

Bill No. 15-05

Concerning: 2015 Plumbing Code Updates

Revised: \_\_\_\_\_ Draft No. \_\_\_\_\_

Introduced: May 5, 2015

Expires: \_\_\_\_\_

Enacted: \_\_\_\_\_

Executive: \_\_\_\_\_

Effective: \_\_\_\_\_

Frederick County Code, Chapter 1-14, Section(s) 56  
and 57

## COUNTY COUNCIL FOR FREDERICK COUNTY, MARYLAND

By: Council President Otis on behalf of the County Executive

**AN ACT** to:

Update the Frederick County Plumbing Code by adopting the 2015 Edition of the International Plumbing Code, subject to the local amendments described in § 1-14-57.

By amending:

Frederick County Code, Chapter 1-14, Section(s) 56 and 57

Other:

**Boldface**

Underlining

[Single boldface brackets]

Double underlining

[[Double boldface brackets]]

\* \* \*

*Heading or defined term.*

*Added to existing law by original bill.*

*Deleted from existing law by original bill.*

*Added by amendment.*

*Deleted from existing law or the bill by amendment.*

*Existing law unaffected by bill.*

Bill No. \_\_\_\_\_

The County Council of Frederick County, Maryland, finds it necessary and appropriate to amend the Frederick County Code by adopting the 2015 Edition of the International Plumbing Code, subject to the local amendments described in § 1-14-57.

NOW, THEREFORE, BE IT IN ENACTED, that the Frederick County Code be, and it is hereby, amended as shown on the attached Exhibit 1.

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Harold F. (Bud) Otis, President  
County Council of Frederick County,  
Maryland

## **CHAPTER 1-14: PLUMBING**

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### **ARTICLE IV: PLUMBING CODE**

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#### **§ 1-14-56. ADOPTION.**

There is hereby adopted by the County those certain plumbing regulations known as the [2012] 2015 Edition of the International Plumbing Code, and the whole thereof; and the same is hereby adopted, ratified and incorporated as fully as if set out at length herein subject to the local amendments described below in § 1-14-57.

#### **§ 1-14-57. AMENDMENTS.**

The International Plumbing Code is hereby amended and changed as described and shown below.

*Section 101* is hereby amended as follows:

101.2 Scope. The exception is hereby deleted.

*Section 103* is hereby deleted in its entirety.

*Section 104* is hereby amended as follows:

104.2 Applications and Permits. The administrative authority shall receive applications and issue permits for the installation and alteration of plumbing systems, inspect the premises for which such permits have been issued, and enforce compliance with the provisions of this code.

*Section 106* is hereby deleted in its entirety.

*Section 108* is hereby deleted in its entirety.

*Section 109* is hereby deleted in its entirety.

*Section 202* is hereby amended as follows:

Administrative Authority: Is the Director of the Department of Permits and Inspections, or an authorized agent of the Director.



Building Drain: That part of the lowest piping of a drainage system that receives the discharge from soil, waste and other drainage pipes inside and that extends five (5) feet (1524 mm) beyond the walls of the building and conveys the drainage to the building sewer.

*Subsection 305.4* is hereby amended as follows:

305.4 Freezing. A water, soil or waste pipe shall not be installed outside of a building, in attics or crawl spaces; concealed in outside walls, or in any other place subjected to freezing temperature unless adequate provision is made to protect them from freezing by insulation or heat or both. Water service pipe shall be installed not less than thirty-six (36) inches (915 mm) deep or less than six (6) inches (152 mm) below the frost line.

*Subsection 305.4.1, Sewer depth* is hereby deleted in its entirety.

*Subsection 306.3* is hereby amended to add the following text:

ABS and PVC shall be bedded in maximum three-quarter-inch stone to a depth of six (6) inches under the pipe and covered to a depth of twenty-four (24) inches above the pipe.

*Subsection 312.10.1* is hereby deleted in its entirety.

*Subsection 312.10.2* is hereby amended by adding the following text.

