



## PROPOSED OHIO PLUMBING CODE CHANGES

### **Summary of Proposed Ohio Plumbing Code Rules**

The Board proposes to rescind existing rules and to adopt proposed new rules contained in Chapters 4101:3-1 to 4101:3-15 of the Ohio Administrative Code to comply with the five-year rule review and to replace the current Ohio Plumbing Code with a new Ohio Plumbing Code that is based upon the 2021 edition of the “International Plumbing Code” with Ohio revisions identified in the following rules. There are 15 rules, one for each model code chapter. A summary of the significant changes is found following the rules.

## **4101:3-1-01 Administration.**

### **Section 101** **General**

**101.1 Incorporation by Reference, Title and Rules of Construction.** Except as provided in Chapters 4101:3-1 to 4101:3-15 of the Administrative Code, the International Plumbing Code, 2021 edition, Chapters 2 through 15, as published by the “International Code Council, Inc.” including all subsequently published errata and printings, and readily available at <https://www.iccsafe.org>, are hereby incorporated by reference in accordance with sections 121.71 to 121.74 of the Revised Code as if set out at length herein.

**101.1.1 Rules of Construction.** The following rules of construction are to be applied to the Administrative Code:

1. All references to the International Building Code, International Mechanical Code, International Plumbing Code, and International Residential Code mean the Ohio Building Code, Ohio Mechanical Code, Ohio Plumbing Code, and Residential Code of Ohio, respectively, unless otherwise noted. References to “this code” in Sections 4101:3-1 to 4101:3-15 of the Administrative Code mean the “Ohio Plumbing Code.” References to “plumbing code” in divisions 4101:1, 4101:2, 4101:3 and 4101:8 of the Administrative Code mean “Ohio Plumbing Code.”
2. The phrase “applicable energy conservation code referenced in Chapter 13 of the building code” is substituted for “International Energy Conservation Code.”
3. Except as otherwise noted, “Chapter 34 of the building code” is substituted for “International Existing Buildings Code.”
4. The terms “approval” or “approvals” are substituted for “permit” or “permits,” respectively, when referring to documentation indicating compliance with this code.
5. The phrase “owner’s representative” is substituted for “owner’s authorized agent.”
6. Except as otherwise noted, “building official” is substituted for “fire code official.”
7. The phrase “building official” is substituted for “code official.”
8. The provisions of this code are mandatory whether or not the term “shall” is used.

**101.2 Scope.** The provisions of this code apply to the design, installation, maintenance, alteration, repair, relocation, replacement, addition to, use and inspection of plumbing systems within buildings. This code also applies to those

other systems, system components, equipment and appliances specifically addressed herein.

**101.3 Administrative and enforcement.** For administrative and enforcement provisions of this code, refer to sections 101.2 to 114 of the building code.

**101.3.1 Specific enforcement.** Enforcement of the provisions in sections 307, 310, 314, 403, 404 and 603 of this code is the responsibility of the certified *building official* of the certified municipal, county, or township building department having jurisdiction or the superintendent of the division of industrial compliance.

**101.3.2 Enforcement of medical gas systems.** Plan review and inspection of nonflammable medical gas and vacuum systems is to be performed by one of the following:

- a. A building department certified to enforce medical gas systems and having in its employ or under contract a certified medical gas inspector; or
- b. A local health district requesting enforcement responsibility and having in its employ or under contract a certified medical gas inspector; or
- c. If a certified department does not hold the certification to enforce medical gas piping system requirements and a local health district does not request enforcement authority, then the enforcement is to be done by the division of industrial compliance in the department of commerce.

**101.4 Referenced standards.** When a reference is made within the building, mechanical, or plumbing codes to a federal statutory provision, an industry consensus standard, or any other technical publication, the specific date and title of the publication as well as the name and address of the promulgating agency are listed in Chapter 35 of the building code, Chapter 15 of the mechanical code, or Chapter 15 of the plumbing code.

The codes and standards referenced in the building, mechanical, and plumbing codes are considered part of the requirements of these codes as though the text were printed in this code, to the prescribed extent of each such reference. Where differences occur between provisions of these codes and the referenced standards, the provisions of these codes apply.

### **4101:3-2-01 Definitions.**

Chapter 2 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

#### **Modify section 202 to replace or add the following definitions:**

**ABOVE-GROUND STORAGE TANK** A vessel, intended for fixed installation above grade, at grade, or below grade without backfill, used for the purpose of bulk storage, dispensing, handling or processing of hazardous, flammable or combustible liquids or gases and not connected to and utilized for the operation of building service equipment.

**ACCEPTED ENGINEERING PRACTICE.** That which conforms to accepted principles, tests or standards of nationally recognized technical or scientific authorities. Where a standard is referred to in Chapter 4101:3-15 of the Administrative Code relative to "accepted engineering practice," conformity to the applicable technical provisions, requirements, recommendations, and determinations in the standard or other publications is *prima-fascia* evidence of conformity with accepted engineering practice.

**ALTERNATE ON-SITE NONPOTABLE WATER.** Nonpotable water from other than public utilities, on-site surface sources and subsurface natural freshwater sources. Examples of such water are graywater, on-site reclaimed water, collected rainwater, captured condensate and rejected water from reverse osmosis systems. Private water supplies and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**ALTERNATIVE ENGINEERED DESIGN.** A plumbing system that performs in accordance with the intent of Chapters 3 through 12 and provides an equivalent level of performance for the protection of public health, safety, and welfare. See Section 106.5 of the building code.

**APPROVED.** Determined to be in compliance by the authority having jurisdiction in accordance with the rules of the board.

**APPROVED AGENCY.** An established and accredited testing laboratory, listing agency, inspection body, or field evaluation body recognized by the board of building standards providing services consistent with their accreditation and the code section requiring the approved agency service.

**BACKFLOW PREVENTER.** A backflow prevention assembly, a backflow prevention device, or other means or method to prevent backflow into the potable water supply. A backflow preventer is classified as either a “CONTAINMENT BACKFLOW PREVENTION DEVICE” or an “ISOLATION BACKFLOW PREVENTION DEVICE”.

**BUILDING.** Any structure utilized or intended for supporting or sheltering any occupancy, function, or activity. This includes, but is not limited to, structures built or used for the shelter, occupancy, enclosure or support of persons, animals, or chattels. For the purposes of this code, the term “building” is to be construed as followed by the words “or portion thereof.”

**BUILDING CODE.** The “Ohio Building Code”.

**BUILDING OFFICIAL.** The superintendent of the division of industrial compliance of the Ohio department of commerce or the person appointed by the superintendent to enforce this code in that division, or the designated authority charged with the administration and enforcement of this code, approved by the board in accordance with section 103 of this code, in a municipal corporation, township or county having a building department, certified by the board pursuant to section 3781.10 of the Revised Code, or the health commissioner or his authorized representative in health districts, whichever one has jurisdiction.

**BUILDING SERVICE EQUIPMENT.** Equipment, appliances, materials, devices, and systems integrated into a building that provide space heating, air conditioning, ventilation, fire protection, lighting, electricity, sanitation, water, water heating, cooking, medical gas, medical vacuum, and clothes drying. Building service equipment begins from the connected stored source of liquid or gas fuel or electrical power supplying the equipment or the utility service point/point of delivery and extends through the point of use but does not include process equipment that may also be connected to the same source.

**BUILDING SERVICES PIPING.** All piping systems and their component parts that are part of a building system and that promote the safe, sanitary, and energy efficient occupancy of a building. Building services piping includes, but is not limited to, cold and hot potable water distribution for plumbing fixtures; sanitary lines from plumbing fixtures; nonflammable medical gas systems; medical oxygen systems; medical vacuum systems; fire protection piping systems and compressed air in dry systems; refrigeration, chilled water, condenser and cooling tower water, brine, and water/antifreeze systems; steam, steam condensate, and hot water piping

systems; and fuel oil piping and fuel gas piping for heating, cooling, and cooking applications. See division (A) of section 4104.41 of the Revised Code.

**CODE.** Those rules contained in Chapters 4101:3-1 to 4101:3-15 of the Administrative Code.

**CODE OFFICIAL.** See “BUILDING OFFICIAL”.

**COLLECTION PIPE.** Unpressurized pipe used within the collection system that drains on-site nonpotable water or rainwater to a storage tank by gravity. Private water supplies and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**CONSTRUCTION DOCUMENTS.** The written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of a project necessary for obtaining plan approval in accordance with section 106 of the building code.

**CONTAINMENT BACKFLOW PREVENTION DEVICE.** A device for the prevention of the backflow of liquids, solids, or gases that is installed by the supplier of, or as a requirement of, any public water system as defined in division (A) of section [6109.01](#) of the Revised Code.

