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An American National Standard

IAPMO/ANSI UPC 1-2006

2006 UNIFORM PLUMBING CODE™



REVISION MARKINGS

Code changes from the 2003 edition are marked in the margins as follows:

➔ An arrow denotes a deletion.

| A vertical denotes a change.

TIA TIA indicates that the revision is the result of a Tentative Interim Amendment
TIA For further information on tentative interim amendments see Section 5 of the IAPMO
TIA Regulations Governing Committee Projects available at <http://www.iapmo.org/pages/codedevelopmentprocedures.aspx>
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NFPA consensus requirements for an American National Standard (ANS) nor approved by
NFPA ANSI's Board of Standards Review, but will be fully processed in accordance with those
NFPA requirements as part of the next revision cycle for this document.
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Information on referenced publications can be found in Chapter 14.

All pressures used in this code are gauge pressures unless otherwise indicated.

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2006 UPC Foreword

The advantages of a uniform plumbing code adopted by various local jurisdictions has long been recognized. Disorder in the industry as a result of widely divergent plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions influenced the Western Plumbing Officials Association (now the International Association of Plumbing and Mechanical Officials [IAPMO]) to form a committee of plumbing inspectors, master and journeyman plumbers, and sanitary and mechanical engineers, assisted by public utility companies and the plumbing industry to create a basic plumbing document for general use. The product of this effort, the first edition of the *Uniform Plumbing Code*[™] (UPC[™]) was officially adopted by IAPMO in 1945. The widespread use of this code over the past five decades by jurisdictions throughout the United States and internationally is testament to its merit.

With the publication of the 2003 Edition of the *Uniform Plumbing Code*, another significant milestone was reached. For the first time in the history of the United States, a plumbing code was developed through a true consensus process. The 2006 edition represents the most current approaches in the plumbing field and is the second edition developed under the ANSI consensus process. Contributions to the content of the code were made by every segment of the built industry, including such diverse interests as consumers, enforcing authorities, installers/maintainers, insurance, labor, manufacturers, research/standards/testing laboratories, special experts, and users.

The UPC is designed to provide consumers with safe and sanitary plumbing systems while, at the same time, allowing latitude for innovation and new technologies. The public at large is encouraged and invited to participate in IAPMO's open consensus code development process. This code is updated every three years. A code development timeline and other relevant information is available at IAPMO's website at www.iapmo.org.

The *Uniform Plumbing Code* is dedicated to all those who, in working to achieve "the ultimate plumbing code," have unselfishly devoted their time, effort, and personal funds to create and maintain this, the finest plumbing code in existence today.

The 2006 *Uniform Plumbing Code* is supported by the American Society of Sanitary Engineering (ASSE), the Mechanical Contractors Association of America (MCAA), the Plumbing-Heating-Cooling Contractors National Association (PHCC-NA), the United Association (UA), and the World Plumbing Council (WPC). The presence of these logos, while reflecting support, does not imply any ownership of the copyright to the UPC, which is held exclusively by IAPMO. Further, the logos of these associations indicates the support of IAPMO's open, consensus process being used to develop IAPMO's codes and standards.

The addresses of the organizations are as follows:

ASSE – 901 Canterbury Road, Suite A • Westlake, OH 44145-7201 • (440) 835-3040

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PHCC-NA – PO Box 6808 • Falls Church, VA 22046 • (800) 533-7694

UA – 901 Massachusetts Avenue NW • Washington, DC 20001 • (202) 628-5823

WPC – WPC Secretary • c/o The Institute of Plumbing • 64 Station Lane • Hornchurch Essex
RM12 6NB • United Kingdom • +44 17-08-47-27-91

Tentative Interim Amendment (TIA)

A Tentative Interim Amendment (TIA) to any Document may be processed if the Council Secretary determines, after a preliminary review, and consultation with the appropriate Chair, that the Amendment appears to be of an emergency nature requiring prompt action and has the endorsement of a Member of the involved Technical Committee.

Section 204.0 Bathroom (Groups) – This Tentative Interim Amendment (TIA) was issued on November 15, 2007.

Section 206.0 Design Flood Elevation – This Tentative Interim Amendment (TIA) was issued on September 26, 2005.

Section 208.0 Flood Hazard Area – This Tentative Interim Amendment (TIA) was issued on September 26, 2005.

Section 301.3 Flood Hazard Resistance – This Tentative Interim Amendment (TIA) was issued on September 26, 2005.

Section 301.3.1 General – This Tentative Interim Amendment (TIA) was issued on September 26, 2005.

Section 301.3.2 Flood hazard areas subject to high velocity wave action – This Tentative Interim Amendment (TIA) was issued on September 26, 2005.

