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# 2006

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# PREFACE

## Introduction

Internationally, code officials recognize the need for a modern, up-to-date plumbing code addressing the design and installation of plumbing systems through requirements emphasizing performance. The *International Plumbing Code*®, in this 2006 edition, is designed to meet these needs through model code regulations that safeguard the public health and safety in all communities, large and small.

This comprehensive plumbing code establishes minimum regulations for plumbing systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new plumbing designs. This 2006 edition is fully compatible with all the *International Codes*® (I-Codes®) published by the International Code Council (ICC)®, including the *International Building Code*®, *ICC Electrical Code*®, *International Energy Conservation Code*®, *International Existing Building Code*®, *International Fire Code*®, *International Fuel Gas Code*®, *International Mechanical Code*®, *ICC Performance Code*®, *International Private Sewage Disposal Code*®, *International Property Maintenance Code*®, *International Residential Code*®, *International Wildland-Urban Interface Code*™ and *International Zoning Code*®.

The *International Plumbing Code* provisions provide many benefits, among which is the model code development process that offers an international forum for plumbing professionals to discuss performance and prescriptive code requirements. This forum provides an excellent arena to debate proposed revisions. This model code also encourages international consistency in the application of provisions.

## Development

The first edition of the *International Plumbing Code* (1995) was the culmination of an effort initiated in 1994 by a development committee appointed by the ICC and consisting of representatives of the three statutory members of the International Code Council at that time, including: Building Officials and Code Administrators International, Inc. (BOCA), International Conference of Building Officials (ICBO) and Southern Building Code Congress International (SBCCI). The intent was to draft a comprehensive set of regulations for plumbing systems consistent with and inclusive of the scope of the existing model codes. Technical content of the latest model codes promulgated by BOCA, ICBO and SBCCI was utilized as the basis for the development. This 2006 edition presents the code as originally issued, with changes as reflected in the subsequent editions through 2003 and with changes approved through the ICC Code Development Process through 2005. A new edition such as this is promulgated every three years.

This code is founded on principles intended to establish provisions consistent with the scope of a plumbing code that adequately protects public health, safety and welfare; provisions that do not unnecessarily increase construction costs; provisions that do not restrict the use of new materials, products or methods of construction; and provisions that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

## Adoption

The *International Plumbing Code* is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference in accordance with proceedings establishing the jurisdiction's laws. At the time of adoption, jurisdictions should insert the appropriate information in provisions requiring specific local information, such as the name of the adopting jurisdiction. These locations are shown in bracketed words in small capital letters in the code and in the sample ordinance. The sample adoption ordinance on page v addresses several key elements of a code adoption ordinance, including the information required for insertion into the code text.

## Maintenance

The *International Plumbing Code* is kept up to date through the review of proposed changes submitted by code enforcing officials, industry representatives, design professionals and other interested parties. Proposed changes are carefully considered through an open code development process in which all interested and affected parties may participate.

The contents of this work are subject to change both through the Code Development Cycles and the governmental body that enacts the code into law. For more information regarding the code development process, contact the Code and Standard Development Department of the International Code Council.

While the development procedure of the *International Plumbing Code* ensures the highest degree of care, ICC and ICC's members and those participating in the development of this code do not accept any liability resulting from compliance or noncompliance with the provisions, since ICC and its members do not have the power or authority to police or enforce compliance with the contents of this code. Only the governmental body that enacts the code into law has such authority.

## Letter Designations in Front of Section Numbers

In each code development cycle, proposed changes to the code are considered at the Code Development Hearings by the ICC Plumbing Code Development Committee, whose action constitutes a recommendation to the voting membership for final action on the proposed change. Proposed changes to a code section that has a number beginning with a letter in brackets are considered by a different code development committee. For example, proposed changes to code sections that have [B] in front of them (e.g. [B] 309.2) are considered by the ICC Building Code Development Committee at the code development hearings.

The content of sections in this code that begin with a letter designation are maintained by another code development committee in accordance with the following:

- [B] = International Building Code Development Committee;
- [E] = International Energy Conservation Code Development Committee;
- [F] = International Fire Code Development Committee;
- [M] = International Mechanical Code Development Committee.

## Marginal Markings

Solid vertical lines in the margins within the body of the code indicate a technical change from the requirements of the 2003 edition. Deletion indicators in the form of an arrow (➡) are provided in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.

# ORDINANCE

The *International Codes* are designed and promulgated to be adopted by reference by ordinance. Jurisdictions wishing to adopt the *2006 International Plumbing Code* as an enforceable regulation governing plumbing systems should ensure that certain factual information is included in the adopting ordinance at the time adoption is being considered by the appropriate governmental body. The following sample adoption ordinance addresses several key elements of a code adoption ordinance, including the information required for insertion into the code text.

## SAMPLE ORDINANCE FOR ADOPTION OF THE INTERNATIONAL PLUMBING CODE ORDINANCE NO. \_\_\_\_\_

An ordinance of the [JURISDICTION] adopting the 2006 edition of the *International Plumbing Code*, regulating and governing the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of plumbing systems in the [JURISDICTION]; providing for the issuance of permits and collection of fees therefor; repealing Ordinance No. \_\_\_\_\_ of the [JURISDICTION] and all other ordinances and parts of the ordinances in conflict therewith.