**ENGINE-MOUNTED TANK.** A fuel tank furnished by the engine manufacturer or the emergency power system supplier and mounted on the engine, the engine-frame, or under as a subbase.

**EXISTING INSTALLATION.** Any plumbing system regulated by this code that has been installed and for which a certificate of occupancy has been or can be issued in accordance with section 111.4 of the building code.

**FIRE CODE.** The “Ohio Fire Code”.

**FUEL TANK.** A tank containing fuel for an engine(s) or appliance.

**GRAYWATER.** Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays. Private water supplies and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**HUB DRAIN.** A drain whose inlet terminates not less than one inch (25.4mm) above the finished floor.

**INDIVIDUAL WATER SUPPLY.** A water supply that serves one or more families, and that is not an approved public water supply. Private water supplies and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**ISOLATION BACKFLOW PREVENTION DEVICE.** A device for the prevention of the backflow of liquids, solids, or gases that is regulated by the plumbing code adopted pursuant to section [3781.10](#) of the Revised Code and rules adopted pursuant to this section. See "BACKFLOW PREVENTER".

**JURISDICTION.** The authority to enforce this code by municipal corporations, townships or counties certified by the board in accordance with section 3781.10 of the Revised Code, or by general health districts, or by the division of industrial compliance in the department of commerce.

**LABEL.** An identification applied on a product by the manufacturer that contains the name of the manufacturer, the function and performance characteristics of the product or material, and the name and identification of an approved agency and that indicates that the representative sample of the product or material has been tested and evaluated by an approved agency (see building code section 1703.5 and building code definitions of "MANUFACTURER'S DESIGNATION" and "MARK").

**LISTED.** Equipment, appliances, materials, products or services included in a directory published by an approved agency whose listing states either that the equipment, appliance, material, product or service meets identified standards listed in this code or have been tested and found suitable for use in a specified manner.

**MECHANICAL CODE.** The "Ohio Mechanical Code".

**NUISANCE.** See "Public Nuisance."

**ON-SITE NONPOTABLE WATER REUSE SYSTEM.** A water system for the collection, treatment, storage, distribution and reuse of nonpotable water generated on site, including but not limited to a gray water system. This definition does not include a rainwater harvesting system. Private water supplies and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**POWER PIPING.** Piping systems and their component parts that are not building services piping systems, and that may be installed within electric power generating stations, industrial and institutional plants, utility geothermal heating systems, and central and district heating and cooling systems. Power piping includes, but is not limited to, piping used in the distribution of plant and process steam at boiler pressures greater than fifteen pounds per square inch gauge, high temperature water piping from high pressure and high temperature boilers, power boiler steam condensate piping, high pressure and high temperature water condensate piping, and compressed air and hydraulic piping upstream of the first stop valve off a system distribution header. See division (B) of section 4104.41 of the Revised Code.

**PRIVATE.** In the classification of plumbing fixtures, “private” applies to fixtures that are intended only for a small group of persons and are not open to and available for use by all persons within the building. Examples of private fixtures include, but are not limited to, fixtures within dwelling units, sleeping units, guest rooms, patient sleeping rooms, and individual offices, and separate employee fixtures not intended for customers, patrons, and visitors.

**PRIVATE RESIDENTIAL SWIMMING POOL.** Any indoor or outdoor structure, chamber, or tank containing a body of water for swimming, diving or bathing intended to serve a residential structure containing not more than 3 dwelling units and used exclusively by the residents and their nonpaying guests. Any swimming pool other than a private swimming pool is classified as a public swimming pool.

**PROCESS PIPING.** Piping systems and their component parts that are not building services or power piping systems and that may be installed in petroleum refineries; chemical, pharmaceutical, textile, paper, semiconductor, and cryogenic plants; and related processing plants and terminals. See division (C) of section 4104.41 of the Revised Code.

**PUBLIC OR PUBLIC UTILIZATION.** In the classification of plumbing fixtures, “public” applies to fixtures that are open to and available for use by all persons within the building including, customers, patrons, and visitors.

**PUBLIC NUISANCE.** Any building, structure, or part thereof, constructed, erected, altered, manufactured, or repaired not in accordance with the Ohio Revised Code or the rules of the board, and any building, structure, or part thereof in which there is installed, altered, or repaired any fixture, device, and material, or

plumbing, heating, or ventilating system, or electric wiring not in accordance with the Ohio Revised Code or the rules of the board. See division (C) of section 3781.11 of the Revised Code.

**PUBLIC SEWER.** That part of the drainage system of pipes, installed and maintained by a city, township, county, public utility company or other public entity, and located on public property, in the public way or in an approved dedicated easement of public or community use.

**PUBLIC SWIMMING POOL.** Any indoor or outdoor structure, chamber, or tank containing a body of water for swimming, diving, or bathing that is intended to be used collectively for swimming, diving, or bathing and is operated by any person whether as the owner, lessee, operator, licensee, or concessionaire, regardless of whether or not a fee is charged for use, but does not mean any public bathing area, private residential swimming pool or any structure, chamber and tank that is easily portable when empty with a capacity of no more than 150 gallons.

**READY ACCESS.** That which enables a fixture, appliance or equipment to be directly reached without requiring the removal or movement of any panel, door or similar obstruction and without the use of a portable ladder, step stool or similar device. (See also "ACCESS (TO)").

**RECLAIMED WATER.** Nonpotable water that has been derived from the treatment of waste water by a facility or system licensed or permitted to produce water meeting the jurisdiction's water requirements for its intended uses. Also known as "recycled water". Private water supplies and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**REGISTERED DESIGN PROFESSIONAL.** Any architect holding a certificate issued under section 4703.10 of the Revised Code, any landscape architect holding a certificate issued under section 4703.36 of the Revised Code, or any engineer holding a certificate issued under section 4733.14 of the Revised Code.

**RODENT PROOFING.** The installation of plumbing systems in a manner which will prevent the entry of rodents into a structure through openings created when any part of a plumbing system penetrates an exterior wall or floor assembly located near or on grade.

**SINK, SERVICE.** Any designated sink so approved for liquid discharge, liquid filling, cleaning, and washing in a facility, and installed in a dedicated area or space.

**SWIMMING POOL.** A permanent or temporary structure that is intended to be used for swimming, bathing or wading and that is designed and manufactured or built to be connected to a circulation system. A swimming pool can be open to the public regardless of whether a fee is charged for its use or can be accessory to a residential setting where the pool is available only to the household and guests of the household.

**THIRD-PARTY CERTIFICATION AGENCY.** Deleted

**THIRD-PARTY CERTIFIED.** Deleted

**WASTE RECEPTOR.** A device for receiving the discharge of a waste pipe or pipes and discharges them by gravity into the sanitary drainage system. Waste receptors include, but are not limited to, floor drains, floor sinks, trench drains, hub drains, standpipes, mop basins, service sinks, and laundry trays.

**WATER DISPENSER.** A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises.

This definition also includes a free-standing apparatus for the same purpose that is not connected to the potable water distribution system and that is supplied with potable water from a container, bottle or reservoir.

**WELL.** Private water supplies and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**Bored.** Deleted.

**Drilled.** Deleted.

**Driven.** Deleted.

**Dug.** Deleted.

## **4101:3-3-01 General regulations.**

Chapter 3 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Modify the exception to section 301.3 to read as follows:**

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays are not required to discharge to the *sanitary drainage system* where such fixtures discharge to a recycled water system approved by the “Ohio Environmental Protection Agency” in accordance with Chapter 3745-42 of the Administrative Code or approved by the “Ohio Department of Health” in accordance with Chapter 3701-28 of the Administrative Code.

**(B) Modify section 303.3 as follows:**

Replace the phrase “...third party certification...” with the word “...listed...”.

**(C) Replace section 303.4 to read as follows:**

**303.4 Approved agency testing and certification.** Plumbing products and materials required by the code to be in compliance with a referenced standard are to be *listed* by an *approved agency* as complying with the applicable referenced standards. Products and materials are to be identified in accordance with Section 303.1.

**(D) Replace section 303.5 to read as follows:**

**303.5 Cast-iron soil pipe, fittings and components.** Cast-iron soil pipes and fittings, and the couplings used to join these products together, are to be *listed* and *labeled* by an *approved agency*.

**(E) Replace section 305.3 to read as follows:**

**305.3 Pipes and fittings through foundation wall assemblies.** Any pipe or fitting making a through penetration of a foundation wall assembly are to be provided with a relieving arch, or a pipe sleeve pipe is to be built into the foundation wall assembly. The sleeve is to be two pipe sizes greater than the pipe or fitting passing through the foundation wall assembly. Pipe joints or fitting joints are not to occur within the exterior foundation wall assembly.