Chapter 4, Table 4-1 – This Tentative Interim Amendment (TIA) was issued on March 31, 2008

Section 411.7 – This Tentative Interim Amendment (TIA) was issued on December 7, 2005.

Section 507.8 – This Tentative Interim Amendment (TIA) was issued on December 7, 2005.

Section 603.4.21 Pure water process systems – This Tentative Interim Amendment (TIA) was issued on December 7, 2005.

Section 603.4.21.1 Dialysis water systems – This Tentative Interim Amendment (TIA) was issued on December 7, 2005.

Section 715.3 – This Tentative Interim Amendment (TIA) was issued on September 17, 2003.

Section 908.4 Horizontal Wet Venting for Bathroom (Groups) – This Tentative Interim Amendment (TIA) was issued on November 15, 2007.

Section 908.4.1 Where Permitted – This Tentative Interim Amendment (TIA) was issued on November 15, 2007.

Section 908.4.2 Vent Connection – This Tentative Interim Amendment (TIA) was issued on November 15, 2007.

Section 908.4.3 Size – This Tentative Interim Amendment (TIA) was issued on November 15, 2007.

Section 1202.0 General. – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.

Section 1214.6 Purging Requirements – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.

Section 1214.6.1 Piping Systems Required to be Purged Outdoors – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.

Section 1214.6.1.1 Removal from Service – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.

Section 1214.6.1.2 Placing in Operation – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.

Section 1214.6.1.3 Outdoor Discharge of Purged Gases – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.

Section 1214.6.1.4 Combustible Gas Indicator – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.

Section 1214.6.2 Piping Systems Allowed to Be Purged Indoors or Outdoors – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.

- Section 1214.6.2.1 Purging Procedure** – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.
- Section 1214.6.2.2 Combustible Gas Detector** – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.
- Section 1214.6.3 Purging Appliances and Equipment** – This Tentative Interim Amendment (TIA) was issued on January 7, 2011.
- Section 1216.1 Required Gas Supply.** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.1 Pipe Sizing Methods.** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.1.1 Longest Length Method.** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.1.2 Branch Length Method.** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.1.3 Hybrid Pressure.** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.2 Tables for Sizing Gas-Piping Systems.** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.3 Sizing Equations.** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Figure 12-2 Example Illustrating Use of Tables 12-1 and 12-8** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.4** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.5** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Section 1217.6** – This Tentative Interim Amendment (TIA) was issued on August 28, 2006.
- Appendix K, K 1 Private Sewage Disposal - General** – This Tentative Interim Amendment (TIA) was issued on September 26, 2005.
- Appendix K, K 5 Septic Tank Construction** – This Tentative Interim Amendment (TIA) was issued on September 26, 2005.
- Appendix K, Table K-1 Location of Sewage Disposal Systems** – This Tentative Interim Amendment (TIA) was issued on September 26, 2005.
- Appendix L, L8.6 Additional Venting Required** – This Tentative Interim Amendment (TIA) was issued on February 7, 2006.

For further information on Tentative Interim Amendments, see Section 5 of the IAPMO Rules Governing Committee Projects – www.iapmo.org.

COMMITTEE ON UNIFORM PLUMBING CODE

These lists represent the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. Please refer to the new members list below.

Terry Swisher, *Chairman*
State of Oregon, [E]

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John Taecker, Underwriters Laboratories [R/S/T]

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Engineering [R/S/T]

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April Trafton, Donald Dickerson Associates [SE]

Fred Volkers, United Association [L]

James Walls, Cast Iron Soil Pipe Institute [M]

Mike Wynne, Plumbers & Steamfitters Local [L]

New Committee Members as of January 2006

Tim Collings, Salt Lake City, Utah [E] is the new chairman of the
technical committee appointed as of March 2006

Nasser Nikravi, State of California OSHPD [E]

Ray Moore, American Society of Plumbing Engineer [SE]

Nonvoting

Chris Salazar, Ex-Officio, IAPMO [E]*

Carl Marbery, IAPMO Staff Liaison

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These classifications apply to Technical Committee members and represent their principal interest in the activity of a committee.

M	<i>Manufacturer:</i> A representative of a maker or marketer of a product, assembly, or system, or portion thereof, that is affected by the standard.
U	<i>User:</i> A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.
I/M	<i>Installer/Maintainer:</i> A representative of an entity that is in the business of installing or maintaining a product, assembly, or system affected by the standard.
L	<i>Labor:</i> A labor representative or employee concerned with safety in the workplace.
R/S/T	<i>Research/Standards/Testing Laboratory:</i> A representative of an independent research organization; an organization that develops codes, standards or other similar documents; or an independent testing laboratory.
E	<i>Enforcing Authority:</i> A representative or an agency or an organization that promulgates and/or enforces standards.
I	<i>Insurance:</i> A representative of an insurance company, broker, agent, bureau, or inspection agency.
C	<i>Consumer:</i> A person who is, or represents, the ultimate purchaser of a product, system, or service affected by the standard, but who is not included in the <i>User</i> classification.
SE	<i>Special Expert:</i> A person not representing any of the previous classifications, but who has special expertise in the scope of the standard or portion thereof.

