term as used in the next sentence.

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

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

RP9–06/07
P2801.3

Proponent: Charles E. Gerber, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

Revise as follows:

P2801.3 Location. Water heaters and storage tanks shall be installed in accordance with Section M1305 and shall be located and connected to provide access for observation, maintenance, servicing and replacement.

Reason: It is not the intent of the code for an obstacle to be moved or removed so a piece of equipment or appliance can be worked on or replaced. This is made clear in the section M1305. This added text is for clarity and consistency.

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

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

RP10–06/07
P2801.6

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:

P2801.6 Water heaters installed in garages. Water heaters, other than gas-fired, having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the garage floor. Gas-fired appliances shall be installed in accordance with Chapter 24.

Reason: This is to provide clarification to the user that fuel gas related provisions are located in Chapter 24.

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

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

RP11–06/07
P2803.7 (New)

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

Add new text as follows:

P2803.7 Vacuum relief valve. Bottom fed water heaters and bottom fed tanks connected to water heaters shall have a vacuum relief valve installed. The vacuum relief valve shall comply with ANSI Z21.22.

Reason: Bottom fed water heaters are installed in residences and this requirement applies. The water heater doesn't know which occupancy in which it is installed. Currently this is not addressed in the IRC. In an effort to make this document a better stand-alone code, this requirement should be located here.

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

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

RP12–06/07
P2902.3.4

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

Revise as follows:

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

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

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

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

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

RP13–06/07
P2902.4.1

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

Revise as follows:

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

Reason: Delete current requirements

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

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

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

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

RP14–06/07
P2902.6 – P2902.6.3 (New), Chapter 43

Proponent: Charles E. Gerber, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

1. Add new text as follows:

P2902.6 Location of back flow preventers. Access shall be provided to backflow preventers as specified by the manufacturer's installation instructions.

P2902.6.1 Outdoor enclosures for backflow prevention devices. Outdoor enclosures for backflow prevention devices shall comply with ASSE 1060.

P2902.6.2 Protection of backflow preventers. Backflow preventers shall not be located in areas subject to freezing except where they can be removed by means of unions, or are protected by heat, insulation or both.

P2902.6.3 Relief port piping. The termination of the piping from the relief port or air gap fitting of the backflow preventer shall discharge to an approved indirect waste receptor or to the outdoors where it will not cause damage or create a nuisance.

2. Add standard to Chapter 43:

ASSE

1060–96 Performance Requirements for Outdoor Enclosures for Backflow Prevention Assemblies

Reason: There are some manufacturer's installation instructions which include this information and some that do not. Part of this added text is from the IPC and part of it is new. This additional text give further clarity and guidance to both the installer and the code enforcer as to the proper location and uniform installation of the backflow preventer.

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

Analysis: See parallel proposal for Section 608.14.2 of the IPC.
Results of the review of the proposed standard(s) will be posted on the ICC website by August 20, 2006.

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

RP15–06/07
P2903.5

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

Revise as follows:

P2903.5 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 used.~~ Water-hammer arrestors shall be installed in accordance with the manufacturers' ~~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 in all cases is overly restrictive and should be removed.

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

Analysis: See parallel Code Change Proposal for Section 604.9 of the IPC.

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

RP16–06/07
2903.7, Appendix R (New)

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

1. Revise as follows:

P2903.7 Size of water-service mains, branch mains and risers. The minimum size water service pipe shall be 3/4 inch (19 mm). The size of water service mains, branch mains and risers shall be determined according to water supply demand [gpm (L/m)], available water pressure [psi (kPa)] and friction loss caused by the water meter and developed length of pipe [feet (m)], including equivalent length of fittings. The size of each water distribution system shall be determined according to ~~the procedure outlined in this section or by other~~ design methods conforming to acceptable engineering practice, such as those methods in Appendix R and shall be approved by the ~~administrative authority.~~ code official.