**(F) Replace section 305.4.1 to read as follows:**

**305.4.1 Sewer depth.** Deleted.

**(G) Modify section 309.2 to replace the list as follows:**

1. Water service pipes.
2. Deleted.
3. Deleted.
4. Sanitary drainage piping.
5. Storm drainage piping.
6. Deleted.
7. Other plumbing fixtures, faucets, fixture fittings, piping systems and equipment.
8. Water heaters.
9. Vents and vent systems.

**(H) Replace section 311.1 to read as follows:**

**311.1 General.** Deleted.

**(I) Replace section 312.1 in its entirety to read as follows:**

**312.1 Required tests.** The owner or owner's representative is to cause the applicable tests and inspections, prescribed in Sections 312.2 through 312.11, to be performed to determine that the work will withstand the prescribed test without leakage and to demonstrate the integrity of the device or assembly. In accordance with OBC Section 108.8, reasonable advanced notice is to be given to the *building official* when the plumbing work is ready for tests. The *building official* may require that the tests be conducted in the presence of the *building official* or certified plumbing inspector. The owner or owner's representative is to keep records of the tests and inspections and submit such records to the *building official* upon request.

**312.1.1 New, altered, extended or repaired systems.** New *plumbing systems* and parts of existing systems that have been altered, extended, or repaired are to be tested as prescribed herein to disclose leaks and defects, except that testing is not required in the following cases:

1. In any case that does not include addition to, replacement, alteration or relocation of any water supply, drainage or vent piping.
2. In any case where plumbing equipment is set up temporarily for exhibition purposes.

**312.1.2 Equipment, material, power and labor for tests.** Equipment, material, power and labor necessary for testing a *plumbing system* or part thereof is to be furnished by the owner or the owner's

representative. Required tests are to be conducted by and at the expense of the owner or the owner's representative.

**312.1.3 Test gauges.** Gauges used for testing are to be as follows:

1. Tests requiring a pressure of 10 pounds per square inch (psi) (69 kPa) or less are to utilize a testing gauge having increments of 0.10 psi (0.69 kPa) or less.
2. Tests requiring a pressure of greater than 10 psi (69 kPa) but less than or equal to 100 psi (689 kPa) are to utilize a testing gauge having increments of 1 psi (6.9 kPa) or less.
3. Tests requiring a pressure of greater than 100 psi (689 kPa) are to utilize a testing gauge having increments of 2 psi (14 kPa) or less.

**312.1.4 Test media.** All *plumbing system* piping, fittings, and shower liners are to be tested with water.

**Exception:** Plumbing system piping and fittings are permitted to be tested as prescribed in Sections 312.2 to 312.8 with air, another compressed gas, vacuum, or other media or method only when the manufacturer of the proposed piping, fittings and solvent cement (if applicable) allows the alternative method of testing. Where this code does not address or prescribe an alternative test method, an alternative test method prescribed by the manufacturer of the piping, fittings, or solvent cement in the published manufacturer's installation instructions will be acceptable as meeting the requirements of this code.

**312.1.5 Reinspection and testing.** Where any work or installation does not pass any initial test or inspection, the necessary corrections are to be made to comply with this code.

**(J) Replace section 312.2 to read as follows:**

**312.2 Drainage and vent rough-in test.** Drainage and vent piping and fittings are to be tested prior to the installation of the *plumbing fixtures* and prior to the installation of wall and ceiling coverings to verify the integrity of the system in accordance with one of the following methods prescribed in Section 312.2.1, 312.2.2, or 312.2.3:

**312.2.1 Drainage and vent rough-in water test.** A water test is to be applied to the *drainage system* either in its entirety or in sections. If applied to the entire system, all openings in the piping are to be tightly closed, except the highest opening, and the system is to be filled with water to the point of overflow. If the system is tested in sections, each

opening is to be tightly plugged except the highest openings of the section under test, and each section is to be filled with water, but sections are not to be tested with less than a 10-foot (3048 mm) head of water. In testing successive sections, not less than the upper 10 feet (3048 mm) of the next preceding section is to be tested so that no joint or pipe in the building, except the uppermost 10 feet (3048 mm) of the system, is to have been submitted to a test of less than a 10-foot (3048 mm) head of water. This pressure is to be held for not less than 15 minutes. The system is then to be tight at all points.

**312.2.2 Drainage and vent rough-in air test.** When permitted by the manufacturer of the piping, fittings, and solvent cement (if part of the plumbing system), an air test is to be made by forcing air into the system until there is a uniform gauge pressure of 5 psi (34.5 kPa) or sufficient to balance a 10-inch (254 mm) column of mercury. This pressure is to be held for a test period of not less than 15 minutes. Any adjustments to the test pressure required because of changes in ambient temperatures or the seating of gaskets are to be made prior to the beginning of the test period. Testing is to be done with dual pressure relief valves rated for 7.5 psig.

**312.2.3 Alternative drainage and vent rough-in test.** When permitted by the manufacturer of the piping, fittings, and solvent cement (if part of the plumbing system), an alternative method of testing the drainage and vent system, such as compressed gas or vacuum, may be permitted to meet the drainage and vent rough-in test requirements of this code as long as the test is conducted strictly in accordance with the requirements published in the manufacturer's installation instructions.

**(K) Replace section 312.3 to read as follows:**

**312.3 Drainage and vent air test.** Deleted.

**(L) Replace section 312.4 to read as follows:**

**312.4 Drainage and vent final test.** After the plumbing fixtures have been set and their traps filled with water, the entire drainage system is to be subjected to one of the following final tests as prescribed by the building official:

**312.4.1 Visual and operational final test.** All plumbing fixtures are to be operated and a visual inspection of accessible piping and joints are to be performed to determine that there are no visible leaks.

**312.4.2 Drainage and vent final test.** The final test of the completed drainage and vent systems is to be made, after the fixtures are connected, as follows:

1. Close all stack openings;
2. A manometer tube is to be placed through a trap seal to the system side and water is to be added to a fixture until an equivalent of at least 1 in. water column (248.8 Pa) is read on the manometer gauge or water-can. Water may be added to a water closet bowl or trap tailpiece extension until the water level is at least one inch higher than the original trap seal;
3. Maintain the initial water column for fifteen (15) minutes;
4. After fifteen (15) minutes, the system is to be separated at a trap seal, AAV, or other means as directed by the plumbing inspector for verification that the entire system is interconnected.

**312.4.3 Alternative drainage and vent final test.** Any other testing method equal to the 1 in. water column. Except as provided for in Section 312.4.2, compressed or stored air may be used only if permitted by the manufacturer of piping, fittings, and solvent cement (if part of the plumbing system).

**(M) Replace section 312.5 to read as follows:**

**312.5 Water supply system test.** Upon completion of a section of or the entire water supply system, the system, or portion completed, is to be tested to verify the integrity of the system in accordance with one of the following methods prescribed in Sections 312.5.1 or 312.5.2:

**312.5.1 Water supply working pressure test.** A water pressure test is to be performed to prove the system watertight. The test pressure is to be not less than the working pressure under which the system will be used, and the system will hold the test pressure for at least 15 minutes. The water utilized for tests is to be obtained from a potable source of supply.

**312.5.2 Water supply air test.** When permitted by the manufacturer of the piping, fittings, and solvent cement (if part of the plumbing system), an air test is to be performed to prove the system airtight. The test pressure is to be not less than 50 psi (344 kPa) and the system will hold the test pressure for at least 15 minutes.

**(N) Replace section 312.6 to read as follows:**

**312.6 Gravity sewer test.** Deleted

**(O) Replace section 312.7 to read as follows:**

312.7 Forced sewer test. Deleted.

**(P) Add an exception to section 312.9 to read as follows:**

Exception: The shower liner test is not required for one-, two-, or three-family dwellings unless required by the shower liner manufacturer's installation instructions.

**(Q) Replace section 312.10 to read as follows:**

312.10 Inspection and testing of isolation backflow prevention devices required by this code. Inspection and testing of *isolation backflow prevention devices* is to comply with Sections 312.10.1 and 312.10.2.

Exception: Inspection and testing requirements for *containment backflow prevention devices* required by the water supplier is to be in accordance with rule 3745-95-06 of the Administrative Code and enforced by the water supplier.

**(R) Modify section 313.1 as follows:**

Add the phrase "or Chapter 11 of the "Residential Code of Ohio" at the end of the sentence.