The [GOVERNING BODY] of the [JURISDICTION] does ordain as follows:

Section 1. That a certain document, three (3) copies of which are on file in the office of the [TITLE OF JURISDICTION'S KEEPER OF RECORDS] of [NAME OF JURISDICTION], being marked and designated as the *International Plumbing Code*, 2006 edition, including Appendix Chapters [FILL IN THE APPENDIX CHAPTERS BEING ADOPTED], as published by the International Code Council, be and is hereby adopted as the Plumbing Code of the [JURISDICTION], in the State of [STATE NAME] regulating and governing the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of plumbing systems as herein provided; providing for the issuance of permits and collection of fees therefor; and each and all of the regulations, provisions, penalties, conditions and terms of said Plumbing Code on file in the office of the [JURISDICTION] are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in Section 2 of this ordinance.

**Section 2.** The following sections are hereby revised:

Section 101.1. Insert: [NAME OF JURISDICTION]

Section 106.6.2. Insert: [APPROPRIATE SCHEDULE]

Section 106.6.3. Insert: [PERCENTAGES IN TWO LOCATIONS]

Section 108.4. Insert: [OFFENSE, DOLLAR AMOUNT, NUMBER OF DAYS]

Section 108.5. Insert: [DOLLAR AMOUNT IN TWO LOCATIONS]

Section 305.6.1. Insert: [NUMBER OF INCHES IN TWO LOCATIONS]

Section 904.1. Insert: [NUMBER OF INCHES]

**Section 3.** That Ordinance No. \_\_\_\_\_ of [JURISDICTION] entitled [FILL IN HERE THE COMPLETE TITLE OF THE ORDINANCE OR ORDINANCES IN EFFECT AT THE PRESENT TIME SO THAT THEY WILL BE REPEALED BY DEFINITE MENTION] and all other ordinances or parts of ordinances in conflict herewith are hereby repealed.

**Section 4.** That if any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The [GOVERNING BODY] hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

**Section 5.** That nothing in this ordinance or in the Plumbing Code hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 3 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

**Section 6.** That the [JURISDICTION'S KEEPER OF RECORDS] is hereby ordered and directed to cause this ordinance to be published. (An additional provision may be required to direct the number of times the ordinance is to be published and to specify that it is to be in a newspaper in general circulation. Posting may also be required.)

**Section 7.** That this ordinance and the rules, regulations, provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full force and effect [TIME PERIOD] from and after the date of its final passage and adoption.



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## CHAPTER 13

# REFERENCED STANDARDS

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 102.8.

ANSI	American National Standards Institute 25 West 43rd Street, Fourth Floor New York, NY 10036	Referenced in code section number
Standard Reference Number	Title	
Z4.3—95	Minimum Requirements for Nonsewered Waste-Disposal Systems . . . . .	311.1
Z21.22—99 (R2003)	Relief Valves for Hot Water Supply Systems with Addenda Z21.22a-2000(R2003) and Z21.22b-2001(R2003) . . .	504.2, 504.5
Z124.1—95	Plastic Bathtub Units . . . . .	407.1
Z124.2—95	Plastic Shower Receptors and Shower Stalls . . . . .	417.1
Z124.3—95	Plastic Lavatories . . . . .	416.1, 416.2
Z124.4—96	Plastic Water Closet Bowls and Tanks . . . . .	420.1
Z124.6—97	Plastic Sinks . . . . .	415.1, 418.1
Z124.9-94	Plastic Urinal Fixtures . . . . .	419.1

ARI	Air-Conditioning & Refrigeration Institute 4100 North Fairfax Drive, Suite 200 Arlington, VA 22203	Referenced in code section number
Standard reference number	Title	
1010—02	Self-contained, Mechanically Refrigerated Drinking-water Coolers . . . . .	410.1