~~1. Obtain the minimum daily static service pressure [psi (kPa)] available (as determined by the local water authority) at the water meter or other source of supply at the installation location. Adjust this minimum daily static pressure [psi (kPa)] for the following conditions:~~
~~1.1. Determine the difference in elevation between the source of supply and the highest water supply outlet. Where the highest water supply outlet is located above the source of supply, deduct 0.5 psi (3.4 kPa) for each foot (305 mm) of difference in elevation. Where the highest water supply outlet is located below the source of supply, add 0.5 psi (3.4 kPa) for each foot (305 mm) of difference in elevation.~~
~~1.2. Where a water pressure reducing valve is installed in the water distribution system, the minimum daily static water pressure available is 80 percent of the minimum daily static water pressure at the source of supply or the set pressure downstream of the pressure reducing valve, whichever is smaller.~~
~~1.3. Deduct all pressure losses caused by special equipment such as a backflow preventer, water filter or water softener. Pressure loss data for each piece of equipment shall be obtained from the manufacturer of such devices.~~
~~1.4. Deduct the pressure in excess of 8 psi (55 kPa) caused by installation of special plumbing fixtures, such as temperature controlled showers and flushometer tank water closets. Using the resulting minimum available pressure, find the corresponding pressure range in Table P2903.7.~~
~~2. The maximum developed length for water piping is the actual length of pipe between the source of supply and the most remote fixture, including either hot (through the water heater) or cold water branches multiplied by a~~

~~factor of 1.2 to compensate for pressure loss through fittings. Select the appropriate column in Table P2903.7 equal to or greater than the calculated maximum developed length.~~

3. ~~To determine the size of water service pipe, meter and main distribution pipe to the building using the appropriate table, follow down the selected "maximum developed length" column to a fixture unit equal to, or greater than the total installation demand calculated by using the "combined" water supply fixture unit column of Table P2903.6. Read the water service pipe and meter sizes in the first left-hand column and the main distribution pipe to the building in the second left-hand column on the same row.~~
4. ~~To determine the size of each water distribution pipe, start at the most remote outlet on each branch (either hot or cold branch) and, working back toward the main distribution pipe to the building, add up the water supply fixture unit demand passing through each segment of the distribution system using the related hot or cold column of Table P2903.6. Knowing demand, the size of each segment shall be read from the second left-hand column of the same table and a maximum developed length column selected in Steps 1 and 2, under the same or next smaller size meter row. In no case does the size of any branch or main need to be larger that the size of the main distribution pipe to the building established in Step 3.~~

2. Add new text as follows:

Create new Appendix R to be a duplication of Appendix E of the IPC.

APPENDIX R
SIZING OF WATER PIPING SYSTEM

Reason: The current pipe sizing method in the IRC is not usable in everyday applications as it requires piping that is too large in some cases and allows piping that is too small in others. It requires meters and service piping to be the same size and that simply is not common in many local jurisdictions. It fails to provide guidance when a meter is a different size than the service. It also fails to provide sizing criteria when the point of delivery is from a private source such as a well.

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

Analysis: This proposal will duplicate Appendix E of the IPC in a new Appendix R in the IRC. IPC Sections 604.5 and 604.6 are referenced in Appendix E, but have no equivalent in the IRC.

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

RP17–06/07
P2904.5.1

Proponent: Charles E. Gerber, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

Delete without substitution:

~~**P2904.5.1 Under concrete slabs.** Inaccessible water distribution piping under slabs shall be copper water tube minimum Type M, brass, ductile iron pressure pipe, cross-linked polyethylene/aluminum/cross-linked polyethylene (PEXAL- PEX) pressure pipe, polyethylene/aluminum/polyethylene (PE-AL-PE) pressure pipe, chlorinated polyvinyl chloride (CPVC), polybutylene (PB), cross-linked polyethylene (PEX) plastic pipe or tubing or polypropylene (PP) pipe or tubing, all to be installed with approved fittings or bends. The minimum pressure rating for plastic pipe or tubing installed under slabs shall be 100 pounds per square inch at 180°F (689 kPa at 82°C).~~

Reason: This section is not needed. There is no need for distinction between above ground and under ground water distribution piping. This proposal achieves consistency with the IPC requirements.