**(S) Replace section 316.1 and its subsections with the following:**

316.1 Alternative engineered design. See Section 106.5 of the *building code*.

316.1.1 Design criteria. Deleted.

316.1.2 Submittal. Deleted.

316.1.3 Technical data Deleted.

316.1.4 Construction documents. Deleted.

316.1.5 Design approval. Deleted.

316.1.6 Inspection and testing. Deleted.

**(T) Add new section 317 Welding and Brazing to read as follows:**

**SECTION 317 WELDING AND BRAZING**

317.1 General. Section 4104.44 of the Revised Code governs the requirements for welding and brazing of metallic *building services piping* (including medical gas) systems referenced by this code.

### **4101:3-4-01 Fixtures, faucets and fixture fittings.**

Chapter 4 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Modify section 403.1 to add two sentences and an exception at the end of the section to read as follows:**

When the actual occupant load will be significantly different than that determined by section 1004 of the *building code*, the *building official* may establish an alternate basis for determining the *occupant load*. This alternate basis is to be included in the special stipulations and conditions section of the certificate of occupancy issued for that structure pursuant to section 111 of the *building code*. For accessibility requirements, see "Chapter 11, Accessibility" of the *building code*.

**Exception:** Facilities are not required in buildings less than 100 square feet in area if fixtures are available within 500 feet of the building.

**(B) Modify table 403.1 as follows:**

Relocate the reference to footnote "f" to the assembly classification and replace footnote "f" with the following:

f. The minimum required number, type and location of plumbing fixtures for *public swimming pools* are to be provided in accordance with Section 3109.3.3 of the building code.

**(C) Modify the first sentence of section 403.2 exception 6 to read as follows:**

6. In other than Group E occupancies, separate facilities are not required where rooms having both water closets and lavatory fixtures are designed for use by both sexes and privacy for water closets are installed in accordance with Section 405.3.4.

**(D) Modify section 403.3 exception 1 to read as follows:**

1. Parking garages.

**(E) Modify section 403.3.1 as follows:**

Add the phrase "or similar spaces not available to the public" to the end of the first sentence and add two sentences to the end of the section that read "The building owner is permitted to control access to the toilet facilities. Where such access is controlled, a sign is to be posted indicating how access is to be obtained."

**(F) Replace section 403.4.1 with the following:**  
**403.4.1 Directional signage. Deleted.**

**(G) Add the following sentence to the end of section 405.3.1 to read as follows:**  
**See Chapter 11 of the building code for the minimum required dimensions for accessible fixtures.**

**(H) Modify section 405.3.4 to add the following sentence after the first sentence and before the exceptions:**  
**Compartments of multiple-user facilities designed to serve all genders are to comply with the Type A privacy rating requirements of IAPMO/ANSI/CAN Z124.10.**

**(I) Replace section 405.7 with the following:**  
**405.7 Plumbing in mental health centers. Deleted.**

**(J) Replace the first sentence of section 410.3.1 to read as follows:**  
**Where drinking fountains are required, not fewer than two drinking fountains are to be provided.**

**(K) Replace the last sentence in section 410.4 to read as follows:**  
**In other occupancies where water dispensers are provided, drinking fountains are not required to be installed.**

**(L) Modify section 421.5.2 to add exception #3 to read as follows:**  
3. **The shower liner test is not required for one-, two-, or three-family dwellings unless required by the shower liner manufacturer's installation instructions.**

**4101:3-5-01 Water heaters.**

Chapter 5 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Modify section 501.1 to add an exception to read as follows:**

Exception: Water heaters are to comply with the “Ohio Boiler and Pressure Vessels rules,” Chapters 4101:4-1 to 4101:4-10 of the Administrative Code, when any of the following limitations are exceeded:

1. Heat input of two hundred thousand BTU per hour;
2. Water temperature of two hundred ten degrees Fahrenheit;
3. Nominal water containing capacity of one hundred twenty gallons.

**(B) Modify section 501.5 as follows:**

Replace the term “third-party certified” with the phrase “*listed by an approved agency* as complying with the applicable referenced standards.”

## **4101:3-6-01 Water supply and distribution.**

Chapter 6 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Replace section 601.1 with the following:**

**601.1 Scope.** This chapter governs the materials, design and installation of water supply systems within a building, both hot and cold, for utilization in connection with human occupancy and habitation.

**Exceptions:**

1. This chapter is not applicable to private water systems or recycled water systems as defined in section 3701.344 of the Revised Code and as defined in rule 3701-28-01 of the Administrative Code and within the scope of the rules of the “Ohio Department of Health”.
2. This chapter is not applicable to public water systems as defined in division (A) of section 6109.01 of the Revised Code and as defined in rule 3745-81-01 of the Administrative Code and within the scope of the rules of the “Ohio Environmental Protection Agency”.

**(B) Replace section 602.3 in its entirety to read as follows:**

**602.3 Water Required**

This section and all subsections are deleted.

**(C) Replace section 603.2 with the following:**

**603.2 Separation of water service and building sewer.** Where water service piping is located in the same trench with the building sewer and the building sewer piping is not constructed of materials listed in Table 702.2, the water service pipe and the building sewer are to be horizontally separated by not less than 5 feet (1524 mm) of undisturbed or compacted earth. The required separation distance is not applicable where a water service pipe crosses a sewer pipe, provided that the water service is sleeved to a point not less than 5 feet (1524 mm) horizontally from the sewer pipe centerline on both sides of such crossing. The sleeve is to be of pipe materials listed in Table 605.3, Table 702.2, or other pipe material acceptable to the authority having jurisdiction for the building sewer. The required separation distance is not applicable where the bottom of the water service pipe, located within 5 feet (1524 mm) of the sewer, is not less than 12 inches (305 mm) above the highest point of the top of the building sewer.

**(D) Add an exception to section 605.2.1 to read as follows:**

Exception: The following items are exempt from the lead content limitations of this section (even though the potable water supply pipe which serves the fixture or supplies the nonpotable water system is not exempt):

1. Pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers that are used exclusively for nonpotable services such as process piping, irrigation piping, and outdoor watering piping.
2. Toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, and service saddles.
3. Water distribution main gate valves two inches in diameter or larger.

**(E) Modify section 605.3 as follows:**

Replace the term "...third party certified..." with the phrase "...*listed by an approved agency...*"

**(F) Modify section 605.15.2, exception #1, as follows:**

Replace the term "...third party certified..." with the phrase "...*listed by an approved agency...*"

**(G) Modify section 606.1, item #4, to read as follows:**

4. On the base of every riser.

**(H) Replace section 606.5.5 to read as follows:**

**606.5.5 Low-pressure cutoff required on booster pumps.** In accordance with rule 3745-95-07 of the Administrative Code, a low-pressure cutoff, a low suction throttling valve, or variable speed suction limiting controls is to be installed on all booster pumps in a water pressure booster system to prevent creation of a vacuum or negative pressure on the suction side of the pump when a positive pressure of 10 psi (68.94 kPa) or less occurs on the suction side of the pump while the pump is operating. Enforcement of the referenced rule is the responsibility of the local water supplier.

**(I) Add a sentence at the end of section 607.1 to read as follows:**

*Tempered water is to be delivered from public hand-washing facilities.*

**(J) Replace section 607.2.1 to read as follows:**

**607.2.1 Circulation systems and heat trace systems for maintaining heated water temperature in distribution systems.** Automatic circulating *hot water* system pumps or heat trace is to be arranged to be conveniently turned off, automatically or manually, when the *hot water* system is not in operation.

**(K) Replace section 607.2.1.1 to read as follows:**

**607.2.1.1 Pump controls for hot water storage systems.** Deleted.

**(L) Replace section 607.5 to read as follows:**

**607.5 Insulation of piping.** Piping to the inlet of a *water heater* and piping conveying water heated by a *water heater* is to be insulated in accordance with the applicable energy conservation standard referenced in Chapter 13 of the *building code* or Chapter 11 of the “*Residential Code of Ohio*”.

**(M) Replace section 608.1 with the following:**

**608.1 General.** A potable water supply system within a building is to be designed, installed and maintained in such a manner so as to prevent contamination from nonpotable liquids, solids or gases being introduced into the building potable water supply through cross connections or any other piping connections to the system. Isolation backflow prevention device applications are to conform to Table 608.1, except as specifically stated in Sections 608.2 through 608.17.10.

**(N) Modify section 608.4 as follows:**

Add “water-powered sump pumps,” after “Water pumps.”

**(O) Add a sentence at the end of section 608.17.2 to read:**

If the boiler feedwater, water treatment, or make-up water pipe is not provided with a high temperature check valve (rated at not less than 250 °F) near the boiler stop valve, then the temperature rating of the *backflow preventer* is to be not less than 250 °F.

**(P) Replace section 608.18 in its entirety to read as follows:**

**608.18 Protection of individual water supplies.** An individual water supply, otherwise known as a private water system, is to be located and constructed so as to be safeguarded against contamination in accordance with the rules of the “Ohio Department of Health” set forth in Chapter 3701-28 of the Administrative Code, “Private Water Systems.”.