ASME	American Society of Mechanical Engineers Three Park Avenue New York, NY 10016-5990	Referenced in code section number
Standard Reference Number	Title	
A112.1.2—1991 (R2002)	Air Gaps in Plumbing Systems . . . . .	Table 608.1
A112.1.3—2000	Air Gap Fittings for Use with Plumbing Fixtures, Appliances and Appurtenances . . . . .	608.13.1, Table 608.1
A112.3.1—1993	Performance Standard and Installation Procedures for Stainless Steel Drainage Systems for Sanitary, Storm and Chemical Applications, Above and Below Ground. . . . .	412.1, Table 702.1, Table 702.2, Table 702.3, Table 702.4, 708.2, Table 1102.4, Table 1102.5, 1102.6, Table 1102.7
A112.3.4—2000	Macerating Toilet Systems and Related Components . . . . .	712.4.1
A112.4.1—1993 (R2002)	Water Heater Relief Valve Drain Tubes . . . . .	504.6.2
A112.4.3—1999	Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System . . . . .	405.4
A112.6.1M—1997 (R2002)	Floor-Affixed Supports for Off-the-floor Plumbing Fixtures for Public Use . . . . .	405.4.3
A112.6.2—2000	Framing-Affixed Supports for Off-the-floor Water Closets with Concealed Tanks . . . . .	405.4.3
A112.6.3—2001	Floor and Trench Drains . . . . .	412.1
A112.6.7—2001	Enameled and Epoxy-coated Cast-iron and PVC Plastic Sanitary Floor Sinks . . . . .	427.1
A112.14.1—2003	Backwater Valves . . . . .	715.2
A112.14.3—2000	Grease Interceptors. . . . .	1003.3.4
A112.14.4—2001	Grease Removal Devices . . . . .	1003.3.4
A112.18.1—2003	Plumbing Fixture Fittings. . . . .	424.1, 608.2
A112.18.2—2002	Plumbing Fixture Waste Fittings . . . . .	424.1.2
A112.18.3—2002	Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings. . . . .	424.2, 424.6
A112.18.6—2003	Flexible Water Connectors . . . . .	605.6
A112.18.7—1999	Deck mounted Bath/Shower Transfer Valves with Integral Backflow Protection . . . . .	424.6
A112.19.1M—1994 (R1999)	Enameled Cast Iron Plumbing Fixtures with 1998 and 2000 supplements . . . . .	407.1, 410.1, 415.1, 416.1, 418.1

**REFERENCED STANDARDS**

**ASME—continued**

A112.19.2M—2003	Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals . . . . .	401.2, 405.9, 408.1, 410.1, 416.1, 418.1, 419.1, 420.1
A112.19.3—2000	Stainless Steel Plumbing Fixtures (Designed for Residential Use) with 2002 Supplement . . . . .	405.9, 415.1, 416.1, 418.1
A112.19.4M—1994(R1999)	Porcelain Enameled Formed Steel Plumbing Fixtures with 1998 and 2000 Supplement . . . . .	407.1, 416.1, 418.1
A112.19.5—1999	Trim for Water-closet Bowls, Tanks and Urinals . . . . .	425.4
A112.19.6—1995	Hydraulic Performance Requirements for Water Closets and Urinals . . . . .	419.1, 420.1
A112.19.7M—1995	Whirlpool Bathtub Appliances . . . . .	421.1
A112.19.8M—1987(R1996)	Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs and Whirlpool Bathtub Appliances . . . . .	421.4
A112.19.9M—1991(R2002)	Non-Vitreous Ceramic Plumbing Fixtures with 2002 Supplement . . . . .	407.1, 408.1, 410.1, 415.1, 416.1, 417.1, 418.1, 420.1
A112.19.12—2000	Wall Mounted and Pedestal Mounted, Adjustable and Pivoting Lavatory and Sink Carrier Systems . . . . .	416.4, 418.3
A112.19.13—2001	Electrohydraulic Water Closets . . . . .	420.1
A112.19.15—2001	Bathtub/Whirlpool Bathtubs with Pressure Sealed Doors . . . . .	407.4, 421.5
A112.21.2M—1983	Roof Drains . . . . .	1102.6
A112.36.2M—1991(R2002)	Cleanouts . . . . .	708.2
B1.20.1—1983(R2001)	Pipe Threads, General Purpose (inch) . . . . .	605.10.3, 605.12.3, 605.14.4, 605.16.3, 605.18.1, 705, 705.2.3, 705.4.3
B16.3—1998	Malleable Iron Threaded Fittings Classes 150 and 300 . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.4—1998	Gray Iron Threaded Fittings Classes 125 and 250 . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.9—2003	Factory-made Wrought Steel Butt-welding Fittings . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.11—2001	Forged Fittings, Socket-welding and Threaded . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.12—1998	Cast-iron Threaded Drainage Fittings . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.15—1985(R1994)	Cast Bronze Threaded Fittings . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.18—2001	Cast Copper Alloy Solder Joint Pressure Fittings . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.22—2001	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.23—2002	Cast Copper Alloy Solder Joint Drainage Fittings DWV . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.26—1988	Cast Copper Alloy Fittings for Flared Copper Tubes . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.28—1994	Wrought Steel Butt-welding Short Radius Elbows and Returns . . . . .	Table 605.5, Table 702.4, Table 1102.7
B16.29—2001	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings (DWV) . . . . .	Table 605.5, Table 702.4, Table 1102.7