- (a) Copies of test reports for the initial installation shall be sent to the administrative authority and the water supplier. Copies of annual test reports shall be sent to the water supplier.
- (b) Testing, inspection and repair of devices shall be performed by certified individuals approved by an agency acceptable to the administrative authority. Certification for testing shall be in accordance with a nationally recognized accredited training program. Certification shall include not less than 32 hours of combined classroom and practice training and successful completion of a written and practical examination.
- (c) Double check valves and reduced pressure principal valves: Such devices shall be installed at not less than 12 inches above the floor with the maximum of 60 inches above floor. All test reports shall be made on Frederick County forms and the device shall be tagged with a Frederick County pink card.
- (d) Where a continuous water supply is critical and cannot be interrupted for the periodic testing of a backflow prevention device, multiple backflow prevention devices or other means of maintaining a continuous supply shall be provided.

*Subsection 403.1.1* is hereby amended by adding the following text.

- (a) In new construction for assembly and mercantile occupancies, an accessible unisex toilet may be provided where an aggregate of six or more male or female water closets are required. In buildings of mixed occupancy, those water closets required for the assembly or mercantile portion of the occupancy would be used to determine the ability to make use of the unisex toilet room option. The inclusion of the one accessible unisex toilet room shall be allowed to replace both one male and one female toilet.

(b) Unisex toilet rooms shall comply with this section and the requirements for accessible toilet rooms as per standards prescribed in the International Building Code, except where a more stringent requirement is found in COMAR 05.02.02 Maryland Accessibility Code.

(c) [Unisex toilet rooms shall include only one water closet and only one lavatory.

(d)] Unisex toilet rooms shall be located on an accessible route. Unisex toilet rooms shall be located not more than one story above or below separate-sex toilet rooms. The accessible route from any separate-sex toilet rooms to a unisex toilet room shall not exceed 500 feet/152.4m.

(d[e]) Unisex toilet rooms shall be designated by accessible signs. Directional signage shall be provided at all separate-sex toilet rooms indicating the location of the nearest unisex toilet room.

*Section 404 is hereby deleted in its entirety.*

*New section 404 to read as follows:*

*Section 404 Accessible Plumbing Facilities:* Plumbing fixtures and installation shall conform to the requirements of the International Building Code except where a more stringent requirement is found in the Code of Maryland Regulations 05.02.02 Maryland Accessibility Code.

*Section 410.1 is hereby amended as follows:*

*410.1 Approval.* Drinking fountains shall conform to ASME A112.19.1, ASME A112.19.2, or ASME A112.19.9M, and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9. Where water is served in restaurants, drinking fountains shall not be required. In other occupancies where drinking fountains are required, water coolers or bottled water dispensers shall not be permitted to be substituted for the required drinking fountains.

*Subsection 412.4 Public Laundries, Central Washing Facilities, Commercial Kitchens, and Toilet Rooms* is hereby amended to add the following text:

Floor drains shall be located in toilet rooms containing two (2) or more water closets or a combination of one water closet and one urinal, except in dwelling units. Floor drains shall be required in commercial kitchens.

*Subsection 415 is hereby amended to add the following new subparagraphs:*

*415.3 Prohibited locations.* Laundry trays and mop sinks shall not be located in, nor accessed through, public restrooms.

*415.4 Wall area.* The wall area around mop sink basins shall be constructed of smooth waterproof materials to a minimum height of 36", but no less than the height of the faucet. Waterproofing materials of epoxy or paint coatings are prohibited.

*Subsection 417.1 is hereby amended to add the following text:*

Fiberglass or plastic tub and shower enclosures cannot be installed with faucets back to back unless approved by administrative authority.



*Subsection 417.4.1* is hereby amended to add the following text:

No windows shall be in the 70-inch wall area. Waterproofing materials of epoxy or paint coatings are prohibited.

*Subsection 419.3* is hereby amended to add the following text:

Waterproofing materials of epoxy or paint coatings are prohibited.

*Section 501.2* is hereby deleted in its entirety.

