

COMMISSION MEETING

January 16, 2019

Engineering and Construction Team

2018 Plumbing & Fuel Gas Code – Amendment #1

Item Number: 2019-2210

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WASHINGTON SUBURBAN SANITARY COMMISSION

COMMISSION SUMMARY

AGENDA CATEGORY: Engineering and Construction Team

ITEM NUMBER: 2019-2210

DATE: January 16, 2019

SUBJECT	Briefing of revisions proposed to the 2018 WSSC Plumbing & Fuel Gas Code – Amendment #1
SUMMARY	<p>WSSC staff is proposing revisions to five chapters of the WSSC Plumbing & Fuel Gas (P&FG) Code. New language specifically addresses changes made to satisfy requirements of the recently passed State Legislative House Bill-218, which went into effect June 1, 2018.</p> <p>House Bill-218 no longer allows WSSC to authorize a master meter to serve residential, condominium buildings for billing purposes. The modifications to the WSSC P&FG Code due to House Bill-218 include sections related to metering and fire protection piping.</p> <p>Due to timely importance, rather than delaying until the next full code cycle, WSSC staff has included three additional changes to the WSSC P&FG Code.</p>
CONTRACT #1 REFERENCE NO.	N/A
COSTS	N/A
AMENDMENT CHANGE ORDER NO.	N/A
MBE PARTICIPATION	N/A
PRIOR STAFF/ COMMITTEE/ STAKEHOLDER REVIEW	WSSC Chief Engineer; WSSC General Counsel’s Office; WSSC’s Senior Leadership Team; Montgomery and Prince George’s County Building Code and Fire Officials; Montgomery County Department of Environmental Services; Washington Apartment Office Building Association; Washington Suburban Master Plumber’s Association; Mechanical Contractors of America (Metro-Washington Chapter); Air-Conditioning Cooling Contractors Association; American Society of Professional Engineers (Baltimore and Washington Chapters); and the Maryland Building Industry Association
RECOMMEND-ATION TO COMMISSION	<i>Approve Resolution 2019-2210 adopting revision to the Plumbing and Fuel Gas Code.</i>
COMMISSION ACTION	



WASHINGTON SUBURBAN SANITARY COMMISSION
OVERVIEW OF REVISIONS TO THE REGULATORY SERVICES
PLUMBING & FUEL GAS CODE

AGENDA CATEGORY: Engineering and Construction Team

ITEM NUMBER: 2019-2210

DATE: January 16, 2019

Overview

The WSSC Regulatory Services Division (RSD) staff is requesting approval and adoption of Amendment #1 to the 2018 WSSC Plumbing & Fuel Gas (P&FG) Code. This Code was previously approved and became effective on July 1, 2018

House Bill-218 was adopted by the Maryland General Assembly and became effective on June 1, 2018. This new law, which now appears in the Md. Ann. Code, Public Utilities Article at § 23-202(3), prohibits WSSC from authorizing the use of a master meter to serve residential, condominium buildings in Prince George's County for billing purposes. The passing of this law makes it imperative WSSC revise the language and requirements of the WSSC P&FG Code in three areas. Additionally, WSSC is revising the language of the WSSC P&FG Code in three other areas due to timely importance, rather than delaying until the next full code cycle. The proposed revisions made to the WSSC P&FG Code are identified in the 2018 WSSC Plumbing & Fuel Gas Code – Amendment #1 on pages 5 thru 31 of this package. A brief description of the impacts to WSSC P&FG Code are identified below:

- 1) Requiring individual metering for condominiums in Prince George's County;
- 2) Allowing individual metering for all other multi-unit occupancies, residential and commercial, in both Counties;
- 3) Detailing specific piping requirements including dedicated meter rooms, lockable valves and provisions for mixed-use development, amenities and submeters (allowing for deduction of sewer charges);
- 4) Matching recent action by the Maryland State Board of Plumbing regarding minimum passing score for trade exams, lower the passing grade to 70% from 75%;
- 5) Matching the recent changes to the *WSSC Modified FOG Enforcement Plan* recently approved by our regulating agencies, Environmental Protection Agency (EPA) and Maryland Department of the Environment (MDE); and
- 6) Recognizing/Reacting to recent changes to the *International Fuel Gas Code* that now adequately addresses the special bonding/ground provisions needed for Corrugated Stainless Steel Tubing (CSST).

In terms of public outreach, WSSC staff has posted a Public Comment Period in the Montgomery County Sentinel, the Prince George's Sentinel and the Washington Post as



WASHINGTON SUBURBAN SANITARY COMMISSION
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PLUMBING & FUEL GAS CODE

well as on the WSSC web page under Public Notices. Staff also proactively reached out to both Counties and industry stakeholders through emails and meetings to alert them to the new code.

No comments were received.

On December 20th, the WSSC Plumbing and Fuel Gas Board voted to recommend approval of the proposed changes by the Commissioners

RESOLUTION NO.: 2019-2210

Adopted: January [16], 2019

Effective Date: March 1, 2019

WASHINGTON SUBURBAN SANITARY COMMISSION

Subject: A RESOLUTION adopting revisions to Chapter 14.25 of the WSSC Code of Regulations, the Plumbing and Fuel Gas Code.

WHEREAS, the Washington Suburban Sanitary Commission (“Commission” or “WSSC”) is authorized and empowered pursuant to Division II of the Public Utilities Article, Annotated Code of Maryland, to adopt regulations governing plumbing and gasfitting in the Washington Suburban Sanitary District (“WSSD”); and

WHEREAS, pursuant to its authority derived from State law, the Commission has previously adopted the Plumbing and Fuel Gas Code (“the Code”); and

WHEREAS, the Maryland General Assembly adopted a law effective June 1, 2018, now set forth in the Maryland Annotated Code, Public Utilities Article (PUA), §23-202(e), which prohibits the use of master meters for new condominium projects in Prince George’s County; and

WHEREAS, revisions to the Code are necessary to comply with PUA §23-202(e); and

WHEREAS, revisions are also necessary to mirror recent action by the Maryland State Board of Plumbing regarding the minimum passing score for trade exams; and

WHEREAS, revisions are also necessary to incorporate changes to WSSC’s Modified FOG Enforcement Plan which were recently approved by the Environmental Protection Agency and the Maryland Department of the Environment; and

WHEREAS, revisions are also necessary to recognize recent changes to the International Fuel Gas Code which address the special bonding/ground provisions needed for Corrugated Stainless Steel Tubing (CSST); and

WHEREAS, the Commission has duly considered the matters involved, including any comments and views expressed by the public, and other identified stakeholders including the WSSC Plumbing and Fuel Gas Board, along with the recommendations of Commission Staff.