**ASSE**

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

Standard Reference Number	Title	Referenced in code section number
1001—02	Performance Requirements for Atmospheric Type Vacuum Breakers . . . . .	425.2, Table 608.1, 608.13.6
1002—99	Performance Requirements for Antisiphon Fill Valves (Ballcocks) for Gravity Water Closet Flush Tanks . . . . .	425.3.1, Table 608.1
1003—01	Performance Requirements for Water Pressure Reducing Valves . . . . .	604.8
1004—90	Performance Requirements for Backflow Prevention Requirements for Commercial Dishwashing Machines . . . . .	409.1
1005—99	Performance Requirements for Water Heater Drain Valves . . . . .	501.3
1006—89	Performance Requirements for Residential Use Dishwashers . . . . .	409.1
1007—92	Performance Requirements for Home Laundry Equipment . . . . .	406.1, 406.2
1008—89	Performance Requirements for Household Food Waste Disposer Units . . . . .	413.1
1009—90	Performance Requirements for Commercial Food Waste Grinder Units . . . . .	413.1
1010—96	Performance Requirements for Water Hammer Arresters . . . . .	604.9
1011—93	Performance Requirements for Hose Connection Vacuum Breakers . . . . .	Table 608.1, 608.13.6
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1013—99	Performance Requirements for Reduced Pressure Principle Backflow Preventers and Reduced Pressure Fire Protection Principle Backflow Preventers . . . . .	Table 608.1, 608.13.2, 608.16.2
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5047—98	Performance Requirements for Testing Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies (RPDA) . . . . .	312.9.2
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5052—98	Performance Requirements for Testing Hose Connection Backflow Preventers . . . . .	312.9.2
5056—98	Performance Requirements for Testing Spill Resistant Vacuum Breaker . . . . .	312.9.2



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Standard Reference Number	Title	Referenced in code section number
A 53/A 53M—02	Specification for Pipe, Steel, Black and Hot-dipped, Zinc-coated Welded and Seamless . . . . .	Table 605.3, Table 605.4, Table 702.1
A 74—04a	Specification for Cast-iron Soil Pipe and Fittings . . . . .	Table 702.1, Table 702.2, Table 702.3, Table 702.4, 708.2, Table 1102.4, Table 1102.5, Table 1102.7
A 312/A 312M—04a	Specification for Seamless and Welded Austenitic Stainless Steel Pipes . . . . .	Table 605.4, Table 605.5, Table 605.6, 605.23.2
A 733—03	Specification for Welded and Seamless Carbon Steel and Austenitic Stainless Steel Pipe Nipples . . . . .	Table 605.8
A 778—01	Specification for Welded Unannealed Austenitic Stainless Steel Tubular Products . . . . .	Table 605.4, Table 605.5, Table 605.6
A 888—04a	Specification for Hubless Cast-iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Application . . . . .	Table 702.1, Table 702.2, Table 702.3, Table 702.4, Table 1102.4, Table 1102.5, Table 1102.7
B 32—03	Specification for Solder Metal . . . . .	605.14.3, 605.15.4, 705.9.3, 705.10.3
B 42—02e01	Specification for Seamless Copper Pipe, Standard Sizes . . . . .	Table 605.3, Table 605.4, Table 702.1
B 43—(2004)	Specification for Seamless Red Brass Pipe, Standard Sizes . . . . .	Table 605.3, Table 605.4, Table 702.1
B 75—02	Specification for Seamless Copper Tube . . . . .	Table 605.3, Table 605.4, Table 702.1, Table 702.2, Table 702.3, Table 1102.4
B 88—03	Specification for Seamless Copper Water Tube . . . . .	Table 605.3, Table 605.4, Table 702.1, Table 702.2, Table 702.3, Table 1102.4
B 152/B 152M—00	Specification for Copper Sheet, Strip Plate and Rolled Bar . . . . .	402.3, 425.3.3, 417.5.2.4, 902.2
B 251—02e01	Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube . . . . .	Table 605.3, Table 605.4, Table 702.1, Table 702.2, Table 702.3, Table 1102.4