FORM FOR PROPOSALS ON IAPMO UPC/UMC COMMITTEE DOCUMENT

NOTE: All proposals MUST be received by 5:00 PM PST/PDST on the published proposal-closing date.

For further information on the standards-making process, please contact Codes and Standards Administration at 909-472-4110
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7. Sign the proposal.

If supplementary material (photographs, diagrams, reports, etc.) is included, you may be required to submit sufficient copies for all members and alternates of the technical committee. The technical committee is authorized to abstract the "Statement of Problem and Substantiation for Proposal" if it exceeds 200 words for publication in the *Report on Proposals*.

NOTE: The IAPMO Regulations Governing Committee Projects in Paragraph 4-3.3 state: Each proposal shall be submitted to the Council Secretary and shall include: (a) identification of the submitter and his or her affiliation (i.e., technical committee, organization, company), where appropriate; (b) identification of the document, edition of the document, and paragraph of the document to which the proposal is directed; (c) the proposed text of the proposal, including the wording to be added, revised (and how revised), or deleted; (d) a statement of the problem and substantiation for proposal; (e) the signature of the submitter; and (f) two copies of any document(s) (other than an IAPMO document) being proposed as a reference standard or publication (see 3-3.7).

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CHAPTER 1

ADMINISTRATION

101.0 Title, Scope, and General.

101.1 Title. This document shall be known as the "Uniform Plumbing Code," may be cited as such, and will be referred to herein as "this code."

101.2 Purpose. This code is an ordinance providing minimum requirements and standards for the protection of the public health, safety, and welfare.

101.3 Plans Required. The Authority Having Jurisdiction may require the submission of plans, specifications, drawings, and such other information as the Authority Having Jurisdiction may deem necessary, prior to the commencement of, and at any time during the progress of, any work regulated by this code.

The issuance of a permit upon plans and specifications shall not prevent the Authority Having Jurisdiction from thereafter requiring the correction of errors in said plans and specifications or from preventing construction operations being carried on thereunder when in violation of this code or of any other pertinent ordinance or from revoking any certificate of approval when issued in error.

101.4 Scope.

101.4.1 The provisions of this code shall apply to the erection, installation, alteration, repair, relocation, replacement, addition to, use, or maintenance of plumbing systems within this jurisdiction.

101.4.1.1 Repairs and Alterations.

101.4.1.1.1 In existing buildings or premises in which plumbing installations are to be altered, repaired, or renovated, deviations from the provisions of this code are permitted, provided such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction.

101.4.1.1.2 Existing building sewers and building drains may be used in connection with new buildings or new plumbing and drainage work only when they are found on examination and test to conform in all respects to the requirements governing new work, and the proper Authority Having Jurisdiction shall notify the owner to make any changes necessary to conform to this code. No building, or part thereof, shall

be erected or placed over any part of a drainage system that is constructed of materials other than those approved elsewhere in this code for use under or within a building.

101.4.1.1.3 All openings into a drainage or vent system, excepting those openings to which plumbing fixtures are properly connected or which constitute vent terminals, shall be permanently plugged or capped in an approved manner, using the appropriate materials required by this code.

101.4.1.2 Maintenance. The plumbing and drainage system of any premises under the Authority Having Jurisdiction shall be maintained in a sanitary and safe operating condition by the owner or the owner's agent.

101.4.1.3 Existing Construction. No provision of this code shall be deemed to require a change in any portion of a plumbing or drainage system or any other work regulated by this code in or on an existing building or lot when such work was installed and is maintained in accordance with law in effect prior to the effective date of this code, except when any such plumbing or drainage system or other work regulated by this code is determined by the Authority Having Jurisdiction to be in fact dangerous, unsafe, insanitary, or a nuisance and a menace to life, health, or property.

101.4.1.4 Conflicts Between Codes. When the requirements within the jurisdiction of this plumbing code conflict with the requirements of the mechanical code, this code shall prevail.

101.4.2 Additions, alterations, repairs, and replacement of plumbing systems shall comply with the provisions for new systems except as otherwise provided in Section 101.5.

101.4.3 The provisions in the appendices are intended to supplement the requirements of this code and shall not be considered part of this code unless formally adopted as such.