NOW, THEREFORE, BE IT RESOLVED, this ____ day of January, 2019, that the Commission hereby adopts the above-referenced revisions to the Code; and

BE IT FURTHER RESOLVED, that the revisions are prospective and shall apply only to applications for plumbing permits submitted on or after the effective date of said revisions; and

BE IT FURTHER RESOLVED, that the revisions shall be effective on March 1, 2019; and

BE IT FURTHER RESOLVED, that notice of this resolution and the actions taken hereunder shall be published in at least one (1) newspaper in each county of the WSSD for thirty (30) days prior to the effective date.

A True Copy.

Sheila R. Finlayson, Esq.
Corporate Secretary

WSSC CODE OF REGULATIONS 2019

Title 14. Regulatory Services
Subtitle 2. Plumbing and Gas Fitting
Chapter 14.25. Plumbing and Fuel Gas Code

SECTION 111 CONNECTION TO THE COMMISSION'S SYSTEMS AND METERING

111.1 Service Connections, General. Any newly constructed building located on a property which abutts a public water or sewer main shall connect to the public water and/or sewer systems. Any property that does not abutt a public water or sewer main may connect to a private well for water supply or private sewage disposal system (septic system) if the property is categorized by the respective County's water or sewer category maps, and the property is permitted by the respective County's Health Department. Any property that is not categorized or permitted by the respective County for private water or sewage disposal shall apply for a system (main line) extension or a non-abutting connection to the public water or sewer system. This section supersedes Sections 602.3 & 701.3 of the International Plumbing Code.

111.1.1 Size, Type, and Location. The Commission shall have approval authority of the size, depth, location, and type of construction of water and sewer service connections.

111.1.1.1 Water Service Connection, Minimum Size. The minimum size new *water service connection* for Group R-3 occupancies shall be 1.5 inches. Water service connections that are already buried may be utilized provided they are deemed adequate to serve the greater demand of either the total proposed fixture load or the fire sprinkler system.

111.1.1.2 Design Consideration. New water service connections may be designed as 1” provided the future load can be predetermined and where no segment of the building’s domestic or fire protection system shall exceed 1”. These criteria must be met for all models and all lots; and the entire extension project excluding “pipe-stem” lots, must be designed uniformly.

111.1.2 Non-Abutting Properties. Connections to property not abutting directly on a Commission water or sewer main may be permitted under certain conditions.

111.1.3 Right-of-Way Connection. If the property to be served is to be connected to a Commission water or sewer main located in a right-of-way, on or off the owner’s property, services shall be provided under the following conditions:

111.1.3.1 Responsibility. All necessary excavation, backfill, and restoration within right-of-ways shall be the responsibility of the Master Plumber.

111.1.3.2 Trenching. The main shall be exposed and the trench protected in accordance with all MOSHA requirements.

111.1.3.3 Tapping. Only Commission-authorized personnel shall make taps or connections into Commission water and sewer mains.

111.1.4 Reconnection. Reconnections to abandoned building sewers and water services shall be permitted provided they conform to applicable Code requirements.

111.1.5 Existing Water Connection. New buildings utilizing an existing water service connection, with either an existing outside or inside water meter setting, shall be required to *re-establish* a water meter setting, at the Commission's discretion, with the size, type and location of the new water meter as designated by the Commission.

111.1.5.1 Existing water connections not being re-used shall be disconnected at the main through an abandonment permit at the expense of the property owner.

111.1.6 Existing Sewer Connection. New buildings utilizing a previously un-used existing sewer service connection, and existing buildings having the building sewer *replaced*, shall be *required* to have a *property line cleanout* installed within 1-foot of the property line, or at the edge of the right-of-way in the case of right-of-way connections, *if* such a cleanout does not already exist. The base connection shall be a combination wye and one-eighth bend lying on its back. The cleanout cover assembly shall conform with WSSC Standard Detail S-5.1 or S-5.2.

111.1.6.1 Existing sewer connections not being re-used shall be disconnected at the main through an abandonment permit at the expense of the property owner.

111.1.7 Applicant Built Service Connection Permits. Where applicant built service connection permits apply, a completed applicant built package shall be submitted and accepted by Permit Services prior to the first plumbing permit. Where applicant built permits are for abandonment of water and/or sewer service connections, the applicant built package is required at the time the applicant built package is submitted for new service.

111.2 Service Connection(s) . Only one (1) water and/or only one (1) sewer service connection will be permitted to serve a lot or parcel, or a group of lots & parcels which are under single ownership.

111.2.1 Additional Connection(s) Allowed or Required. After approval from the Commission, additional service connection(s) shall be allowed or required as follows:

111.2.1.1 Group R-3 Buildings (single family homes). For detached building(s) located on common tract of land with the same owner, if the detached building is converted wholly

or in part, subdivided under different ownership and sold, it is required to have separate water and sewer service connections prior to the sale.

111.2.1.2 Hospitals. Two separate water service connections and separate piping on property are required in accordance with Section 609.2 of the International Plumbing Code.

111.2.1.3 Superstructures (High Rises 420 feet in height or greater). Two separate water service connections and separate piping on property are required in accordance with Section 403.3.2 of the International Building Code.

111.2.1.4 Greater Hydraulic Demand. For buildings, complexes or campuses with a significant domestic and/or fire protection demand, additional water services may be allowed. Supporting documentation is required to demonstrate that a single service is not practical or where the local fire protection design official is requiring redundant service. Where separate services are approved, metering arrangements shall generate a single WSSC account.