*New subsection 501.2* to read as follows:

501.2 Water heater as space heater.

(a) The installation of any system or equipment utilizing water heaters to provide heat must be installed by a person who is licensed to perform the work in Maryland and who has obtained the necessary local permits for such installations.

(b) This section is applicable to:

1. A combination heating system, which is installed as a unit and incorporates a water heater as an integral part of the system, to provide the primary heat source to the dwelling;

2. Pieces of equipment sold as an add-on to an existing heating system for the purpose of providing supplemental heat, and are attached to a water heater containing water, which may later be expected to be used as potable water.

(c) All installations shall comply with the following:

1. Combination water/space heating equipment, materials and components shall be suitable for use with potable water and listed for such use;

2. Water heaters, piping and components connected for a space heating application shall be properly sized and installed according to manufacturer's instructions;

3. Water heaters used in combination water/space heating systems shall be listed as complying with American National Standards (ANSI) Z21.101, Z21.10.3 or UL732, as applicable;

4. A water temperature control valve shall be installed with every installation utilizing a combination water heating/space heating system application to limit domestic hot water temperature safe for ordinary domestic use by individuals;

5. The installer must disinfect and certify the water system whenever required by the administrative authority under Section 610 of International Plumbing Code;

6. The system shall be equipped with a means for periodic circulation between the water heater and the exchanger during off seasons;

7. An acceptable means shall be provided to prevent thermal circulation through the exchanger during off seasons, except circulation necessary to comply with subparagraph (6);

8. A copy of the documentation to support the requirements of these subparagraphs shall be available for an Inspector's review during inspections and shall remain with the unit;

9. For all such devices used in Maryland, an informational sheet shall be provided that outlines all of the requirements of this subsection.

*Subsection 603.2* is hereby deleted in its entirety. New subsection 603.2 to read as follows:

*603.2 Separation of water service and building sewer.* The water service pipe and building drain or building sewer shall not have less than one foot horizontal distance between the piping.

*604.8* is hereby amended as follows:

*604.8 Water pressure reducing valve or regulator.* Where water pressure within a building exceeds sixty (60) psi static, an approved water pressure reducing valve conforming to ASSE 1003 with strainer shall be installed to reduce the pressure in the building water distribution piping to sixty (60) psi static or less. Exception to the requirement are service lines to sill cocks and outside hydrants, and main supply risers where pressure from the mains is reduced to sixty (60) psi or less at individual fixtures.

*Subsection 605.3* is hereby amended to add the following text:

All copper tube used underground shall be Type K copper. When using insert fittings on plastic water service the size of the pipe shall be no less than one inch. The fittings used shall be made of brass or stainless steel and shall be used with stainless steel bands. Delete from Table 605.3 water service pipe type L, WL, M or WM copper tubing. A minimum diameter of a one inch pipe shall be used for connection from submersible pump to a storage tank as part of a well system installation.

*Table 605.4* is hereby amended to delete the following text:

Type M or WM copper tube.

*Subsection 606.1, Location of full-open valves,* is hereby amended to add a new subparagraph:

9. After the tee for the connection to the sprinkler system on the domestic side.

*Subsection 606.5.8* is hereby amended to add the following text:

Any pressure tank installed in a basement and/or crawl space shall be a minimum of seven and one-half (7½) inches above finished grade. All water pressure tanks and apparatus for mobile homes shall be installed in the confines of the living space. In every case, the only exception shall be those tanks installed a minimum of eighteen (18) inches from the top of the tank to finished grade in an approved manhole with water tight lid, a minimum of six (6) inches above finished grade.

*Subsection 606.8* is hereby added as follows:

*Subsection 606.8 Dead ends.* In the installation or removal of any part of the water distribution system, dead ends shall be prohibited. Future water distribution piping shall be allowed when



valves are provided within 2 feet (610 mm) of the branch tee and are tagged as to their purpose. Valves shall be kept in the closed position following testing.

*Subsection 608.16.4, Connections to automatic fire sprinkler systems and standpipe systems*, is hereby amended to delete exceptions (1.) and (2.).