**608.18.1 Well locations.** Deleted.

**TABLE 608.18.1 DISTANCE FROM CONTAMINATION TO  
PRIVATE WATER SUPPLIES AND PUMP SUCTION LINES**  
Deleted.

608.18.2 Elevation. Deleted.

608.18.3 Depth. Deleted.

608.18.4 Watertight casings. Deleted.

608.18.5 Drilled or driven well casings. Deleted.

608.18.6 Dug or bored well casings. Deleted.

608.18.7 Cover. Deleted.

608.18.8 Drainage. Deleted.

**(Q) Modify section 609.2.1 as follows:**

Replace the word “hospital.” with the phrase “Group I-2, Condition 2 facility.”

**(R) Add an exception to section 610.1 that reads as follows:**

Exception: New plumbing systems in one-, two-, and three-family dwellings are to be purged of deleterious matter and shown by a bacteriological examination, prescribed by the health authority or the water purveyor having jurisdiction and performed by a third-party testing laboratory certified/accepted by the Ohio EPA, that the water in the system meets prescribed water quality standards in accordance with the following procedure:

1. If, after first bacteriological examination, the water in the plumbing system meets prescribed water quality standards, then no disinfection is required.
2. If, after first bacteriological examination, the water in the plumbing system fails to meet prescribed water quality standards, then a second bacteriological examination is to be performed. If, after the second bacteriological examination, the water in the plumbing system meets prescribed water quality standards, then no disinfection is required.
3. If, after the second bacteriological examination, the water in the plumbing system fails to meet prescribed water quality standards, then the system is to be disinfected as described in this section prior to utilization.

## **4101:3-7-01 Sanitary drainage.**

Chapter 7 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

### **(A) Modify section 701.1 as follows:**

Add a second sentence and an exception to read as follows:

In accordance with section 3781.03 of the Revised Code, the department of the city engineer, in cities having such departments, the boards of health districts, or the sewer purveyor, as appropriate, has complete supervision and regulation of the entire sewerage and drainage system of the jurisdiction, including the *building sewer* and all laterals draining into the street sewers.

**Exception:** Private sewage disposal systems within the scope of the “Ohio Department of Health” rules contained within Chapter 3701-29 of the Administrative Code, “Household Sewage Disposal Systems”.

### **(B) Replace section 701.2 with the following:**

**701.2 Connection to sewer required.** Except where permitted by the “Ohio Environmental Protection Agency” or the “Ohio Department of Health”, sanitary drainage piping from plumbing fixtures in buildings and sanitary drainage piping systems from premises is to be connected to a public sewer.

### **(C) Modify section 701.3 as follows:**

Replace the indefinite article “A...” at the beginning of section 701.3 with the phrase “Except as permitted by the “Ohio Environmental Protection Agency” or the “Ohio Department of Health”, every...”

### **(D) Modify section 701.4 as follows:**

Replace the phrase “...unless it has first been rendered innocuous through subjection to an *approved* form of treatment.” with “...without prior approval from the “Ohio Environmental Protection Agency” for the form of treatment and for the location of discharge.”

### **(E) Replace section 701.5 with the following:**

**701.5 Damage to drainage system or public sewer.** Except where permitted by the “Ohio Environmental Protection Agency”, wastes detrimental to the public sewer system or to the functioning of the sewage-

treatment plant are to be treated and disposed of in accordance with requirements of the local sewer purveyor.

**(F) Modify section 701.7 as follows:**

Replace the reference “316” with “106.5 of the building code”.

**(G) Add section 701.8 to read as follows:**

701.8 Reuse of existing sanitary drainage piping. Reuse of existing sanitary drainage piping is to comply with Chapter 34 of the *building code*.

**(H) Replace section 702.3 with the following:**

702.3 Building sewer pipe. Deleted.

**(I) Replace table 702.3 with the following:**

TABLE 702.3 BUILDING SEWER PIPE. Deleted.

**(J) Replace section 703 in its entirety with the following:**

This section and all subsections are deleted.

**(K) Modify section 705.10.2 as follows:**

Delete the word “purple” and the phrase “not purple in color” in the first two sentences and replace the phrase “third party certified” in exception #1 with the phrase “*listed by an approved agency*”

**(L) Modify section 706.3 as follows:**

Add the following sentence as a new paragraph before the exception: “When a through penetration of an exterior foundation wall assembly occurs, drainage fitting joints are not to occur within that exterior foundation wall assembly.”

**(M) Replace section 708.1.2 with the following:**

708.1.2 Building sewers. Deleted.

**(N) Modify table 709.1 as follows:**

In the row titled “Automatic clothes washers, commercial”, change the second and third column values to read “Note a” and change footnote “a” to read “a. Calculate per Section 709.3.”

**(O) Modify section 712.2 to add an exception as follows:**

Exception: In buildings where the “*Residential Code of Ohio*” applies, only a check valve is required, located on the discharge piping from the sewage pump or ejector.

**(P) Modify section 714.1 as follows:**

In the first sentence, replace the word “Where” with the phrase “If required by the “Ohio Environmental Protection Agency” or local sewer purveyor, a backwater valve is to be installed only for” and delete the word “are”

**(Q) Modify section 716 as follows:**

Delete the phrase “...UNDERGROUND BUILDING SEWERS AND...” in the title of the section, delete the phrase “...building sewer and...” in sections 716.1 and 716.2, and delete the phrase “...building sewer or ...” in section 716.6.

**(R) Modify section 717 as follows:**

- (1) Delete the phrase “BUILDING SEWERS AND” in the title of the section.
- (2) Delete the phrase “building sewers and” in subsections 717.1 and 717.2.
- (3) Replace sections 717.3, 717.3.1, 717.4, 717.5, 717.6, 717.8, 717.10 with the following:

717.3 Preinstallation requirements. Deleted.

717.3.1 Preinstallation recorded video camera survey. Deleted.

717.4 Permitting. Deleted.

717.5 Prohibited applications. Deleted.

717.6 Relining materials. Deleted.

717.8 Post-installation recorded video camera survey. Deleted.

717.10 Approval. Deleted.

**(S) Replace section 718.1 with the following:**

718.1 Cure-in-place. Deleted.

## **4101:3-8-01 Indirect/special waste.**

Chapter 8 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Modify section 802.1 as follows:**

Change the reference from “802.1.7” to “802.1.8” and add an exception that reads:

**Exception:** Approved health care related fixtures, devices, and equipment may be directly connected to the *drainage system* if required to be directly connected in accordance with the manufacturer’s installation instructions.

**(B) Modify section 802.1.7 as follows:**

Add the phrase “, or directly connect” after the term “*air break*” and add a second sentence that reads: “Food handling sinks are to comply with Section 802.1.1.”

**(C) Add new section 802.1.8 to read as follows:**

**802.1.8 Dental, drinking or soda fountain, bar sink, floor or shower drain waste.** Wastes from dental or cuspidor fountains, drinking fountains, soda fountains, bar sinks, floor drains or shower drains may be indirectly connected by means of an *air break* to the *sanitary drainage system*. Each indirectly connected item listed above is to discharge, individually, to a directly connected floor drain, waste receptor or standpipe.

**(D) Modify section 802.4 as follows:**

Change the phrase “cover the outlet of” to “be installed in” and add an exception that reads: **Exception:** Standpipes only require *access*.

## **4101:3-9-01 Vents.**

Chapter 9 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Modify section 901.3 as follows:**

The last sentence is to read: “Air admittance valves for chemical waste systems are to comply with Section 918 including Section 918.8, are to be constructed of materials *approved* in accordance with Section 702.6, and are to be tested for chemical resistance in accordance with ASTM F1412.”

**(B) Modify section 903.1.1 as follows:**

Add the number “12” for the inches value and “304.8” for the mm value.

**(C) Modify section 903.1.2 as follows:**

Add the phrase “within 10 feet (3048 mm) of the occupiable area” at the end of the sentence.

**(D) Modify section 906.5.1 as follows:**

In the first sentence, add the phrase “the building” before “sewer”.

**(E) Modify section 913.2 as follows:**

The last sentence is to read: “The stack is not to receive the discharge of clinical or flushing rim sinks, water closets or urinals.”

**(F) Modify section 918.8 as follows:**

In the first sentence replace the reference “702.5” with “702.6” and in the second sentence, add the phrase “or where limited by the manufacturer’s installation instructions” after “plenums”.

**(G) Modify section 919.1 as follows:**

Replace the reference “316” with “106.5 of the building code”.