111.2.1.5 Layout Restrictions. Additional water or sewer service connections may be allowed where physical site features or appurtenances, including the imposing footprint of the building itself, create unyielding obstacles.

111.2.1.6 Sewer Serviceability. In order to facilitate the greatest amount of gravity sewer service, additional sewer service connections shall be allowed for buildings, complexes or campuses where deemed practical and beneficial. Consideration shall be given to the depth, serviceability, and structural impact of long, inside runs of building drain (collection piping).

111.2.1.7 Imminent Subdivision and Sale. Separate service connections are required when subdivision and sale of a large tract of land has begun or as a riding condition of a governmental action. Consideration shall be given to mainline water and sewer extensions needed to facilitate the required service connections.

111.2.1.8 CONDOMINIUMS OR COOPERATIVE OWNERSHIP PROPERTIES. CONDOMINIUMS OR COOPERATIVE OWNERSHIP PROPERTIES THAT ABUT A PUBLIC WATER MAIN, ARE CONSTRUCTED AS “ROW STYLE” TOWNHOMES (ONE UNIT BOTTOM TO TOP), AND UTILIZE A 13D OR 13R TYPE FIRE SPRINKLER SYSTEM MAY BE SERVED WITH INDIVIDUAL WSSC WATER SERVICE CONNECTION OUTFITTED WITH AN OUTSIDE METER OR CURB VALVE.

111.2.2 Shared Service Connections. Serving Multiple Property Owners – a shared service connection may be allowed when multiple properties or buildings (other than Group R-3 occupancy) are under separate ownership but located on a common tract of land. The arrangement must be recorded in a Shared Site Utility System Agreement and approved by a WSSC Code Official. The following conditions shall be required for approval by WSSC:

111.2.2.1 Recordation of the necessary covenants and easements for maintenance of the shared site utility system.

111.2.2.2 An accessible outside water meter for each water service connection. All WSSC water meters serving the shared site utility system shall be billed to a single account.

111.2.2.3 Design to facilitate the sharing of water service connection(s) *and* sewer service connection(s); where only the minimum number of services needed shall be allowed.

111.2.2.4 Further division of water and sewer billing obligations shall be a private matter between the property owners, lessees, and tenants and may be accomplished through "private" metering.

111.2.3 Covenants. In general, where multiple properties or buildings under single ownership are served by water and sewer services connections as allowed or required, a covenant shall be submitted for the Commission's approval. The covenant shall require the property owner to notify the Commission prior to any subdivision or sale of any or all of the properties covered by the covenant. Such action may require the property owner to obtain separate water and sewer connections or a Shared Site Utility System Agreement.

111.3 Right-Of-Way or Easement. A property owner shall have a recorded right-of-way or easement if their property's water service, sewer service or site utility system is installed, under, over or through any other property.

111.4 Fire Service Connections and Fire Hydrants. Water connections for combined domestic and fire service, or for fire service only, shall be provided under such conditions as determined by the Commission. **COMBINATION WATER SERVICE IS THE PREFERRED METHOD OF SUPPLYING DOMESTIC WATER AND FIRE PROTECTION SYSTEMS.**

111.4.1 Group R-3 Single Family Occupancies. Connection to the potable water supply shall be made in accordance with provisions set forth in **SECTION 111.2.1.8 AND** Chapter 6, Installation of Commission Water Meters, Sections 603.2.2 and 604.3.2.

111.4.2 Other than Group R-3 Occupancies

111.4.2.1 Systems Without Fire Hydrants. If the water service is to serve a fire sprinkler system with *no* private fire hydrants, a reduced pressure [detector] **PRINCIPLE BACKFLOW** assembly, or a double check [detector] **VALVE BACKFLOW** assembly *supplied by the applicant*, shall be installed.

111.4.2.2 Systems With Fire Hydrants. If the water service is to serve private fire hydrants and/or other fire protection systems, **AND AN OUTSIDE METERING SCHEME IS PERMITTED AND EMPLOYED, THE METER TYPE UTILIZED SHALL BE** a Factory Mutual (FM) water meter [shall be installed].

[111.4.2.2.1 Exception. Where an inside meter is permitted by WSSC, see 701.3, a single fire hydrant may be permitted to be installed as a monitored hydrant.]

111.4.2.3 Existing Monitored Systems. Existing properties served with monitored fire sprinkler systems and/or monitored fire hydrants [shall] **MAY DIS**continue to monitor those systems via a WSSC approved third party alarm monitoring company. Properties may be altered and new buildings erected **WITHOUT** utilizing monitored systems [with approval from the Commission. Permission will be contingent on successful demonstration of past and present monitoring agreements; updated agreements will be required for all building fire sprinkler systems and all private fire hydrants served by the service connection(s) supplying the proposed work].

111.4.2.4 WATER SUPPLIED TO FIRE PROTECTION SYSTEMS OR PRIVATE HYDRANTS. WATER SUPPLIED TO FIRE PROTECTION SYSTEMS OR PRIVATE HYDRANTS SHALL NOT BE USED FOR ANY PURPOSE OTHER THE FIREFIGHTING OR PERIODIC SYSTEM FLUSHING AND TESTING REQUIRED BY A COUNTY OR LOCAL FIRE PROTECTION OFFICIAL. ANY OTHER UN-OFFICIAL OR UNAUTHORIZED USE SHALL CONSTITUTE THEFT OF SERVICE AND BE SUBJECT TO PROSECUTION UNDER SECTION 110 OF THIS CODE.

111.4.3 Private Fire Hydrants. Private fire hydrants shall be painted *red*. The use of private fire hydrants shall be limited solely to fire protection. Any other use shall be prohibited.

111.5 Metering

111.5.1 General. The Commission shall determine meter size, type, and metering schemes for all properties. In general, water meters shall be right-sized based on plumbing hydraulic load, as set forth in Section 602.3. Oversized meters shall be *prohibited*, unless an exception is approved by the Code Official. **WSSC METERS MAY NOT BE DESIGNED OR UTILIZED TO MEASURE HOT WATER DISTRIBUTION PIPING SYSTEMS, PLUMBING FIXTURES INDIVIDUALLY, OR GROUPINGS OF FIXTURES INDIVIDUALLY.**

111.5.1.1 Existing Metering Schemes. Existing properties may be permitted to have their existing metering schemes remain in lieu of new provisions of this Code. Properties may be altered and new buildings erected utilizing existing metering schemes with approval from the Commission.