*Subsection 608.16.4* is hereby amended to add the following:

In 1 and 2 family dwellings the type of backflow preventer required shall be an ASSE 1024 dual check valve.

*Subsection 608.17* is hereby deleted in its entirety.

*Section 701.2 Sewer required* is hereby deleted and replaced with the following:

Every building in which plumbing fixtures are installed and all premises having drainage piping shall be connected to a public sewer, where available, or an approved private sewage disposal system in accordance with Code of Maryland (COMAR) regulations.

*Table 710.1(1)* is hereby amended to read as follows:

Footnote a. The minimum size of any building sewer shall be four (4) inches in diameter to the inside of the building.

*Subdivision 701.9* is hereby amended to add the following text:

Food or drink shall not be stored, prepared or displayed beneath overhead sewer or drain pipes unless such pipes are protected against leakage or condensation reaching the food or drink as described below for new construction. In newly constructed or remodeled establishments, soil or drain pipes located over food preparation, storage, display or serving areas are undesirable. Where building design requires that soil or drain pipes be located over such areas, the installation shall be made with the least possible number of joints and shall be installed so as to connect to a vertical stack at the nearest wall or vertical building support and the construction shall be performed as follows:

- a. All openings through floors over such areas shall be provided with sleeves securely bonded to the floor construction and projecting not less than three-quarters inch above top of the finished floor with space between sleeve and pipe or duct sealed.
- b. Floor and shower drains installed above such areas shall be equipped with integral seepage pans.
- c. Plumbing fixtures in rooms located above such areas shall be of the wall mounted type except bathtubs. Tubs shall have waste and overflow connections made above floor and piped to the trap below the floor. Connections through floors and to traps shall conform with all other provisions of this regulation. No floor openings, other than sleeve for waste pipe, will be permitted for tubs.
- d. All other soil or drain pipes shall be of an approved material as listed in Table 702.1 and Section 702. All materials shall conform to established standards. Cleanouts shall be extended through the floor construction above.



e. Soil and drain pipes located above such area shall be subjected to a standing water test of not less than twenty-five (25) feet.

f. Piping subject to operation at temperatures that will form condensation on the exterior of the pipe shall be thermally insulated.

g. Where pipes are installed in ceilings above such areas, the ceiling shall be of the removable type, or shall be provided with access panels in order to form a ready access for inspection of piping.

h. In lieu of the above, any other method may be approved by the administrative authority.

*Subsection 904.3.1* is hereby added as follows:

*904.3.1 Roof extension.* All open vent pipes that extend through roof shall be terminated at least 6 inches above the roof, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall run at least 7 feet (2134 mm) above the roof. All stacks that terminate through roof shall have no offsets more than 45 degree angle.

*Section 918.1* is hereby amended to read as follows:

918.1 General. Air admittance valves shall only be installed with the approval of the administrative authority. Where approved, vent systems utilizing air admittance valves shall comply with this section. Stack-type air admittance valves shall conform to ASSE 1050. Individual and branch-type air admittance valves shall conform to ASSE 1051.

*Section 1003.3.4, Grease interceptors,* is hereby replaced with the following:

Grease interceptors and automatic grease removal devices shall be sized by a registered design professional or master plumber in accordance with PDI G101, ASME A112.14.3 Appendix A, or ASME A112.14.4. Grease interceptors and automatic grease removal devices shall be designed and tested in accordance with PDI G101, ASME A112.14.3 or ASME A112.14.4. Grease interceptors and automatic grease removal devices shall be installed in accordance with the manufacturer's instructions. Grease interceptors and automatic grease removal devices shall be located as close as possible to the grease source.

*Section 1003.4.* Add the following text after subsection 1003.4.

Interceptors.

A. In a structure where a public sanitary sewer is available, the waste pipe from oil and sand interceptors shall discharge, if installed, into the public sanitary sewer, or any more restrictive manner as otherwise mandated by an applicable administrative authority.