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

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

RP18–06/07
P2904.15

Proponent: Charles E. Gerber, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

Delete without substitution:

~~**P2904.15 Underground joints.** Joints in polybutylene (PB) plastic pipe or tubing underground or under a concrete floor slab shall be installed using heat fusion, in accordance with the manufacturer's installation instructions. Joints in~~

~~copper pipe or tube installed in a concrete floor slab or under a concrete floor slab on grade shall be installed using wrought-copper fittings and brazed joints.~~

Reason: This section is not needed. Section P2608.2 already refers to the manufacturer's installation instructions as it relates to the installation of all materials. The requirement for joints in or under concrete is unfounded and does not exist in any other code or code section. This achieves consistency with the IPC.

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

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

RP19–06/07
P2904.17.2

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

Revise as follows:

P2904.17.2 Plastic pipe or tubing to other piping material. Joints between different ~~grades~~ 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.

Reason: To clarify the code language. This is better code language and reflects what is stated in the IPC Section 705.18.4 below:

> **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.
>
> Types is clearly understandable, grades is not.

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

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

RP20–06/07
P3002.3, Table P3002.3

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

Revise as follows:

P3002.3 Fittings. Fittings shall be approved and compatible with the type of piping being used and shall be of a sanitary or DWV design for drainage and venting as shown in Table P3002.3. ~~Water pipe fittings shall be permitted in engineer-designed systems where the design indicates compliance with Section P3101.2.1.~~

TABLE P3002.3
PIPE FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic ~~pipe~~	ASTM D 3311; ASTM F 628; CSA B181.1; ASTM D 2661
Asbestos cement	ASTM C 428
Coextruded composite ABS DWV schedule 40 IPS ~~pipe~~ (solid or cellular core)	ASTM D 2661; ASTM D 3311~~; ASTM F 628~~
Coextruded composite PVC DWV schedule 40 IPS-DR, PS 140, PS200 (solid and cellular core)	ASTM D 2665; ASTM D 3311~~; ASTM F 891~~
Polyvinyl chloride (PVC) plastic pipe	ASTM D 3311; ASTM D 2949; ASTM D 2665; ASTM D 3034; ASTM F 1412; ~~ASTM F 1866;~~ CSA B 181.2; CSA B 182.4
PVC fabricated fittings	ASTM F 1866
Vitrified clay	ASTM C 700

(Portions of table not shown do not change)

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. The reference to using water pipe fittings in a drain waste and vent system is simply inappropriate. The section that is referred to in chapter 31 is a venting section that has absolutely nothing to do with drainage fittings.

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

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

RP21–06/07
Table P3004.1

Proponent: Charles E. Gerber, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

Revise as follows:

TABLE P3004.1
DRAINAGE FIXTURE UNIT (d.f.u.) VALUES FOR VARIOUS PLUMBING FIXTURES

(Portions of table not shown do not change)

For SI: 1 gallon = 3.785 L.
a. For a continuous or semicontinuous flow into a drainage system, such as from a pump or similar device, ~~1.5~~ 2 fixture units shall be allowed per gpm of flow. For a fixture not listed, use the highest d.f.u. value for a similar listed fixture.
b. A floor drain itself adds no hydraulic load. However, where used as a receptor, the fixture unit value of the fixture discharging into the receptor shall be applicable.
c. Add 2 d.f.u. for each additional full bath.

Reason: IPC Section 709.3 and the IRC Table P3004.1 need to be uniform.

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

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

RP22–06/07
P3007.1, P3007.2, P3007.2.1, P3007.1 – P3007.6 (New)

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

Delete and substitute as follows:

~~**P3007.1 Sewage ejectors or sewage pumps.** A sewage ejector, sewage pump, or grinder pump receiving discharge from a water closet shall have minimum discharge velocity of 1.9 feet per second (0.579 m/s) throughout the discharge piping to the point of connection with a gravity building drain, gravity sewer or pressure sewer system. A nongrinding pump or ejector shall be capable of passing a 1 1/2-inch-diameter (38 mm) solid ball, and the discharge piping shall be not less than 2 inches (51 mm) in diameter. The discharge piping of grinding pumps shall be not less than 1 1/4 inches (32 mm)in diameter. A check valve and a gate valve located on the discharge side of the check valve shall be installed in the pump or ejector discharge piping between the pump or ejector and the drainage system. Access shall be provided to such valves. Such valves shall be located above the sump cover or, where the discharge pipe from the ejector is below grade, the valves shall be accessibly located outside the sump below grade in an access pit with a removeable access cover.~~