111.5.1.1.1 CONVERSION TO CONDOMINIUM (PRINCE GEORGE'S COUNTY ONLY). IN ACCORDANCE WITH STATE LAW, WHERE A PROPERTY USE IS BEING CONVERTED TO CONDOMINIUM OR COOPERATIVE OWNERSHIP OF RESIDENTIAL UNITS, PLUMBING MODIFICATIONS SHALL BE PERMITTED, INSPECTED, AND APPROVED, PRIOR TO THE CONVERSION, TO INDIVIDUALLY METER EACH UNIT WITH A WSSC FURNISHED METER AND INDIVIDUAL WATER/SEWER ACCOUNT. REFER TO SECTIONS 111.5.8.2 AND 111.5.8.3 FOR DETAILS.

111.5.2 Location. Water meters shall be set adjacent to the property line, or at the edge of a right-of-way where applicable, unless [an exception is] approved for location inside of a building. Water meter settings and vaults shall be constructed in accordance with WSSC Standard Details.

111.5.3 Responsibility. Commission water meters shall be supplied and maintained by the Commission, shall remain the property of the Commission, and shall be installed in accordance with provisions set forth in Chapter 6.

111.5.4 Protection. Commission water meters shall be protected from damage by freezing or physical abuse. The property owner shall be responsible for expenses related to meter repair, replacement, or loss due to neglect or damage.

111.5.5 Tampering. It shall be unlawful to tamper with a Commission water meter, meter seal, bypass seal, appurtenance, meter setting, curb valve, valve box, or meter vault.

111.5.6 Exceptions. All water provided by Commission shall be metered, except as provided in Section 111.4.2.3.

111.5.7 Meter Settings and Installation. The *Commission* shall furnish *all* water meters. The Commission or its designee shall install all outside meters. Outside settings for ¾-inch through 2-inch meters and outside vaults for 3-inch and larger meters shall be furnished installed by the utility contractor. The plumber shall install inside Commission meters size 1½-inch and larger. The Commission or its designee shall install inside meters size 1-inch and smaller. See Chapter 6, Installation of Commission Water Meters.

111.5.8 Multi-Unit Buildings. [The Commission shall *not* provide separate water meters to units within a multi-unit building except as required in 111.5.8.1 or as allowed in 111.5.8.1.1.] **IN ACCORDANCE WITH STATE LAW, THE COMMISSION SHALL REQUIRE INDIVIDUAL METERING OF RESIDENTIAL UNITS WITHIN A MULTI-UNIT CONDOMINIUM OR COOPERATIVE OWNERSHIP PROPERTY LOCATED IN PRINCE GEORGE’S COUNTY. FOR ALL OTHER MULTI-UNIT PROPERTIES, WSSC SHALL ALLOW EITHER “MASTER METERING” OR INDIVIDUAL UNIT METERING. WHERE INDIVIDUAL METERING IS OPTIONED, DESIGN AND INSTALLATION SHALL MEET THE PROVISIONS SET FORTH IN SECTIONS 111.5.8.2 AND 111.5.8.3 BELOW.** Where required **SOLELY** by the owner, unit (**PRIVATE**) water meters shall be [privately] **FURNISHED**, installed, and maintained **BY THE PROPERTY OWNER**.

111.5.8.1 Mixed-Use Buildings. Where both residential and commercial units in the same building (a “Mixed-Use” building) are served by a single water service connection or multiple service connections forming into a single system on property, **A MINIMUM OF two meters shall be installed, as set forth below, to allow for the separate registering or computation of residential unit and commercial unit water consumption at the building. FOR MIXED-USE PROPERTIES LOCATED IN PRINCE GEORGE’S COUNTY, EACH RESIDENTIAL UNIT MUST BE SEPARATELY METERED.**

111.5.8.1.1 Live/Work Units. In such mixed-use buildings where only one residential unit and one commercial unit are served by a single water service, the owner may choose to have one or two meters. Where only one meter is installed, the “Unit Count” for billing purposes shall be one.

111.5.8.1.2 Inside Meters. When a Mixed-Use building is allowed **OR REQUIRED** by other sections of this Code to be served by [an] inside meterING [application], the [two] required meters, one **OR MORE** to register only residential unit water consumption and [the] **ONE OR MORE** [other] to register only commercial unit water consumption, shall be installed inside per **SECTION 111.5.8.2 AND 111.5.8.3 BELOW, AS WELL AS** Chapter 6 of this Code.

111.5.8.1.3 Outside Meters. When a Mixed-Use building is **ALLOWED OR** required by other sections of this Code to be served by an outside meter application, the two **OR MORE** required meters shall be installed per Chapter 6 and as follows: One meter shall be installed outside on the water service connection to register all consumption on-property. The other meter(S) shall be installed inside to register the commercial unit water consumption only so that the difference between the **OUTSIDE METER AND THE INSIDE** [two] meter readings represents the residential unit water consumption at the building. **THIS ARRANGEMENT IS NOT PERMITTED WHERE INDIVIDUAL RESIDENTIAL UNIT METERING IS EITHER REQUIRED OR CHOSEN.**

111.5.8.2 INDIVIDUAL METERING WHERE INDIVIDUAL METERING FOR MULTI-UNIT PROPERTIES IS EITHER REQUIRED OR CHOSEN, EACH RESIDENTIAL UNIT SHALL BE SUPPLIED WITH AN INDIVIDUAL COLD WATER MAIN SUPPLY PIPE, WSSC METER, AND SEPARATELY BILLED ACCOUNT. COLLECTIVELY, ALL BUILDING PIPING, INCLUDING ANY OTHER WATER USES THROUGHOUT THE BUILDING SHALL BE ARRANGED AS FOLLOWS:

111.5.8.2.1 NO COMBINATION OF MASTER METERING WITH INDIVIDUAL UNIT METERS IS PERMITTED (NOT ALLOWED AS AN OPTION AND WILL NOT BE SUPPORTED BY THE WSSC BILLING SYSTEM).