**4101:3-10-01 Traps, interceptors and separators.**

Chapter 10 of the International Plumbing Building Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Replace section 1001.1 with the following:**

1001.1 Scope. This chapter governs the material and installation of traps, interceptors and separators when installed inside a building and not on the building sewer. The rules of the “Ohio Environmental Protection Agency” may also govern the design and installation of pretreatment devices such as traps, interceptors, and separators.

**(B) Replace the first paragraph of section 1002.1 with the following, but retain the four exceptions intact:**

1002.1 Fixture traps. Each plumbing fixture is to be separately trapped by a liquid-seal trap, except as otherwise permitted by this code. A fixture is not to be double trapped.

**(C) Add new section 1002.1.1 to read as follows:**

1002.1.1 Vertical distance. The vertical distance from the fixture outlet to the trap weir is not to exceed 24 inches (610 mm).

Exception: The height of a clothes washer standpipe above a trap is to conform to Section 802.4.3.

**(D) Add new section 1002.1.2 to read as follows:**

1002.1.2 Horizontal distance. The horizontal distance is not to exceed 30 inches (610 mm) measured from the centerline of the fixture outlet to the centerline of the inlet of the trap.

**(E) Modify section 1002.4.1 to add an exception as follows:**

Exception: Trap seal protection is not required in garage floor drains in one-, two-, and three-family dwellings.

**(F) Modify section 1003.1 as follows:**

Replace the word “Interceptors” with the phrase “Where required by the local sewer purveyor or as otherwise required in this section, interceptors”

**(G) Add new section 1003.1.1 to read as follows:**

**1003.1.1 Industrial processes, meat packing and food processing facilities.** Wastes from industrial processes, meat packing and food processing facilities and similar processing plants are to be drained in accordance with the rules of the “Ohio Environmental Protection Agency”, or the authority in charge of the sewage system into which the wastes are to be discharged. (See sections 6111.44 and 6111.45 of the Revised Code.)

**(H) Modify section 1003.4 as follows:**

Add the word “and” after “facilities,”, delete the phrase “and hydraulic elevator pits” and delete the exception as shown below.

Exception: Deleted.

## **4101:3-11-01 Storm drainage.**

Chapter 11 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Modify section 1101.2 as follows:**

After the word “courtyards”, add the phrase “in buildings”.

**(B) Replace section 1102.4 and table 1102.4 with the following:**

1102.4 Building storm sewer pipe. Deleted.

TABLE 1102.4 BUILDING STORM SEWER PIPE. Deleted.

**(C) Replace section 1109.1 with the following:**

1109.1 General. Deleted.

**(D) Modify section 1110.1 as follows:**

The second sentence is to read: “The controlled flow roof drain system is to be an engineered system in accordance with this section and the design, submittal, approval, inspection and testing requirements of Sections 106.5, 107, and 108 of the *building code* and Section 312 of this code.”

**(E) Replace section 1113.1.4 with the following:**

1113.1.4 Piping. Discharge piping is to meet the requirements of Section 1102.2 or 1102.3 and is to include a full open gate valve and a full flow check valve. Pipe and fittings are to be the same size as, or larger than, the pump discharge tapping.

**Exception:** In buildings where the “*Residential Code of Ohio*” applies, only a check valve is required on the discharge piping from the pump or ejector.

**(F) Add new section 1113.1.5 to read as follows:**

1113.1.5 Water-powered sump pumps. Water-powered sump pumps are only to be used as a secondary back-up pump for the subsoil drainage system and only with appropriate backflow protection in place as required by Section 608.

**4101:3-12-01 Special piping and storage systems.**

Chapter 12 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Replace section 1201.1 to read as follows:**

1201.1 Scope. The provisions of this chapter govern the design and installation of piping and storage systems for nonflammable medical gas systems. All maintenance and operations of such systems are to be in accordance with Chapter 34 of the *building code* and the applicable chapters of the International Fire Code.

**(B) Modify section 1202.1 as follows:**

Add “designed,” before “installed”.

**(C) Replace Section 1203.1 with the following:**

1203.1 Design and installation. Deleted.

**4101:3-13-01 Nonpotable water systems.**

Chapter 13 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Replace section 1301.1 with the following:**

1301.1 Scope. The content of this model code chapter has been deleted. On-Site Nonpotable Water Reuse Systems, Nonpotable Rainwater Collection and Distribution Systems, and Reclaimed Water Systems are considered Private Water Systems as defined in Section 3701.344 of the Revised Code. Private water systems and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**(B) Delete all subsequent sections, subsections, exceptions, tables and figures in Chapter 13 of the referenced model code.**

**4101:3-14-01 Subsurface graywater soil absorption systems.**

Chapter 14 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

**(A) Replace Section 1401.1 with the following:**

**1401.1 Scope.** The content of this model code chapter has been deleted.  
Subsurface graywater soil absorption systems connected to nonpotable water from on-site water reuse systems are considered process piping systems (not building services piping systems) and, therefore, exempt from approval in accordance with Section 102.10 of the building code. Private water systems and recycled water systems are regulated by the Ohio Department of Health rules found in Chapter 3701-28 of the Administrative Code.

**(B) Delete all subsequent sections, subsections, exceptions, tables and figures in Chapter 14 of the referenced model code.**

### **4101:3-15-01 Referenced standards.**

Chapter 15 of the International Plumbing Code, 2021 edition, as incorporated by reference and modified in Section 101.1.1 of this code, is further modified as follows:

#### **(A) Add new section 1501.1 to read as follows:**

1501.1 General. This chapter lists the standards that are referenced in various sections of the plumbing code. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title. The application of the referenced standards is to be as specified in Section 102.5.

#### **(B) Add new section 1501.2 to read as follows:**

1501.2 Referenced codes. When indicated in this code, the following codes refer to provisions in the listed chapters of the administrative code:

<b><u>Referenced Code</u></b>	<b><u>Ohio Administrative Code Chapters</u></b>
<u>Building Code</u>	<u>4101:1-1 to 4101:1-35</u>
<u>Fire Code</u>	<u>1301:7-1 to 1301:7-7</u>
<u>Mechanical Code</u>	<u>4101:2-1 to 4101:2-15</u>
<u>Ohio Boiler and Pressure Vessel Rules</u>	<u>4101:4-1 to 4101:4-10</u>

#### **(C) Modify Chapter 15 to change the editions or titles of the following referenced standards:**

<b><u>ICC Standard Referenced</u></b>	<b><u>Title</u></b>
<u>A117.1-09</u>	<u>Accessible and Usable Buildings and Facilities (for alterations and change of occupancy)</u>
<u>A117.1-17</u>	<u>Accessible and Usable Buildings and Facilities (for new construction and additions)</u>

#### **NFPA**

<u>Standard Referenced</u>	<u>Title</u>
<u>70-23</u>	<u>National Electrical Code (except that section 210.8(F) Exception No. 2 does not expire)</u>

**(D) Modify Chapter 15 to delete the following referenced standards:**

Identify as (Not Referenced)

<u>ASTM Standard Referenced</u>	<u>Title</u>
<u>D1253-14 (Not referenced)</u>	<u>Standard Test Method for Residual Chlorine in Water</u>
<u>E2635-14 (Not referenced)</u>	<u>Standard Practice for Water Conservation Through In-situ Water Reclamation</u>
<u>E2727-18 (Not referenced)</u>	<u>Standard Practice for the Assessment of Rainwater Quality</u>

<u>CSA Standard Referenced</u>	<u>Title</u>
<u>CSA B805-18/ICC 805-18 (Not referenced)</u>	<u>Rainwater Harvesting Systems</u>

<u>ICC Standard Referenced</u>	<u>Title</u>
<u>CSA B805-18/ICC 805-18 (Not referenced)</u>	<u>Rainwater Harvesting Systems</u>
<u>IBC – 21 (Not referenced)</u>	<u>International Building Code</u>
<u>IEBC – 21 (Not referenced)</u>	<u>International Existing Building Code</u>
<u>IECC – 21 (Not referenced)</u>	<u>International Energy Conservation Code</u>
<u>IMC – 21 (Not referenced)</u>	<u>International Mechanical Code</u>
<u>IPSDC -21 (Not referenced)</u>	<u>International Private Sewage Disposal Code</u>
<u>IRC – 21 (Not referenced)</u>	<u>International Residential Code</u>