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B 302—02	Specification for Threadless Copper Pipe, Standard Sizes . . . . .	Table 605.3, Table 605.4, Table 702.1
B 306—02	Specification for Copper Drainage Tube (DWV) . . . . .	Table 702.1, Table 702.2, Table 1102.4
B 447—02	Specification for Welded Copper Tube . . . . .	Table 605.3, Table 605.4
B 687—99	Specification for Brass, Copper and Chromium-plated Pipe Nipples. . . . .	Table 605.8
B 813—00e01	Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube . . . . .	605.14.3, 605.15.4, 705.9.3, 705.10.3
B 828—02	Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings. . . . .	605.14.3, 605.15.4, 705.9.3, 705.10.3
C 4—03	Specification for Clay Drain Tile and Perforated Clay Drain Tile . . . . .	Table 702.3, Table 1102.4, Table 1102.5
C 14—03	Specification for Concrete Sewer, Storm Drain and Culvert Pipe . . . . .	Table 702.3, Table 1102.4
C 76—04a	Specification for Reinforced Concrete Culvert, Storm Drain and Sewer Pipe . . . . .	Table 702.3, Table 1102.4
C 296—00	Specification for Asbestos-cement Pressure Pipe . . . . .	Table 605.4
C 425—04	Specification for Compression Joints for Vitrified Clay Pipe and Fittings . . . . .	705.15, 705.16
C 428—97(2002)	Specification for Asbestos-cement Nonpressure Sewer Pipe . . . . .	Table 702.2, Table 702.3, Table 1102.4
C 443—03	Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets . . . . .	705.6, 705.16
C 508—00	Specification for Asbestos-cement Underdrain Pipe . . . . .	Table 1102.5
C 564—04a	Specification for Rubber Gaskets for Cast-iron Soil Pipe and Fittings . . . . .	705.5.2, 705.5.3, 705.16
C 700—02	Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated . . . . .	Table 702.3, Table 1102.4, Table 1102.5
C 1053—00	Specification for Borosilicate Glass Pipe and Fittings for Drain, Waste, and Vent (DWV) Applications . . . . .	Table 702.1, Table 702.4
C 1173—02	Specification for Flexible Transition Couplings for Underground Piping System. . . . .	705.7.1, 705.14.1, 705.16
C 1277—04	Specification for Shielded Coupling Joining Hubless Cast-iron Soil Pipe and Fittings . . . . .	705.5.3
C 1440—99e01	Specification for Thermoplastic Elastomeric (TPE) Gasket Materials for Drain, Waste, and Vent (DWV), Sewer, Sanitary and Storm Plumbing Systems . . . . .	705.16
C 1460—04	Specification for Shielded Transition Couplings for Use with Dissimilar DWV Pipe and Fittings Above Ground . . . . .	705.16
C 1461—02	Specification for Mechanical Couplings Using Thermoplastic Elastomeric (TPE) Gaskets for Joining Drain, Waste and Vent (DWV) Sewer, Sanitary and Storm Plumbing Systems for Above and Below Ground Use . . . . .	705.16
C 1540—02	Specification for Heavy Duty Shielded Couplings Joining Hubless Cast-iron Soil Pipe and Fittings . . . . .	705.5.3
C 1563—04	Standard Test Method for Gaskets for Use in Connection with Hub and Spigot Cast Iron Soil Pipe and Fittings for Sanitary Drain, Waste, Vent and Storm Piping Applications . . . . .	705.5.2
D 1527—99e01	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80 . . . . .	Table 605.3
D 1785—04	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120 . . . . .	Table 605.3
D 1869—95(2000)	Specification for Rubber Rings for Asbestos-cement Pipe . . . . .	605.11, 605.22, 705.3, 705.16
D 2235—01	Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings . . . . .	605.10.2, 705.2.2, 705.7.2
D 2239—03	Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter . . . . .	Table 605.3
D 2241—04a	Specification for Poly (Vinyl Chloride) (PVC) Pressure-rated Pipe (SDR-Series) . . . . .	Table 605.3
D 2282—99e01	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR) . . . . .	Table 605.3
D 2464—99	Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80 . . . . .	Table 605.5, Table 1102.7
D 2466—02	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40 . . . . .	Table 605.5, Table 1102.7
D 2467—04	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80 . . . . .	Table 605.5, Table 1102.7
D 2468—96a	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe Fittings, Schedule 40 . . . . .	Table 605.5, Table 1102.7
D 2564—02	Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems . . . . .	605.21.2, 705.8.2, 705.14.2
D 2609—02	Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe. . . . .	Table 605.5, Table 1102.7
D 2657—97	Standard Practice for Heat Fusion-joining of Polyolefin Pipe and Fitting . . . . .	605.19.2, 605.20.2, 705.16.1
D 2661—02	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings . . . . .	Table 702.1, Table 702.2, Table 702.3, Table 702.4, 705.2.2, 705.7.2, Table 1102.4, Table 1102.7
D 2662—96a	Specification for Polybutylene (PB) Plastic Pipe (SDR-PR) Based on Controlled Inside Diameter . . . . .	Table 605.3
D 2665—04ae01	Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings . . . . .	Table 702.1, Table 702.2, Table 702.3, Table 702.4, Table 1102.4, Table 1102.7
D 2666—96a	Specification for Polybutylene (PB) Plastic Tubing . . . . .	Table 605.3
D 2672—96a(2003)	Specification for Joints for IPS PVC Pipe Using Solvent Cement . . . . .	Table 605.3
D 2729—96a	Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings . . . . .	Table 1102.5
D 2737—03	Specification for Polyethylene (PE) Plastic Tubing . . . . .	Table 605.3
D 2751—96a	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings . . . . .	Table 702.3, Table 1102.7
D 2846/D 2846M—99	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems. . . . .	Table 605.3, Table 605.4, 605.16.2