111.5.8.2.2 COMMON AREAS/AMENITIES SHALL BE INDEPENDENTLY METERED, WITH SEPARATE ACCOUNT AND SHUT-OFF VALVE.

111.5.8.2.3 SPECIAL WATER USES TYPICALLY “SUBMETERED”, SUCH AS IRRIGATION & COOLING TOWERS, SHALL BE SUPPLIED DIRECTLY THROUGH AN INDIVIDUAL METER FOR EACH USE AND NOT BE ARRANGED AS A “SUBMETERED USE” TO ANY OTHER UNIT/USE WITHIN THE PROPERTY.

111.5.8.2.4 WHERE COMMERCIAL UNITS (MIXED-USE) ARE INCLUDED, ADDITIONAL SEPARATE METERING IS REQUIRED APART FROM

RESIDENTIAL UNITS AND COMMON AREAS/AMENITIES. SEE ALSO SECTION 111.5.8.1. THIS MAY INCLUDE ONLY ONE METER FOR ALL COMMERCIAL UNITS OR WHERE INDIVIDUAL COMMERCIAL UNIT METERING IS OPTIONED, DESIGN AND INSTALLATION SHALL FOLLOW THE PROVISIONS OF 111.5.8.3.

111.5.8.3 IN ALL CASES WHERE INDIVIDUAL MULTI-UNIT METERING IS UTILIZED, BY REQUIREMENT OR BY OPTION, A CENTRALIZED METER ROOM(S) SHALL BE PROVIDED FOLLOWING THE PROVISIONS SET FORTH IN SECTION 604 AND AS DETAILED AS FOLLOWS:

111.5.8.3.1 BUILDINGS UP TO THREE FLOORS OR 25,000 GROSS SQUARE FEET SHALL BE OUTFITTED WITH A CENTRAL METER ROOM, EQUIPPED WITH A LOCKABLE DOOR ACCESSIBLE DIRECTLY FROM THE EXTERIOR OF THE BUILDING.

111.5.8.3.2 BUILDINGS GREATER THAN THREE FLOORS OR 25,000 GROSS SQUARE FEET SHALL BE OUTFITTED WITH A CENTRAL METER ROOM, EQUIPPED WITH A LOCKABLE DOOR. ADDITIONAL CENTRAL METER ROOMS, ON A PER WING/AREA/FLOOR BASIS, INCLUDING ACCESS REQUIREMENTS, ARE SUBJECT TO WSSC APPROVAL. WHERE DIRECT ACCESS IS PRACTICAL, IT SHALL BE PROVIDED.

111.5.8.3.3 EACH METER ROOM SHALL BE PROVIDED WITH A MINIMUM OF ONE FLOOR DRAIN, MINIMUM SIZING AS FOLLOWS:

1 - 6 METERS = 2" FLOOR DRAIN

7 - 12 METERS = 3" FLOOR DRAIN

13 OR GREATER = 4" FLOOR DRAIN

111.5.8.3.4 ONE SHUT OFF VALVE WITHIN EACH INDIVIDUAL METER PIPING ASSEMBLY SHALL BE A TAMPER RESISTANT AND LOCKABLE TYPE BALL VALVE. WHERE A 13D OR 13R FIRE SPRINKLER SYSTEM IS UTILIZED, THE REFERENCED LOCKABLE VALVE SHALL BE DOWNSTREAM OF THE FIRE SPRINKLER SUPPLY TEE AND SERVING ONLY THE MAIN DOMESTIC WATER.

111.5.8.3.5 EACH INDIVIDUAL METER PIPING ASSEMBLY SHALL BE IDENTIFIED WITH AN AFFIXED PERMANENT TAG/PLACARD/LABEL DEPICTING THE UNIQUE UNIT/SUITE/ADDRESS SERVED BY THAT METER. ALL RELATED DISTRIBUTION PIPING, INCLUDING CONCEALED PIPING, SHALL ALSO BE IDENTIFIED/LABELED EVERY 25 FEET; IN ADDITION, WITHIN 5 FEET OF EACH SIDE OF A FLOOR OR WALL PENETRATION.

111.5.8.3.6 WHERE CENTRAL METER ROOMS OPEN DIRECTLY TO THE OUTDOORS, THE LOCKING MECHANISM SHALL BE A FOUR-DIGIT

COMBINATION LOCK AND THE LOCK CODE SHALL BE SAME FOR ALL BUILDINGS WITHIN A COMPLEX. THE LOCK CODE SHALL BE PROVIDED TO WSSC'S METER SERVICES PERSONNEL DURING THEIR INITIAL METER SETTING/VERIFICATION WORK ORDER AND UPDATED LOCK CODES COMMUNICATED PROMPTLY TO WSSC SERVICES DIVISION STAFF.

111.5.8.3.7 EXCEPTION. PROPERTIES THAT ABUT A PUBLIC WATER MAIN, ARE CONSTRUCTED AS "ROW STYLE" TOWNHOMES (ONE UNIT BOTTOM TO TOP), AND UTILIZE A 13D OR 13R TYPE FIRE SPRINKLER SYSTEM MAY BE SERVED WITH INDIVIDUAL WSSC WATER SERVICE CONNECTION OUTFITTED WITH AN OUTSIDE METER OR CURB VALVE WITH INSIDE METER.

111.5.9 Commission Sub-Meter. Except as otherwise allowed by law, where water furnished by the Commission is used for purposes where *none* of the water that passes through the sub-meter enters the Commission's sewerage system, the owner may request the installation of a Commission sub-meter. See Public Utilities Article, Section 25-502 & 25-504.

111.5.9.1 Piping arrangement. In cases where a Commission Submeter or secondary meter is the same size as the corresponding WSSC inside main meter, the piping shall be designed and installed to accommodate each meter in parallel to the other; each shall be right-sized per Table 602.1. Where practical, Commission submeters shall be installed on the upstream, potable side of an isolation type backflow preventer.