**NFPA  
Standard**

<u>Referenced</u>	<u>Title</u>
<u>51-18 (Not referenced)</u>	<u>Design and Installation of Oxygen-fuel Gas Systems for Welding, Cutting and Allied Processes</u>
<u>55-19 (Not referenced)</u>	<u>Compressed Gases and Cryogenic Fluids Code</u>
<b><u>NGWA</u></b> <b><u>Standard</u></b> <b><u>Referenced</u></b>	<b><u>Title</u></b>
<u>NGWA/ANSI 01-14 (Not referenced)</u>	<u>Water Well Construction Standard</u>
<b><u>NSF</u></b> <b><u>Standard</u></b> <b><u>Referenced</u></b>	<b><u>Title</u></b>
<u>NSF 50-17 (Not referenced)</u>	<u>Equipment for Swimming Pools, Spas, Hot Tubs and Other Recreational Facilities</u>
<u>NSF 350-17a (Not referenced)</u>	<u>Onsite Residential and Commercial Water Reuse Treatment Systems</u>
<b><u>(E) Modify Chapter 15 to add the following referenced standards:</u></b>	
<b><u>IAPMO</u></b> <b><u>Standard</u></b> <b><u>Referenced</u></b>	<b><u>Title</u></b>
<u>IAPMO/ANSI/CAN Z124.10-22</u>	<u>Water Closets and Urinal Partitions</u>
<b><u>NFPA</u></b> <b><u>Standard</u></b> <b><u>Referenced</u></b>	<b><u>Title</u></b>
<u>37-21</u>	<u>Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines</u>

# Ohio Plumbing Code Summary of Significant Changes – 2017 to 2024

Ohio Administrative Code Rule Number	2024 OPC Section	Source of change (2018 IPC, 2021 IPC, or BBS)	Description of Change
4101:3-1-01	101.1	BBS	Formal adoption by reference of the International Plumbing Code (IPC)
	101.1.1	BBS	“Rules of construction” are universal edits of the IPC
	101.3.1	BBS	Identifies provisions of the plumbing code that are enforced by building official – Consolidated from multiple sections of the OPC
	101.3.2	BBS	Identifies who enforces medical gas
4101:3-2-01	Accessible	2018	Added definition
	Building	BBS	Replaced definition
	Copper Alloy	2021	Added definition
	Existing installation	BBS	Replaced definition
	Full Open Valve	2018	Added definition
	Private	2021 and BBS	ICC Modified definition and BBS replaced definition
	Private residential swimming pool	BBS	Added definition
	Press Connect Joint	2018	Added definition
	Public or Public Utilization	2021 and BBS	ICC Modified definition and BBS replaced definition
	Public Swimming Pool	2018 and BBS	ICC Added definition and BBS replaced definition
	Push-fit fitting	2021	Added definition
	Registered design professional	BBS	Modified definition – includes landscape architects
	Swimming Pool	2018 and BBS	ICC Modified definition and BBS further modified
	Water Dispenser	2021 and BBS	ICC Modified definition and BBS retained current definition
4101:3-3-01	301.3	BBS	Kept ICC model code in charging paragraph. Kept Ohio modifications to exception #1 and relocated Ohio exception #2 to OPC Section 802.1.8
	303.5	2018 and BBS	ICC Added - Third-party listing of soil pipe and BBS modified with Ohio terms
	305.1	2018	Clarified - Corrosion protection of metallic pipe
	305.3	BBS	Modified section with petitioner language for pipes through foundations
	305.6	2018	Modified - Protection against physical damage
	307.7	BBS	Relocated provision to OPC chapter 1
	308.6	2018	Clarified - Sway bracing for drainpipes
	308.9	2021	Modified - Bundled hot water piping insulation

# Ohio Plumbing Code Summary of Significant Changes – 2017 to 2024

	308.10	2018	Added - Thermal expansion tank support
	309.1	BBS	Kept IPC model code – No modifications
	309.3	BBS	Kept IPC model code – No modifications
	310.3	BBS	Relocated provision to OPC chapter 1
	312	BBS	Most of the Ohio changes to the testing and inspections section have remained with the exception of sections 312.10.1, 10.2, 312.11 and 312.12 (see below)
	312.10.1	BBS	Kept IPC model code – No modifications
	312.10.2	BBS	Kept IPC model code – No modifications
	312.11	BBS	Delete unique Ohio section – Important for owners but not within the OPC scope
	312.12	BBS	Delete unique Ohio section – Duplication of chapter 1 requirements.
	314.2.3.3	2021	Added – identification of concealed condensate piping as primary or secondary
	314.3	BBS	Relocated provision to OPC chapter 1
	317	BBS	Replace entire section with general reference directing owners to comply with DIC rules for submission (RC §4104.44)
4101:3-4-01	Table 403.1	2018	Modified - Added fixtures for a gaming area
			Modified - Deleted Group classification column
			Modified - Added Note f for swimming pool fixture quantities.
	403.1.1	2021	Kept model code values and column headings – Ohio modifications moved footnote f from “outdoor sporting events and activities” description cell to “assembly” classification cell as well as deleted current Ohio footnotes f and g as redundant with Sections 403.3 and 424.2
			Modified – Added 2 exceptions to address fixture contribution from multi-user and single-user facilities serving all genders to the overall count required by Table 403.1
	403.1.2	2018	Modified - Signage for single user toilet room
		2021	Clarified – Fixture count contribution from single user toilet rooms
	403.1.3	2018	Added - Lavatories distribution proportionate to water closets

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	403.2	2018	Modified – Added small business exception
		2021	Modified – Added multi-user, multi-gender toilet room design exceptions
	BBS		Modified – Added Group E limitation for separate facilities
	403.3	2018	Clarified - Public/Employee toilet facility simplification
		BBS	Modified – Removed attendant condition. All parking garages are exempt
	403.3.1	2021	Clarified – Remove accessible route duplication
	403.3.3	2021	Modified – Added exception for distance to toilet in Group S
	403.5	2021	Clarified – Remove accessible route duplication
	403.6	2021	Added – Service sink location limits
	403.7	BBS	Relocated provision to OPC chapter 1
	404.3	BBS	Relocated provision to OPC chapter 1
	405.3.1	2018	Clarified - Clearance to obstruction
	405.3.4	BBS	Modified – Added requirement for water closet compartment in multi-user, all gender toilet rooms
	405.3.5	2018	Clarified – Minimum distance between urinal partitions
	405.4.3	2021	Modification – Added new standard for water closet carriers
	405.5	2018	Added – Standard for pumped waste fixtures
	407.2	2021	Modified – Bathtub overflow optional
	409.1	2018	Modified – Added standard for residential dishwashing machines NSF 184
	409.4	2018	Modified – Waste connection requirement for residential dishwasher relocated from 802.1.6 and language revised for clarity
	410.3.2	2021	Added – Quantity of drinking fountains used while standing v. while seated
	410.4	2021	Clarified – Minimum required before substitution of dispensers for fountains
		BBS	Retained Ohio language for water dispenser substitution of drinking fountains
	411.3	2018	Added – Temperature mixing for emergency shower/eyewash
		2021	Modified – Control of temperature where shower/eyewash has direct supply from water heater

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	412	2018	Relocated section 424 to 412
	412.3	2021	Modified – Lower flow shower heads must be compatible with mixing valve
	412.4		
	412.5	2021	Modified – Added methods of temperature limiting control for bathtubs
	412.7	2018	Added – Flow limiting device as part of temperature limiting control. Not a substitute for temperature limiting valves per 412.3 and 412.5
	412.10	2021	Modified – Added methods for temperature limiting control for head shampoo sinks.
	412.11	2021	Added – New text and standard for pre-rinse spray valves used in commercial food prep
	414	2018	Relocated section 427 to 414
	415	2018	Relocated section 425 to 415
	416	2018	Relocated section 413 to 416
	416.1	2021	Modified – New standard for commercial food waste disposers
	417	2018	Relocated section 414 to 417
	418	2018	Relocated section 415 to 418
	419	2018	Relocated section 416 to 419
	419.1	2021	Modified – Clarified impact on fixture count where a group wash fixture is used.
	419.3	2021	Modified – Included group wash fixtures for minimum waste outlet size.
	419.5	2021	Modified – Deleted CSA B125.3 standard as acceptable temperature limiting device for public handwashing – part of ASSE 1070
	420	2018	Relocated section 426 to 420
	421	2018	Relocated section 417 to 421
	421.1	2021	Modified – Added new standards for different types of prefab showers
	421.3.1	2021	Added – Standard for waste fittings that drain a shower.
	422	2018	Deleted entire section for health care fixtures and equipment. Relocated section 418 to 422
	423.3	2021	Modified – Replaced CSA standard with ASSE 1082 standard for footbaths and pedicure baths
	424		Relocated section 419 to 424
	425		Relocated section 420 to 425
	426		Relocated section 421 to 426
4101:3-5-01	501.2	2021	Clarified – Align code language with language of standard