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D 2855—96(2002)	Standard Practice for Making Solvent-cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings . . . . .	605.21.2, 705.8.2, 705.14.2
D 2949—01a	Specification for 3.25-in Outside Diameter Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings . . . . .	Table 702.1, Table 702.2, Table 702.3
D 3034—04	Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings. . . . .	Table 702.3, Table 702.4, Table 1102.7
D 3139—98	Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals. . . . .	605.10.1, 605.21.1
D 3212—96a(2003)	Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals . . . . .	705.2.1, 705.7.1, 705.8.1, 705.14.1
D 3309—96a(2002)	Specification for Polybutylene (PB) Plastic Hot and Cold Water Distribution Systems . . . . .	Table 605.3, Table 605.4, 605.19.2, 605.19.3
D 3311—02	Specification for Drain, Waste and Vent (DWV) Plastic Fittings Patterns . . . . .	Table 702.4, Table 1102.7
D 4068—01	Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane . . . . .	417.5.2.2
D 4551—96(2001)	Specification for Poly (Vinyl Chloride) (PVC) Plastic Flexible Concealed Water-Containment Membrane . . . . .	417.5.2.1
F 405—97	Specification for Corrugated Polyethylene (PE) Tubing and Fittings. . . . .	Table 1102.5
F 409—02	Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings . . . . .	424.1.2, Table 1102.7
F 437—99	Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80. . . . .	Table 605.5, Table 1102.7
F 438—04	Specification for Socket-type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40. . . . .	Table 605.5, Table 1102.7
F 439—02e01	Specification for Socket-type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80. . . . .	Table 605.5, Table 1102.7
F 441/F 441M—02	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80 . . . . .	Table 605.3, Table 605.4, Table 605.5
F 442/F 442M—99	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR). . . . .	Table 605.3, Table 605.4, Table 605.5
F 477—02e01	Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe. . . . .	605.22, 705.16
F 493—04	Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings. . . . .	605.16.2
F 628—01	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core . . . . .	Table 702.1, Table 702.2, Table 702.3, Table 702.4, 705.2.2, 705.7.2, Table 1102.4, Table 1102.7
F 656—02	Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings . . . . .	605.21.2, 705.8.2, 705.14.2
F 714—03	Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter. . . . .	Table 702.3
F 876—04	Specification for Cross-linked Polyethylene (PEX) Tubing . . . . .	Table 605.3
F 877—02e01	Specification for Cross-linked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems . . . . .	Table 605.3, Table 605.4, Table 605.5, Table 605.17.2
F 891—00e01	Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core. . . . .	Table 702.1, Table 702.2, Table 702.3, Table 702.4, Table 1102.4, Table 1102.5, Table 1102.7
F 1281—03	Specification for Cross-linked Polyethylene/Aluminum/Cross-Linked Polyethylene (PEX-AL-PEX) Pressure Pipe . . . . .	Table 605.3, Table 605.4
F 1282—03	Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe. . . . .	Table 605.3, Table 605.4
F 1412—01	Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage . . . . .	Table 702.2, Table 702.4, 705.17.1
F 1488—03	Specification for Coextruded Composite Pipe. . . . .	Table 702.1, Table 702.2, Table 702.3
F 1807—04	Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing. . . . .	Table 605.5, 605.17.2
F 1866—98	Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings . . . . .	Table 702.4
F 1960—04a	Specification for Cold Expansion Fittings with PEX Reinforcing Rings for use with Cross-linked Polyethylene (PEX) Tubing . . . . .	Table 605.5
F 1974—04	Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Composite Pressure Pipe. . . . .	Table 605.5
F 1986—00a	Specification for Multilayer Pipe, Type 2, Compression Fittings and Compression Joints for Hot and Cold Drinking Water Systems . . . . .	Table 605.3, Table 605.4, Table 605.5
F 2080—04	Specifications for Cold-expansion Fittings with Metal Compression-sleeves for Cross-linked Polyethylene (PEX) Pipe . . . . .	Table 605.5
F 2159—03	Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing. . . . .	Table 605.5
F 2389—04	Specification for Pressure-rated Polypropylene (PP) Piping Systems . . . . .	Table 605.3, Table 605.4, Table 605.5, 605.21

**REFERENCED STANDARDS**

**AWS**

American Welding Society  
550 N.W. LeJeune Road  
Miami, FL 33126

Standard Reference Number	Title	Referenced in code section number
A5.8—04	Specifications for Filler Metals for Brazing and Braze Welding . . . . .	605.12.1, 605.14.1, 605.15.1, 705.4.1, 705.9.1, 705.10.1

**AWWA**

American Water Works Association  
6666 West Quincy Avenue  
Denver, CO 80235

Standard Reference Number	Title	Referenced in code section number
C104—98	Standard for Cement-mortar Lining for Ductile-Iron Pipe and Fittings for Water . . . . .	605.3, 605.5
C110—98	Standard for Ductile-iron and Gray-iron Fittings, 3 Inches through 48 Inches, for Water . . . . .	Table 605.5, Table 702.4, Table 1102.7
C111—00	Standard for Rubber-gasket Joints for Ductile-iron Pressure Pipe and Fittings . . . . .	605.13
C115—99	Standard for Flanged Ductile-iron Pipe with Ductile-iron or Gray-iron Threaded Flanges . . . . .	Table 605.3
C151/A21.51—02	Standard for Ductile-iron Pipe, Centrifugally Cast for Water . . . . .	Table 605.3
C153—00	Standard for Ductile-iron Compact Fittings for Water Service . . . . .	Table 605.5
C510—00	Double Check Valve Backflow Prevention Assembly . . . . .	Table 608.1, 608.13.7
C511—00	Reduced-pressure Principle Backflow Prevention Assembly . . . . .	Table 608.1, 608.13.2, 608.16.2
C651—99	Disinfecting Water Mains . . . . .	610.1
C652—02	Disinfection of Water-storage Facilities . . . . .	610.1

**CISPI**

Cast Iron Soil Pipe Institute  
5959 Shallowford Road, Suite 419  
Chattanooga, TN 37421

Standard Reference Number	Title	Referenced in code section number
301—04a	Specification for Hubless Cast-iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications . . . . .	Table 702.1, Table 702.2, Table 702.3, Table 702.4, Table 1102.4, Table 1102.5, Table 1102.7
310—04	Specification for Coupling for Use in Connection with Hubless Cast-iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications . . . . .	705.5.3