111.5.9.2 Established Credits. The following represents established credit values for various submeter applications where all or a portion of the registered water consumption does not discharge to the WSSC sanitary sewer system:

111.5.9.2.1 100% - Irrigation, Outdoor Hose Bibbs, Wall Hydrants, Yard Hydrants and similar outdoor only water uses.

111.5.9.2.2 100% - Cooling Towers with an approved MDE environmental discharge permit = 100%. No provisions for any portion of the submetered water to be discharged to the sanitary sewer system including auto-mechanical "blow-off" for the introduction of fresh water and chemical/disinfection treatments.

111.5.9.2.3 73% - Cooling Towers with drain or any mechanical loop piping routed to sanitary sewer including auto-mechanical "blow-off" for the introduction of fresh water and chemical/disinfection treatments.

111.5.9.2.4 25% - Commercial/Industrial Laundries

111.5.9.2.5 Any industry seeking a new credit or re-consideration of an established credit, shall provide an engineering analysis to the WSSC Customer Relations Department for approval, to determine the ratio of registered water consumption that discharges to sewer

versus the quantity that does not discharge to the Commission's sanitary sewer collection system unless approved by the Commission.

111.5.10 Sewer-Only Accounts. When a building classification other than Group R-3 using a private water supply system is connected to the Commission sewerage system, a Commission meter shall be installed on the water supply to determine the sewer use charge. Group R-3 occupancies served as above shall be billed based on a flat rate, or based on a sewer use meter, at the Commission's discretion.

111.5.11 Hydrant Meters. The Commission may authorize use of a fire hydrant water meter to applicants requiring water for temporary use. A WSSC small hydrant meter shall include an integral ASSE 1011 backflow prevention device. For a WSSC large hydrant meter, the applicant shall provide a high-hazard backflow prevention device assembly (ASSE 1013). The assembly must carry a satisfactory test tag current within six months. Fire hydrant use shall be restricted to temporary or seasonal applications such as, but not limited to: Tank truck filling, temporary water for construction sites, special events (e.g., charity walks, fairgrounds), and seasonal uses (e.g., irrigation). Fire hydrants shall *not* be used to circumvent the need to obtain service connections to supply water to full time businesses, nurseries with retail and maintenance buildings, and similar applications. Such applications shall require a *permanent* service connection.

111.6 Containment. All buildings shall have a backflow containment device installed on the *outlet* side of the water meter, prior to water uses within the premise, as cited in Section 502.3 in Chapter 5 of this Code. Backflow preventers shall be maintained *by the owner* as cited in Section 102.3.9.

SECTION 114 TRADE QUALIFICATIONS AND EXAM

114.1 Apprentice. Qualification for this entry level position to the plumbing and/or fuel gas trade(s) does not require references or the passage of any exam. Plumbing Apprentices shall work a minimum of 7500-hours (generally 4 years) to qualify for the journeyman plumber's exam, see 114.2.1. Gasfitting Apprentices shall work a minimum of 3750-hours (generally 2 years) to qualify for the journeyman gasfitter's exams, see 114.4.1

114.2 Journeyman Plumber. In order to qualify for the Journeyman Plumber exam, applicants shall meet the following requirements:

114.2.1 Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the plumbing trade as an apprentice (or equivalent work experience) under the direction and control of a WSSC-licensed Master Plumber or Master Plumber/Gasfitter for a minimum of 7500-hours and 4-years of work experience in the trades.

114.2.2 Formal Training. Apprentices in the plumbing trade who graduate from approved plumbing training courses, conducted under the auspices of an approved trade association,

utility, or educational institution, shall gain additional credit toward the working hours requirement. Up to 750-hours spent by the applicant in attending such courses shall count as *double* when applied toward the total required hours.

114.2.3 Backflow Certification. As a prerequisite for taking the Journeyman Plumbing exam, applicants shall have passed a 32-hour State-approved Backflow Prevention Certification Program, or passed a Backflow Prevention Certification Program from another jurisdiction or state that is acceptable to the Commission, within 3-years prior to application.

114.2.4 Exam. See Section 114.7.

114.2.5 References. For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

114.3 Master Plumber. In order to qualify for the Master Plumber exam, applicants shall meet the following requirements:

114.3.1 Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the plumbing trade as a registered Journeyman Plumber under the direction and control of a WSSC-licensed Master Plumber or Master Plumber/Gasfitter for a minimum of 3750-hours and 2-years of work experience in the trades.

114.3.2 Backflow Certification. As a prerequisite for taking the Master Plumbing exam, applicants shall have passed a 32-hour State-approved Backflow Prevention Certification Program, or passed a Backflow Prevention Certification Program from another jurisdiction or state that is acceptable to the Commission, within 3-years prior to application.

114.3.3 Exam. See Section 114.7.

114.3.4 References. For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

114.4 Journeyman Gasfitter. In order to qualify for the Journeyman Gasfitter exam, applicants shall meet the following requirements:

114.4.1 Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the gasfitting trade as an apprentice (or equivalent work experience) under the direction and control of a WSSC-licensed Master Gasfitter or Master Plumber/Gasfitter for a minimum of 3750-hours and 2-years of work experience in the trades.

114.4.2 Formal Training. Apprentices in the gasfitting trade who graduate from approved gasfitting training courses, conducted under the auspices of an approved trade association,

utility, or educational institution, shall gain additional credit toward the working hours requirement. Up to 375-hours spent by the applicant in attending such courses shall count as *double* when applied toward the total required hours.

114.4.3 Exam. See Section 114.7.

114.4.4 References. For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

114.5 Master Gasfitter. In order to qualify for the Master Gasfitter examination, applicants shall meet the following requirements:

114.5.1 Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the gasfitting trade as a registered Journeyman Gasfitter under the direction and control of a WSSC-licensed Master Gasfitter or Master Plumber/Gasfitter for a minimum of 3750-hours and 2-years of work experience in the trades.

114.5.2 Exam. See Section 114.7.

114.5.3 References. For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

114.6 Sewer and Drain Cleaner.

114.6.1 Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the sewer and drain cleaning business under the direction and control of a WSSC-licensed Sewer and Drain Cleaner, Master Plumber, or Master Plumber/Gasfitter for a minimum of 3750-hours and 2-years of work experience in the trades. Proof of work experience shall be supported by written statements from one or more employers of the applicant.