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	502.1	2018	Modified – Added solar thermal water heating systems and compliance with mechanical code and ICC 900 standard.
	502.1.1	BBS	Deleted Ohio exception. This is part of the listing
	504.6	2018	Modified – T & P discharge piping minimum size where insert fitting are used.
	504.7	2018	Modified – Expanded the types of materials for water heater drain pan
4101:3-6-01	602.3	BBS	Delete all of section 602.3. This work is regulated through ODH rules for private water supply.
	602.3.1	2018	Modified – Added standard for water well construction that is not otherwise regulated. This change is moot.
	602.3.5	2021	Modified – Added NSF standard for potable water pumps. This change is moot.
	603.3	BBS	Relocated provision to OPC chapter 1
	605.2	BBS	Returned to model code organization of section. Separate requirements for water supply in general from requirements for drinking water supply specifically.
	605.2.1		Relocated unique Ohio exceptions to 605.2.1 (which was previously deleted)
	605.11	2018	Deleted Section 605.11 Brass. Brass is one type of copper alloy. Subsequent sections renumbered
	605.12.3	2021	Modified – Solder and flux used in drinking water systems must comply with NSF 61 standard
	605.13.6		
	605.13.7	2018	Clarified – where push-fit type joints are acceptable
	605.14.4		
	605.16.3		
	606.1	2021	Modified – Added location #2.1 for water shut-off at each tenant in multi-tenant buildings other than a dwelling
		BBS	Retains Ohio modification for location #4 at the base of every water riser.
	606.7	2021	Deleted the labeling of water distribution pipes where bundled.
	607.1.1	2021	Modified - Expands means and standards for temperature limiting and tempered water control. Revised the format of 607.1.2.
	607.1.2		
	607.3	2018	Modified – Allows other means of pressure control in a hot water system beyond a thermal expansion tank only

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	608.3		Modification – Added 608.4 and extracted requirement from 608.3 to clarify backflow protection. All subsequent subsections are renumbered
	608.4	2018	
	608.12 (formerly 608.11)	2018	Modified – Renumbered and added compliance with NSF 61 standard for interior of tanks in contact with potable water.
	608.15.2.1 (formerly 608.14.2.1)	2021	Modified – Drainage for backflow preventer discharge must accommodate max flow rate per manufacturer specs
	608.17.1 (formerly 608.16.1)	2018	Modified – Renumbered and reorganized sections to clarify backflow requirements used with carbonated beverage machines from requirements used with coffee and non-carbonated beverage machines (formerly 608.16.10)
	608.17.1.1		
	608.17.1.2		
	608.17.2 (formerly 608.16.2)	2021	Modified – Added ASSE 1081 standard for backflow requirements used with low hazard boiler
	608.17.10	2018	Added – Backflow protection requirements for humidifiers
	609.1	2018	Modified – Replaced outdated care facility terminology with current terms
	609.2	2021	Modified – Replaced terminology and expanded on requirements for a redundant water service Grp I-2, Cond 2
	609.2.1	2021	Added – Requirement for tracer wire on water service for Group I-2, Cond 2
	610.1	BBS & Petition #23-01	Added – Exception that outlines disinfection process for safe potable water in new plumbing systems of dwellings
	611.1	2018	Modified – Added NSF standard for reverse osmosis treatment unit.
4101:3-7-01	701.2	2018	Modified – Connection to sewer required except for gray water systems (ODH rules)
		BBS	Modifies model code to simplify. Public sewer or as otherwise permitted by OEPA or ODH.
	701.8	2018	Deleted – sanitary drainage above “food areas” no longer prohibited.
		BBS	Added – new section 701.8 for reuse of existing sanitary drain piping
	702.3	2018	Modified – Standard added for PP pipe
		2021	Modified – Standard added for ABS pipe

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		BBS	Ohio continues to delete this section and Table 702.3 as outside the scope of the OPC
703	BBS	2018	Ohio continues to delete this section in its entirety as outside the scope of the OPC
703.4	2018		Modified – Use of existing building drain is clarified. Change is moot.
704.1	2018		Modified – Slope for grease laden waste minimum $\frac{1}{4}$ inch/foot (2%)
704.2	2018		Modified – Allowable reduction in pipe size clarified and expanded
705.2.4	2021		Added – Push-fit DWV fittings for ABS and PVC piping
705.10.4			
705.16.4	2018		Modified – Allows a solvent cement joint between drain and sewer where only one joint is needed between ABS and PVC.
706.3	BBS		Added language for through wall drainage in response to a petition
708.1.6	2021		Added – Removeable fixture traps are acceptable as cleanouts. Subsequent subsections in 708.1 are renumbered
709.3	2018		Clarified – Conversion of GPM to drainage fixture units (DFU)
712.3.2	2018		Modified – Limits on elevation of some sump pit covers
712.4.2	2018		Modified – Limit of waste ejector solids reduced to $\frac{1}{2}$ " max.
713	2018		Deleted – All of health care plumbing is deleted as outdated or superseded. Renumber subsequent Sections
716 (formerly 717)	2018		Modified – Pipe bursting method for replacement allowed for building drain
	BBS		Retains model code but modifies for use with building drain only (not sewer.)
717	2021		Added – Relining method for restoring building sewers and drains
	BBS		Modifies for use with building drain only (not sewer.) Deleted subsections (717.3, .3.1, .4, .5, .6, .8 and .10) are administrative or manufacturer's instruction content.
718	2021		Added – Cure-in-place method for rehabilitation of building drain
	BBS		Deleted this section in its entirety
4101:3-8-01	801.2	2018	Modified – Added humidification equipment that discharges to a drain must be protected

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	802.1	2018	Modified – Waste-water discharge from humidification equipment must be indirectly connected to sanitary drain
	802.1.6	2018	Deleted – Domestic dishwashing machines. Renumber subsequent sub sections.
	802.1.7 (formerly 802.1.8)	Petition #18-06	Modified to allow direct connection for pot, pan and utensil sinks. Clarify that food sinks are under 802.1.1
	802.1.8	BBS	Relocated Ohio provision from exception #2 under OPC Section 301.3
	*802.4	BBS – comment from Kyle Gordon of Heapy Eng.	*Add an exception that allows standpipes to have “access” rather than “ready access”
	802.4.3.1	2018	Added – Alternative connection of laundry tub/tray, without a fixture trap, to clothes washer standpipe
4101:3-9-01	903.1	2021	Reorganized the section for clarity
	903.1.3	2021	Added – Requirements for vent terminations where covered by roof-mounted panel (e.g. solar or PV) or an architectural roof element (e.g. decorative shroud)
	903.1.4 (formerly 903.6)	2021	Relocated – Requirements for sidewall vent terminals.
	915.1	2021	Modified – Food waste disposer may discharge into a combination waste vent
	915.2	Petition #18-05	Retained model code for combination waste and vent, allowing vertical pipe between fixture drain of floor drain and horizontal pipe
	918.8	2018	Modified – Limit use of AAV near air intakes
	1002.1	2021	Modified – Deleted existing exception #3 and adds new exception #4 which will allow direct connection of pot and pan sinks to a hydromechanical grease interceptor under certain conditions. Renumbered subsequent exception
4101:3-10-01		BBS & Petition #18-04	Modified – Retained model code in Exception 1 and relocated distance to trap requirements in new subsections
	1002.1.1	BBS	Added – Relocated requirements for vertical distance to trap weir with an exception
	1002.1.2	BBS	Added – Relocated requirements for horizontal distance to trap inlet without exception
	1002.4.1.5	2021 & Petition #18-12	Added – Use of wastewater from lavs and hand sinks to supply trap primers

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	*1003.3.2	2018	Modified – Prohibits a food waste disposer from discharging into a grease interceptor.
		*BBS	*Retain model code
	*1003.3.3	2018	Added – Additives to grease interceptor must comply with manufacturer's instructions and ASME A112.14. standard
		*BBS	*Retain model code
4101:3-11-01	1102.4	2018	Modified – Added types of pipe allowed for use in storm sewer.
		BBS	Deleted section and table. Model code change is moot
	1102.6	2021	Modified – Added testing and rating of roof drains in accordance with a standard
	1106.2.1	2021	Added – Equation to convert rainfall rate to GPM
	1106.5	2018	Modified – Sets a minimum size and location (elevation) of scuppers
4101:3-12-01	1202.1	2021	Modified – Aligned the requirement with the NFPA 99 standard.
	1202.2	BBS	Relocated enforcement provision to OPC Chapter 1.
4101:3-13-01	Chapter 13	2015	Non-potable water systems – ODH rules
4101:3-14-01	Chapter 14	2015	Subsurface graywater soil absorption
4101:3-15-01	1501.3	BBS	Updated referenced standards: IAPMO Z124.10 ICC A117.1 NFPA 37 NFPA 70

\*Indicates a change after the stakeholder comment period