> ~~**Exception:** Macerating toilet systems shall be permitted to have the discharge pipe sized in accordance with manufacturer's instructions, but not less than 0.75 inch (19 mm) in diameter.~~

~~**P3007.2 Building drains below sewer (building subdrains).** Building drains which cannot be discharged to the sewer by gravity flow shall be discharged into a tightly covered and vented sump from which the contents shall be lifted and discharged into the building gravity drainage system by automatic pumping equipment.~~

~~**P3007.2.1 Drainage piping.** The system of drainage piping below the sewer level shall be installed and vented in a manner similar to that of the gravity system. Only such drains that must be lifted for discharge shall be discharged into sumps. All other drains shall be discharged by gravity.~~

> ~~**Exception:** Macerating toilet systems shall be permitted as an alternate to the sewage pump or ejector system. The macerating toilet shall comply with ASME A112.3.4 or CSA B45.9 and shall be installed in accordance with the manufacturers' instructions.~~

P3007.1 Building subdrains. Building subdrains that cannot be discharged to the sewer by gravity flow shall be discharged into a tightly covered and vented sump from which the liquid shall be lifted and discharged into the building gravity drainage system by automatic pumping equipment or other approved method. In other than existing structures, the sump shall not receive drainage from any piping within the building capable of being discharged by gravity to the building sewer.

P3007.2 Valves required. A check valve and a full open valve located on the discharge side of the check valve shall be installed in the pump or ejector discharge piping between the pump or ejector and the gravity drainage system. Access shall be provided to such valves. Such valves shall be located above the sump cover required by Section P3007.3.2 or, where the discharge pipe from the ejector is below grade, the valves shall be accessibly located outside the sump below grade in an access pit with a removable access cover.

P3007.3 Sump design. The sump pump, pit and discharge piping shall conform to the requirements of Sections P3007.3.1 through P3007.3.5.

P3007.3.1 Sump pump. The sump pump capacity and head shall be appropriate to anticipated use requirements.

P3007.3.2 Sump pit. The sump pit shall be not less than 18 inches (457 mm) in diameter and 24 inches (610 mm) deep, unless otherwise approved. The pit shall be accessible and located such that all drainage flows into the pit by gravity. The sump pit shall be constructed of tile, concrete, steel, plastic or other approved materials. The pit bottom shall be solid and provide permanent support for the pump. The sump pit shall be fitted with a gas-tight removable cover adequate to support anticipated loads in the area of use. The sump pit shall be vented in accordance with Chapter 31.

P3007.3.3 Discharge piping. Discharge piping shall meet the requirements of Section P3307.2.

P3007.3.4 Maximum effluent level. The effluent level control shall be adjusted and maintained to at all times prevent the effluent in the sump from rising to within 2 inches (51 mm) of the invert of the gravity drain inlet into the sump.

P3007.3.5 Ejector connection to the drainage system. Pumps connected to the drainage system shall connect to the building sewer or shall connect to a wye fitting in the building drain a minimum of 10 feet (3048 mm) from the base of any soil stack, waste stack or fixture drain. Where the discharge line connects into horizontal drainage piping, the connection shall be made through a wye fitting into the top of the drainage piping.

P3007.4 Sewage pumps and sewage ejectors. A sewage pump or sewage ejector shall automatically discharge the contents of the sump to the building drainage system.

P3007.5 Macerating toilet systems. Macerating toilet systems shall comply with CSA B45.9 or ASME A112.3.4 and shall be installed in accordance with the manufacturer's installation instructions.

P3007.6 Capacity. A sewage pump or sewage ejector shall have the capacity and head for the application requirements. Pumps or ejectors that receive the discharge of water closets shall be capable of handling spherical solids with a diameter of up to and including 2 inches (51 mm). Other pumps or ejectors shall be capable of handling spherical solids with a diameter of up to and including 1 inch (25.4 mm). The minimum capacity of a pump or ejector based on the diameter of the discharge pipe shall be in accordance with Table 3007.6.

Exceptions:

1. Grinder pumps or grinder ejectors that receive the discharge of water closets shall have a minimum discharge opening of 1.25 inches (32 mm).
2. Macerating toilet assemblies that serve single water closets shall have a minimum discharge opening of 0.75 inch (19 mm).