B. New construction.

1. Any new construction of a structure, where public sanitary sewers are not available, shall have the option to either:

(i) Construct the structures without any floor drains; structures without floor drains must operate to minimize waste and prevent wastewater from leaving the shop area and discharging to the environment; or

(ii) If drains are included, ensure that each drain shall flow into an approved sand interceptor which shall drain into a 1,000 gallon or larger approved holding tank.

2. An oil and water separator is not required when the waste discharges into a holding tank.

C. Existing structures.

1. In areas where public sanitary sewers are not available, existing structures that are being renovated or enlarged shall either:

(i) Permanently plug all existing floor drains; structures which plug their floor drains must notify the Maryland Department of Environment, Ground Water Permits Program, prior to drain closure, and must operate to minimize waste and prevent wastewater from leaving the shop area and discharging to the environment, or

(ii) R[r]etrofit all existing floor drains so as to allow them to flow into an approved sand interceptor which shall drain into a 1,000 gallon or larger approved holding tank which is equipped with a high level alarm.

2. An oil and water separator is not required when the waste discharges into a holding tank.

D. If an underground tank is installed, it shall be corrosion protected and designed according to COMAR 26.10.03.

E. Any new construction of a structure or renovation of an existing structure which discharges liquid wastes as described in Section 1003 of International Plumbing Code or which discharges other industrial waste waters shall have the option of discharging into an on-site subsurface disposal system, providing the facility's owner/operator applies for and obtains from the Maryland Department of Environment a water discharge permit issued pursuant to the provisions and conditions of COMAR 26.08.01–26.08.04.

Where approved and approved point of discharge.

A. Sand and oil interceptors shall be provided wherever floors, pits, or surface areas subject to the accumulation of grease or oil from service or repair operations are drained or washed into a drainage system. Such locations include, but are not limited to: car or truck washing facilities, engine cleaning facilities, and similar operations. Drainage from such locations shall be connected to the sanitary sewer.

B. Drains shall not be required in service or repair garages employing dry absorbent cleaning methods; however, if any drains are located in such areas, they shall discharge to the sanitary sewer through sand and oil interceptors.

C. Drains shall not be required in parking or service garages unless the garage or portions thereof is equipped with provisions for either washing vehicles or rinsing the floor. Where such cleaning



facilities are provided the area subject to waste drainage shall be provided with a system of one or more floor drains, complete with sand and oil interceptors, and the drainage from the oil interceptor shall be connected to the sanitary sewer. Any storm water shall be drained separately and directly to the storm sewer.

D. The waste oil tank used with the oil interceptor shall not be used to store or contain any other waste oil or hazardous fluid. Crankcase oil cannot be dumped into or stored in this waste oil tank.

*Subsection 1003.4.2.1* is hereby amended to add the following text.

A. Oil separators shall have a 3" minimum discharge line and a 2" minimum vent to atmosphere. The discharge line shall have a full-size cleanout extended to grade.

B. The oil draw-off or overflow from oil separators shall be connected to an approved waste oil tank meeting the environmental requirements of the administrative authority. The waste oil from the separator shall flow by gravity or may be pumped to a higher elevation by an automatic pump. Pumps shall be adequately sized, explosion-proof and accessible. Waste oil tanks shall have a 2" minimum pump out connection and a 1-1/2" minimum vent to atmosphere and shall be equipped with a high level alarm.

C. Where oil separators are subject to backflow from a sewer or other point of disposal, their discharge line shall include a backwater valve installed in accordance with the requirements of Section 715.

D. Oil interceptors, waste oil tanks, oil pump out connections, backwater valves, and atmospheric vent piping shall be permanently identified by suitable labels or markings.

E. Combination oil and sand interceptor may be installed if approved by the administrative authority.

*Subsection 1003.5* is hereby amended to add the following text:

A. A sand interceptor shall be provided upstream from each oil interceptor, except when combination oil and sand interceptor is used.

B. When the discharge of a drain may contain solids or semi-solids that would either be harmful to the drainage system or tend to obstruct the system, the drain shall discharge through a sand interceptor.

C. Sand interceptors shall be constructed of concrete, brick, fabricated coated steel, or other watertight material and shall be internally baffled to provide an inlet section for the accumulation of sediment and a separate outlet section.