**CSA**

Canadian Standards Association  
178 Rexdale Blvd.  
Rexdale (Toronto), Ontario, Canada M9W 1R3

Standard Reference Number	Title	Referenced in code section number
B45.1—02	Ceramic Plumbing Fixtures . . . . .	408.1, 416.1, 418.1, 419.1, 420.1
B45.2—02	Enameled Cast-iron Plumbing Fixtures . . . . .	407.1, 415.1, 416.1, 418.1
B45.3—02	Porcelain Enameled Steel Plumbing Fixtures . . . . .	407.1, 416.1, 418.1
B45.4—02	Stainless-steel Plumbing Fixtures . . . . .	415.1, 416.1, 418.1, 420.1
B45.5—02	Plastic Plumbing Fixtures . . . . .	407.1, 416.2, 417.1, 419.1, 420.1, 421.1
B45.9—99	Macerating Systems and Related Components . . . . .	712.4.1
B45.10—01	Hydromassage Bathtubs . . . . .	421.1
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B64.2.1.1—01	Vacuum Breakers, Hose Connection Dual Check Type (HCDVB) . . . . .	Table 608.1, 608.13.6
B64.3.1—01	Backflow Preventers, Dual Check Valve Type with Atmospheric Port for Carbonators (DCAPC) . . . . .	Table 608.1, 608.16.1
B64.4.1—01	Backflow Preventers, Reduced Pressure Principle Type for Fire Sprinklers (RPF) . . . . .	Table 608.1, 608.13.2
B64.5—01	Backflow Preventers, Double Check Type (DCVA) . . . . .	Table 608.1, 608.13.7
B64.5.1—01	Backflow Preventers, Double Check Type for Fire Systems (DCVAF) . . . . .	Table 608.1, 608.13.7
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B64.10/B64.10.1—01	Manual for the Selection and Installation of Backflow Prevention Devices/Manual for the Maintenance and Field Testing of Backflow Prevention Devices . . . . .	312.9.2
B79—94(2000)	Floor, Area and Shower Drains, and Cleanouts for Residential Construction . . . . .	412.1
B125—01	Plumbing Fittings . . . . .	424.1, 424.3, 424.4, 425.3.1, 425.4, 607.4, Table 608.1
B137.1—02	Polyethylene Pipe, Tubing and Fittings for Cold Water Pressure Services . . . . .	Table 605.3
B137.2—02	PVC Injection-moulded Gasketed Fittings for Pressure Applications. . . . .	Table 605.5, Table 1102.7
B137.3—02	Rigid Poly (Vinyl Chloride) (PVC) Pipe for Pressure Applications. . . . .	Table 605.3, 605.21.2, 705.8.2, 705.14.2
B137.5—02	Cross-linked Polyethylene (PEX) Tubing Systems for Pressure Applications—with Revisions through September 1992 . . . . .	Table 605.3, Table 605.4
B137.6—02	CPVC Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems—with Revisions through May 1986 . . . . .	Table 605.3, Table 605.4
B137.11—02	Polypropylene (PP-R) Pipe and Fittings for Pressure Applications . . . . .	Table 605.3, Table 605.4, Table 605.5
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B181.2—02	PVC Drain, Waste, and Vent Pipe and Pipe Fittings—with Revisions through December 1993 . . . . .	Table 702.1, Table 702.2, 705.8.2, 705.14.2, 715.2
B182.1—02	Plastic Drain and Sewer Pipe and Pipe Fittings . . . . .	705.8.2, 705.14.2, Table 1102.4
B182.2—02	PVC Sewer Pipe and Fittings (PSM Type) . . . . .	Table 702.3, Table 1102.4, Table 1102.5
B182.4—02	Profile PVC Sewer Pipe and Fittings. . . . .	Table 702.3, Table 1102.4, Table 1102.5
B182.6—02	Profile Polyethylene Sewer Pipe and Fittings for Leak-proof Sewer Applications . . . . .	Table 1102.5
B182.8—02	Profile Polyethylene Storm Sewer and Drainage Pipe and Fittings . . . . .	Table 1102.5
CAN3-B137.8M—99	Polybutylene (PB) Piping for Pressure Applications—with Revisions through July 1992. . . . .	Table 605.3, Table 605.4, 605.19.2, 605.19.3
CAN/CSA-A257.1M—92	Circular Concrete Culvert, Storm Drain, Sewer Pipe and Fittings. . . . .	Table 702.3, Table 1102.4
CAN/CSA-A257.2M—92	Reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe and Fittings . . . . .	Table 702.3, Table 1102.4
CAN/CSA-A257.3M—92	Joints for Circular Concrete Sewer and Culvert Pipe, Manhole Sections and Fittings Using Rubber Gaskets . . . . .	705.6, 705.16
CAN/CSA-B64.1.1—01	Vacuum Breakers, Atmospheric Type (AVB) . . . . .	425.2, Table 608.1, 608.13.6
CAN/CSA-B64.2—01	Vacuum Breakers, Hose Connection Type (HCVB) . . . . .	Table 608.1, 608.13.6
CAN/CSA-B64.2.2—01	Vacuum Breakers, Hose Connection Type (HCVB) with Automatic Draining Feature. . . . .	Table 608.1, 608.13.6
CAN/CSA-B64.3—01	Backflow Preventers, Dual Check Valve Type with Atmospheric Port (DCAP). . . . .	Table 608.1, 608.13.3, 608.16.2
CAN/CSA-B64.4—01	Backflow Preventers, Reduced Pressure Principle Type (RP) . . . . .	Table 608.1, 608.13.2, 608.16.2
CAN/CSA-B64.10—01	Manual for the Selection, Installation, Maintenance and Field Testing of Backflow Prevention Devices . . . . .	312.9.2
CAN/CSA-B137.9—02	Polyethylene/Aluminum/Polyethylene Composite Pressure Pipe Systems . . . . .	Table 605.3
CAN/CSA-B137.10M—02	Cross-linked Polyethylene/Aluminum/Polyethylene Composite Pressure Pipe Systems . . . . .	Table 605.3, Table 605.4
CAN/CSA-B181.3—02	Polyolefin Laboratory Drainage Systems. . . . .	Table 702.1, Table 702.2
CAN/CSA-B182.4—02	Profile PVC Sewer Pipe and Fittings. . . . .	Table 702.3, Table 1102.4, Table 1102.5
CAN/CSA-B602—02	Mechanical Couplings for Drain, Waste and Vent Pipe and Sewer Pipe. . . . .	705.2.1, 705.5.3, 705.6, 705.7.1, 705.14.1, 705.15, 705.16