114.6.2 Journeyman Plumber. A WSSC-licensed Journeyman Plumber or Journeyman Plumber/Gasfitter shall be considered a qualified applicant in lieu of the work experience required in Section 114.6.1.

114.6.3 References. For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

114.7 Exam.

114.7.1 Type of Exam. Applicants at both the Journeyman and Master levels shall be required to pass a multiple-choice, open-book exam on knowledge of this Code, particular to the trade being examined. At the Journeyman level, questions outside of this Code that relate to general knowledge of hands-on trade practice shall also be included. At the Master level, questions outside of this Code that relate to safety regulations, mathematics, common principles of physics, construction drawings and riser diagrams, building structural integrity, pipe sizing, standard details and specifications, materials standards, and general knowledge of hands-on trade practice shall also be included.

114.7.2 Fee. Fees for the exam are applied according to the schedule of Fees and charges approved by the Commission at time of exam application. Failure to pay required fees shall render an application invalid.

114.7.3 Passing Score. A passing score of no less than [75]70% shall constitute successful completion of the exam.

114.7.4 Re-Exam. Applicants shall be permitted to re-take the exam every 30 days until a passing score has been obtained.

SECTION 402 AMENDMENTS TO THE INTERNATIONAL FUEL GAS CODE

402.1 Amendment of IFGC CHAPTER 1, ADMINISTRATION. IFGC Chapter 1, Administration, is hereby **DELETED** in its entirety. See WSSC 101.4.2 for a reference to IFGC 101.2.4 Systems and equipment outside the scope.

402.2 Reserved

402.3 Amendment of IFGC CHAPTER 3, GENERAL REGULATIONS.

402.3.1 IFGC Section 304.6, Outdoor combustion air, is hereby **AMENDED** by **ADDING** Sections 304.6.3 and 304.6.4, to mandate certain minimum requirements for combustion and ventilation air, all to read as follows:

304.6.3 Construction Heaters, Recirculating. Make-up, ventilation and combustion air shall be provided in accordance with manufacturer's instructions but in no case shall the total effective opening(s) be less than 3 square feet for every 100,000 btuh. Where practical, one half of the required effective opening shall be provided within 12 inches of the top of the enclosure and the remaining half within 12 inches of the bottom of the enclosure. In all cases, there shall be a minimum of two openings located in separate areas of the structure, where one is as high as practical and the other as low as practical.

304.6.4 Construction Heaters, Non-Recirculating. A means to provide ventilation/exhaust shall be provided in accordance with manufacturer's instructions but in no case shall the total

effective opening(s) be less than 1.5 square feet for every 100,000 btuh. The required effective opening shall be provided, as close as practical, to within 12 inches of the top of the enclosure.

402.3.2 IFGC Section 304.12, Protection from fumes and gases, is hereby **AMENDED** by **ADDING** Section 304.12.1 and 304.12.2, to require carbon monoxide detection systems for type R and I occupancies as follows:

304.12.1 Carbon Monoxide Alarms, New Construction. Carbon Monoxide Alarms shall be required for new construction in dwelling units where fuel burning appliances are installed; carbon monoxide alarms shall be installed in accordance with the corresponding version of the International Building Code or the International Residential Code.

304.12.2 Carbon Monoxide Alarms, Existing Construction. Carbon Monoxide Alarms shall be required for any existing building with R-3 occupancy containing one or more sleeping units or dwelling units follows:

304.12.2.1. Where any fuel burning appliance is added or replaced, including an outdoor generator or pool heater. Exception - outdoor grill.

304.12.2.2. Carbon monoxide alarms shall be installed in accordance with the corresponding version of the International Residential Code.

[**402.3.3 IFGC Section 310.1.1, CSST,** is hereby **AMENDED** by **ADDING** specific bonding parameters for Corrugated Stainless Steel Tubing (CSST), all to read as follows:

(IFGC as amended)

310.1.1 CSST. Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building or where the gas piping is closest to the electrical service grounding electrode when the gas service and electric service are in separate areas. The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent.

310.1.2 Prohibited - Additional Driven Grounds. All gas piping systems shall be bonded only to the main electrical system's grounding system; driving a secondary ground is prohibited.]

402.4 Amendments of IFGC CHAPTER 4, GAS PIPING INSTALLATIONS

402.4.1 IFGC Section 401, General, is hereby **AMENDED** by **ADDING** Section 401.11 to codify requirements of private meters and gas utility submeters as follows:

401.11 Private Meters and Gas Utility Submeters. Private Meters and Gas Utility Submeters shall be installed as follows:

401.11.1 Listed to ANSI B109.1 or B109.2, Readily Accessible, and located in a *Ventilated Space*.

401.11.2 Located at least thirty-six (36) inches form an Ignition Source.

401.11.3 Adequately supported and protected from physical damage, temperature extremes, corrosion, or excessive vibration.

401.11.4 Where remote to a space or equipment served, each meter or its associated piping, fittings, valves, etc. shall be permanently tagged or marked indicating the space or equipment served.

401.11.5 Prohibited Locations - bedrooms, bathrooms, buried/vaulted below grade/slab, or hazardous location.

402.4.2 IFGC Section 406.1.2, Repairs and Additions, is hereby **AMENDED** by referring to and **ADDING** thereto new Section 406.1.2.1, all to read as follows:

(IFGC as amended)

406.1.2 (IRC G2417.1.2) Repairs and Additions. In the event repairs or additions are made after the pressure test, the affected piping shall be tested.

Minor repairs and additions are not required to be pressure tested provided that the work is inspected and connections are tested with a non-corrosive leak-detecting fluid or other approved leak-detecting methods, as cited in Section 406.1.2.1.

406.1.2.1 Twelve Joint Rule. Where an existing gas piping system is altered, repaired, or extended, a soap test shall be permitted in lieu of a pressure test, under the following conditions:

- A maximum of 12 joints in the new and disturbed piping are allowed, excluding the equipment connector.
- The new piping and any disturbed piping shall not be concealed.
- The developed length of the new piping shall not exceed 15-feet.