D. The outlet pipe of the sand interceptor shall be the same size as the drain served (or inlet pipe to the oil separator). The internal baffle in the interceptor shall have two tip skimming openings, each the same size as the outlet pipe and at the same invert elevation as the outlet opening. The openings in the baffle shall be offset to prevent straight-line flow through the interceptor from any of its inlets to its outlet.

E. The inlet to the interceptor shall be at the same elevation as or higher than the outlet. The bottom of the inlet section shall be at least 24 inches below the invert of the outlet pipe.

F. The bottom of the inlet section shall be at least 2 feet wide and 2 feet long for flow rates up to 20 gallons per minute. The bottom of the inlet section shall be increased by 1 square foot for each 5 gpm of flow or fraction thereof over 20 gpm. The area of the bottom of the outlet section shall be not less than 50" of the area of the bottom of the inlet section.

G. The outlet section shall be covered by a solid removable cover. The inlet section shall be covered by an open grating suitable for the traffic in the area in which it is located. Covers shall be set flush with the finished floor.

*Subsection 1003.9* is hereby amended to add the following text:

Vapor venting:

The atmospheric vents from oil separators and their waste oil tanks shall be separate from other plumbing system vents and shall be extended to an approved location at least 12 feet above grade or the surrounding area.

*Section 1201* is hereby deleted in its entirety.

New *Section 1201* is hereby added to read as follows:

Section 1201. Installation of gas appliances and gas piping. All installations of gas appliances and gas piping shall conform to requirements contained in the International Fuel Gas Code, 2012, which is incorporated by reference. For installation of elevated 2 psig gas pressure use guidelines for copper tubing natural gas systems manual, incorporated by reference.

Section 1303.6 is hereby deleted in its entirety, and new Section 1303.6 is hereby added to read as follows:

*Section 1303.6 Estimating gray water discharge.* The system shall be sized in accordance with all applicable requirements of COMAR 26.04.02.

Section 1303.7 is hereby deleted in its entirety, and new Section 1303.7 is hereby added to read as follows:

*Section 1303.7 Percolation tests.* The permeability of the soil shall be determined in accordance with all applicable requirements of COMAR 26.04.02.

Section 1303.8 is hereby amended to read as follows:

The soil absorption system shall be located with a minimum horizontal distance between various elements in accordance with all applicable requirements of COMAR 26.04.02.

Table 1303.8 is hereby deleted in its entirety.

Section 1303.9 is hereby deleted in its entirety.

New Section 1303.9 is hereby added to read as follows:



*Section 1303.9. Installation.* Absorption systems shall be installed in accordance with all applicable requirements of COMAR 26.04.02.

Table 1303.9 is hereby deleted in its entirety.

Section 1303.10 is hereby deleted in its entirety.

New Section 1303.10 is hereby added to read as follows:

*Section 1303.10 Distribution piping.* Distribution piping shall be installed in accordance with all applicable requirements of COMAR 26.04.02.

Chapter 1 of the [2012] 2015 International Fuel Gas Code is hereby deleted in its entirety.

The following incorporation by reference is hereby added:

COMAR 26.04.02 Sewage Disposal and Certain Water Systems for Homes and Other Establishments in the Counties of Maryland Where Public Sewage System Is Not Available.

COMAR 26.04.03 Water Supply and Sewage Systems in the Subdivisions of Land in Maryland.

The following requirements for show rooms, offices, shops and trucks is hereby added:

*Subsection 1-14-1(f). Licensing of plumbers.* Every person who holds himself or herself out to the public as a master plumber by advertising, telephone directory listing, business card, stationary, or any exhibit, shall display in a conspicuous place at his or her principal place of business and on all vehicles used for plumbing work by him or her or under his or her direction and control:

- 1) The name or names of each registered master plumber;
- 2) The words “registered plumber” or “registered plumbers;”
- 3) The Maryland State Certificate Number or Numbers; and
- 4) The Frederick County Certificate Number.

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