International Code Council, Inc.  
 500 New Jersey Ave, NW  
 6th Floor  
 Washington, DC 20001



Standard Reference Number	Title	Referenced in code section number
IBC—06	International Building Code® . . . . .	201.3, 305.4, 307.1, 307.2, 307.3, 308.2, 309.1, 310.1, 310.3, 403.1, Table 403.1, 404.1, 407.3, 417.6, 502.6, 606.5.2, 1106.5
ICC EC—06	ICC Electrical Code®—Administrative Provisions . . . . .	201.3, 502.1, 504.3, 1113.1.3
IEBC—06	International Existing Building Code® . . . . .	101.2
IECC—06	International Energy Conservation Code® . . . . .	313.1, 607.2, 607.2.1
IFC—06	International Fire Code® . . . . .	201.3, 1201.1
IFGC—06	International Fuel Gas Code® . . . . .	101.2, 201.3, 502.1
IMC—06	International Mechanical Code® . . . . .	201.3, 307.6, 310.1, 422.9, 502.1, 612.1, 1202.1
IPSDC—06	International Private Sewage Disposal Code® . . . . .	701.2
IRC—06	International Residential Code® . . . . .	101.2

**REFERENCED STANDARDS**

**ISEA**

Industry Safety Equipment Association  
1901 N. Moore Street, Suite 808  
Arlington, VA 22209

Standard Reference Number	Title	Referenced in code section number
Z358.1—03	Emergency Eyewash and Shower Equipment . . . . .	.411.1

**NFPA**

National Fire Protection Association  
Batterymarch Park  
Quincy, MA 02269

Standard Reference Number	Title	Referenced in code section number
50—01	Bulk Oxygen Systems at Consumer Sites . . . . .	1203.1
51—02	Design and Installation of Oxygen-fuel Gas Systems for Welding, Cutting and Allied Processes . . . . .	1203.1
99C—02	Gas and Vacuum Systems . . . . .	1202.1

**NSF**

NSF International  
789 Dixboro Road  
Ann Arbor, MI 48105

Standard Reference Number	Title	Referenced in code section number
3—2003	Commercial Warewashing Equipment . . . . .	.409.1
14—2003	Plastic Piping System Components and Related Materials . . . . .	.303.3, 611.3
18—2004	Manual Food and Beverage Dispensing Equipment . . . . .	.426.1
42—2002e	Drinking Water Treatment Units—Aesthetic Effects . . . . .	.611.1, 611.3
44—2004	Residential Cation Exchange Water Softeners . . . . .	.611.1, 611.3
53—2002e	Drinking Water Treatment Units—Health Effects . . . . .	.611.1, 611.3
58—2004	Reverse Osmosis Drinking Water Treatment Systems . . . . .	.611.2
61—2003e	Drinking Water System Components—Health Effects . . . . .	.410.1, 424.1, 605.3, 605.4, 605.5, 611.3
62—2004	Drinking Water Distillation Systems . . . . .	.611.1

**PDI**

Plumbing and Drainage Institute  
800 Turnpike Street, Suite 300  
North Andover, MA 01845

Standard Reference Number	Title	Referenced in code section number
G101(2003)	Testing and Rating Procedure for Grease Interceptors with Appendix of Sizing and Installation Data . . . . .	1003.3.4

**UL**

Underwriters Laboratories, Inc.  
333 Pfingsten Road  
Northbrook, IL 60062-2096

Standard reference number	Title	Referenced in code section number
UL508—99	Industrial Control Equipment . . . . .	.314.2.3