TABLE 3007.6
MINIMUM CAPACITY OF SEWAGE PUMP OR SEWAGE EJECTOR
DIAMETER OF THE DISCHARGE - CAPACITY OF PUMP OR EJECTOR

PIPE (inches)	GALLONS PER MINUTE(gpm)
2	21
21/2	30
3	46

For SI: 1 inch = 25.4 mm, 1 gallon per minute = 3.785 L/m.

Reason: These are the provisions from the IPC on sewage ejectors and sumps. They are much more complete and detailed than the current IRC text. This provides more complete guidance for the user.

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

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

RP23–06/07
P3008.1, P3008.2, P3008.1 through P3008.5 (New), Chapter 43

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

1. Delete and substitute 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.~~

~~**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.~~

P3008.1 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.

P3008.2 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.

P3008.3 Seal. Backwater valves shall be so constructed as to provide a mechanical seal against backflow.

P3008.4 Diameter. Backwater valves, when fully opened, shall have a capacity not less than that of the pipes in which they are installed.

P3008.5 Location. Backwater valves shall be installed so that access is provided to the working parts for service and repair.

2. Add standard to Chapter 43 as follows:

ASME
A112.14.1 Backwater Valves

Reason: These are the provisions from the IPC on backwater valves. They are much more complete and detailed than the current IRC text. This provides more complete guidance for the user.

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

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

RP24–06/07
P3108.1

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

Revise as follows:

P3108.1 Horizontal wet vent permitted. Any combination of fixtures within two bathroom groups located on the same floor level are permitted to be vented by a horizontal wet vent. The wet vent shall be considered the vent for the fixtures and shall extend from the connection of the dry vent along the direction of the flow in the drain pipe to the most downstream fixture drain connection. Each fixture drain shall connect horizontally to the horizontal branch being wet vented or shall have a dry vent. Each wet-vented fixture drain shall connect independently to the horizontal wet vent. Only the fixtures within the bathroom groups shall connect to the wet-vented horizontal branch drain. Any additional fixtures shall discharge downstream of the horizontal wet vent.

Reason: The principle of the wet vent is that all the wet vented fixtures connect to the wet vent individually. Without this proposed change, the code permits two or more fixture drains to connect together before connecting to wet vent. Similar language exists in the vertical wet vent Section P3108.4.

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

Analysis: See parallel proposal for Section 909.1 of the IPC.

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

RP25–06/07
P3111.1

Proponent: Charles E. Gerber, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

Revise as follows:

P3111.1 Type of fixtures. A combination waste and vent system shall not serve fixtures other than floor drains, ~~standpipes,~~ sinks~~,~~ and lavatories ~~and drinking fountains~~. A combination waste and vent system shall not receive the discharge of a food waste grinder.

Reason: The removal of standpipes is consistent with the IPC. The removal of drinking fountains is consistent with the fact that it is not commonplace to install drinking fountains in a residential setting.

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

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

RP26–06/07
P3114.3

Proponent: Charles E. Gerber, County of Henrico, Virginia, representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA) and the Virginia Building Code Officials Association (VBCOA)

Revise as follows:

P3114.3 Where permitted. Individual vents, branch vents, circuit vents and stack vents shall be permitted to terminate with a connection to an air admittance valve. Individual and branch type air admittance valves shall vent only fixtures that are on the same floor level and connect to a horizontal branch drain.

Reason: To be more consistent with the IPC Section 917.3.

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

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

RP27–06/07
Chapter 33 (New), R202, Chapter 43

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

1. Add new text as follows:

CHAPTER 33
STORM DRAINAGE

SECTION 3301
GENERAL

P3301.1 Scope. The provisions of this chapter shall govern the materials, design, construction and installation of storm drainage.

SECTION 3302
SUBSOIL DRAINS

3302.1 Subsoil drains. Subsoil drains shall be open-jointed, horizontally split or perforated pipe conforming to one of the standards listed in Table3302.1 Such drains shall not be less than 4 inches (102 mm) in diameter. Where the building is subject to backwater, the subsoil drain shall be protected by an accessibly located backwater valve. Subsoil drains shall discharge to a trapped area drain, sump, dry well or approved location above ground. The subsoil sump shall not be required to have either a gas-tight cover or a vent. The sump and pumping system shall comply with Section 3303.

TABLE 3302.1
SUBSOIL DRAIN PIPE

MATERIAL	STANDARD
Asbestos-cement pipe	ASTM C 508
Cast-iron pipe	ASTM A 74; ASTM A 888; CISPI 301
Polyethylene (PE) plastic pipe	ASTM F 405; CSA B182.1; CSA B182.6; CSA B182.8
Polyvinyl chloride (PVC) Plastic pipe (type sewer pipe, PS25, PS50 or PS100)	ASTM D 2729; ASTM F 891; CSA B182.2; CSA B182.4
Stainless steel drainage systems, Type 316L	ASME A112.3.1
Vitrified clay pipe	ASTM C 4; ASTM C 700

SECTION 3303
SUMPS AND PUMPING SYSTEMS

3303.1 Pumping system. The sump pump, pit and discharge piping shall conform to Sections 3303.1.1 through 3303.1.4.

3303.1.1 Pump capacity and head. The sump pump shall be of a capacity and head appropriate to anticipated use requirements.

3303.1.2 Sump pit. The sump pit shall not be less than 18 inches (457 mm) in diameter and 24 inches (610 mm) deep, unless otherwise approved. The pit shall be accessible and located such that all drainage flows into the pit by gravity. The sump pit shall be constructed of tile, steel, plastic, cast-iron, concrete or other approved material, with a removable cover adequate to support anticipated loads in the area of use. The pit floor shall be solid and provide permanent support for the pump.

3303.1.3 Electrical. Electrical outlets shall meet the requirements of Chapters 34 through 43.

3303.1.4 Piping. Discharge piping shall meet the requirements of Sections 3002.1, 3002.2, 3002.3 and 3003. Discharge piping shall include an accessible full flow check valve. Pipe and fittings shall be the same size as, or larger than, pump discharge tapping.

SECTION R202
DEFINITIONS

SUBSOIL DRAIN. A drain that collects subsurface water or seepage water and conveys such water to a place of disposal.

2. Add standards to Chapter 43 as follows:

ASTM

C508-00	Specification for Asbestos-Cement Underdrain Pipe
F405-97	Specification for Corrugated Polyethylene (PE) Tubing and Fittings
D2729-96a	Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
C4-03	Specification for Clay Drain Tile and Perforated Clay Drain Tile

CSA

B182.1-02	Plastic Drain and Sewer Pipe and Pipe Fittings
B182.6-02	Profile Polyethylene Sewer Pipe and Fittings for Leak-Proof Sewer Applications
B182.8-02	Profile Polyethylene Storm Sewer and Drainage Pipe and Fittings

Reason: Current IRC is lacking the provisions for sumps, pumps, and any related equipment. These common items are found in residential construction across the US. These are vital provisions that will help ensure properly installed systems. This information was extracted from the IPC and modified as appropriate for residential applications.

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

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

RP28–06/07
Chapter 43

Proponent: Standards writing organizations as listed below.

Revise as follows:

ASSE

American Society of Sanitary Engineering
901 Canterbury Road, Suite A
Westlake, OH 44145

1010-2004 ~~1996~~	Performance Requirements for Water Hammer Arresters
1011-2004 ~~1993~~	Performance Requirements for Hose Connection Vacuum Breakers
1013-2005 ~~1999~~	Performance Requirements for Reduced Pressure Principle Backflow Preventers and Reduced Pressure Fire Protection Principle Backflow Preventers
1014-2005 ~~1990~~	Performance Requirements for Hand-Held Showers
1015-2005 ~~1999~~	Performance Requirements for Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies
1016-1996	Performance Requirements for Automatic Compensating ~~Individual Thermostatic, Pressure Balancing and Combination Control~~ Valves for Individual Showers and Tub/Shower Combinations ~~Bathing Facilities~~
1017-2003 ~~1999~~	Performance Requirements for Temperature Actuated Mixing Valves for Hot Water Distribution Systems
1019-2004 ~~1997~~	Performance Requirements for Wall Hydrants, Freeze Resistant, Automatic Draining Type
1020-2004 ~~1998~~	Performance Requirements for Pressure Vacuum Breaker Assembly
1047-2005 ~~1999~~	Performance Requirements for Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies
1048-2005 ~~1999~~	Performance Requirements for Double Check Detector Fire Protection Backflow Prevention Assemblies
1052-2004 ~~93~~	Performance Requirements for Hose Connection Backflow Preventers

ASTM

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

Standard reference number	Title
A 74-05 ~~04~~	Specification for Cast Iron Soil Pipe and Fittings
A 312/A 312/M-05a ~~04a~~	Specification for Seamless and Welded Austenitic Stainless Steel Pipes
~~A 539-99~~	~~Specification for Electric-Resistance-Welded Coiled Steel Tubing for Gas and Fuel Oil Lines~~
C 76-05b ~~04a~~	Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
C 428-97(2002~~5~~)	Specification for Asbestos-Cement Nonpressure Sewer Pipe
C 443-05a ~~03~~	Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
C 564-03a ~~04a~~	Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings
C 700-05 02	Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated
C 1173-06 ~~02~~	Specification for Flexible Transition Couplings for Underground Piping Systems
C 1440-03 ~~99e01~~	Specification for Thermoplastic Elastomeric (TPE) Gasket Materials for Drain, Waste, and Vent (DWV), Sewer, Sanitary and Storm Plumbing Systems
D 1527-99(2005) ~~e01~~	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80
D 1785-05 ~~04~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120
D 1869-95 (2005~~0~~)	Specification for Rubber Rings for Asbestos-Cement Pipe

D 2235-04 ~~01~~	Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
D 2241-05 ~~04a~~	Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR-Series)
D 2282-99(2005)~~e01~~	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR)
D 2466-05 ~~02~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
D 2467-05 ~~04~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
~~D 2468-96a~~	~~Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe Fittings, Schedule 40~~
D 2513-05 04a	Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings
D 2564-04 ~~02~~	Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
~~D 2662-96a~~	~~Specification for Polybutylene (PB) Plastic Pipe (SDR-PR) Based on Controlled Inside Diameter~~
D 2665-04ae02~~01~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
~~D 2666-96a(2003)~~	~~Specification for Polybutylene (PB) Plastic Tubing~~
D 2672-96a (2003) ~~03~~	Specification for Joints for IPS PVC Pipe Using Solvent Cement
D 2751-05 ~~96a~~	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings
D 2949-01ae01	Specification for 3.25-in. Outside Diameter Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
D 3034-04a	Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
D 3212-96a(2003)e01	Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
D 3311-02e01	Specification for Drain, Waste and Vent (DWV) Plastic Fittings Patterns
D 3350-05 ~~02a~~	Specification for Polyethylene Plastics Pipe and Fittings Materials
D 4318-05 ~~00~~	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
F 439-05 ~~02~~	Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F 442/F 442M-99(2005)	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
F 714-05 ~~03~~	Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
F 876-05 ~~04~~	Specification for Crosslinked Polyethylene (PEX) Tubing
F 891-04 ~~00e01~~	Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core
F 877-02ae01	Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems
F 1281-05 ~~03~~	Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
F 1282-06 ~~03~~	Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe
F 1412-01e01	Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage
F 1807-05 ~~04~~	Specifications for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) tubing
F 1960-05 ~~04~~	Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing
F 1866-05 ~~98~~	Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Draniage and DWV Fabricated Fittings
F 1986-01 ~~00a~~	Specification for Multilayer Pipe, Type 2, Compression Fittings and Compression Joints for Hot and Cold Drinking Water Systems
F 2080-05 ~~04~~	Specification for Cold-Expansion Fittings with Metal Compression-Sleeves for Cross-linked Polyethylene (PER) Pipe

Reason: The *ICC Code Development Process for the International Codes* (Procedures) Section 4.5* requires the updating of referenced standards to be accomplished administratively, and be processed as a Code Proposal. In May 2005, a letter was sent to each developer of standards that are referenced in the I-Codes, asking them to provide ICC with a list of their standards in order to update to the current edition. Above is the list received of the referenced standards under the maintenance responsibility of the IRC Plumbing and Mechanical Committee.

*** 4.5 Updating Standards:** The updating of standards referenced by the Codes shall be accomplished administratively by the appropriate code development committee in accordance with these full procedures except that multiple standards to be updated may be included in a single proposal.

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