It shall be the licensee's responsibility to perform the required soap test prior to inspection, and to ensure that the piping does not leak.

402.4.3 IFGC Section 412, Liquefied Petroleum Gas Motor Vehicle Fuel-Dispensing Stations, is hereby **DELETED** in its entirety.

402.4.4 IFGC Section 413, Compressed Natural Gas Motor Vehicle Fuel-Dispensing Stations, is hereby **deleted** in its entirety.

402.5.1 IFGC Sections 503, Venting of appliances, and 504, Sizing of Category I Appliance Venting Systems, are hereby **AMENDED** by **MODIFYING** Sections 503.5.5, 503.5.6, 504.2.9, 504.3.20 and specific related Tables to clarify the provisions relating to masonry chimneys and align with 2015 D.O.E mandated increases in water heater efficiencies, all to read as follows:

503.5.5 Size of chimneys. Delete Methods 2 & 3.

503.5.6 Inspection of chimneys. Delete the Exception.

504.2.9 Chimney and vent locations. Tables 504.2(1), 504.2(2), and 504.2(5) shall be used only for chimneys and vents not exposed to the outdoors below the roof line. A Type B vent or listed chimney lining system passing through an unused masonry chimney flue shall not be considered to be exposed to the outdoors. Where vents extend outdoors above the roof more than 5 feet (1524mm) higher than required by Figure 503.6.4, and where the vents terminate in accordance with Section 503.6.4, Item 2, the outdoor portion of the vent shall be enclosed as required by this section for vents not considered to be exposed to the outdoors or such systems shall be engineered. A Type B vent shall not be considered to be exposed to the outdoors where it passes through an unventilated enclosure or chase insulated to a value or not less than R8.

Table 504.2(3) in combination with Table 504.2(6) shall be used for clay-lined *interior* and *exterior masonry chimneys*, provide that all of the following are met:

1. Vent connector is a Type B double wall.
2. Vent connector length is limited to 1-1/2 feet for each inch of vent connector.
3. The appliance is draft hood factory-equipped without a damper or draft inducer.
4. The input rating is less than the maximum capacity given by Table 504.2(3).
5. For a water heater, the outdoor design temperature is not less than 5°F (-15°C).
6. For any appliance, the input rating is greater than the minimum capacity given by Table 504.2(6).

504.3.20 Chimney and vent locations. Tables 504.3(1), 504.3(2), and 504.2(5) shall be used only for chimneys and vents not exposed to the outdoors below the roof line. A Type B vent or listed chimney lining system passing through an unused masonry chimney flue shall not be considered to be exposed to the outdoors. Where vents extend outdoors above the roof more than 5 feet (1524mm) higher than required by Figure 503.6.4, and where the vents terminate in accordance with Section 503.6.4, Item 2, the outdoor portion of the vent shall be enclosed as required by this section for vents not considered to be exposed to the outdoors or such systems shall be engineered. A Type B vent shall not be considered to be exposed to the outdoors where it passes through an unventilated enclosure or chase insulated to a value or not less than R8.

Table 504.3(6a), 504.3(6b), 504.3(7a) and 504.3(7b) shall be used for clay-lined *interior* and *exterior masonry chimneys*, provided that all of the following are met:

1. Vent connectors are Type B double wall.
2. Not less than one appliance is draft hood factory-equipped and no appliance is equipped with a damper or draft inducer.

3. The combined appliance input rating is less than the maximum capacity given by Table 504.3(6a) for NAT+NAT or Table 504.3(7a) for FAN+NAT.
4. The total input rating for all appliances is greater than the minimum input rating given by Table 504.3(7a) for NAT+NAT or 504.3(7b) for FAN+NAT.
5. The vent connector sizing is in accordance with Table 504.3(3).

Tables 504.2(6), 504.3(6a), 504.3(6b), 504.3(7a) and 504.3(7b), re-title as INTERIOR AND EXTERIOR MASONRY CHIMNEY

Tables 504.2(6), 504.3(6b), and 504.3(7b), delete "Space-heating" from table headings.

402.6 Reserved

402.7 Amendment of IFGC Chapter 7, GASEOUS HYDROGEN SYSTEMS. IFGC Chapter 7, Gaseous Hydrogen Systems, is hereby **DELETED** in its entirety.

402.8 Reserved

SECTION 506 BACKFLOW PREVENTION FOR SPECIFIC FACILITIES OR USES

506.1 Plumbing Fixtures. The supply lines and fittings for every plumbing fixture shall be installed so as to prevent backflow. Plumbing fixture fittings shall provide backflow protection in accordance with ASME A112.18.1.

506.1.1 Fixture Outlet Alteration. Other than a lab sink faucet spout, a water outlet such as a fixture faucet, shall not be altered beyond its original intent. The use of a wye-branch fitting or other manifold type assembly shall not be used to serve multiple systems, devices, equipment, appurtenances, etc. Each usage shall be provided with an individual water "rough-in", provided with a shut-off valve per IPC 606.2, and protected against backflow commensurate with the degree of hazard for that use.

506.2 Devices, appurtenances, appliances and apparatus. All devices, appurtenances, appliances and apparatus intended to provide some special function, such as sterilization, distillation, processing, cooling, or storage of ice or food, and that connect to the water supply system, shall be provided with protection against backflow and contamination of the water supply system. Water pumps, filters, softeners, tanks and all other appliances, appurtenances and devices that convey potable water shall be constructed of certain materials and contain components that maintain the potability of the water and protect against contamination.

506.3 Water service piping. Water service piping shall be protected in accordance with the International Plumbing Code Sections 603.2 and 603.2.1.

506.4 Chemicals and other substances. Chemicals and other substances that produce either toxic conditions, taste, odor or discoloration in a potable water system shall not be introduced into, or utilized in, such systems.

506.5 Valves and outlets prohibited below grade. Potable water outlets and combination stop and waste arrangements shall not be installed below grade. Freezeproof yard hydrants that drain the riser into the ground are considered a stop and waste arrangement.

506.5.1 Exception. Freezeproof yard hydrants that drain the riser into the ground shall be permitted to be installed, provided that the potable water supply to such hydrants is protected upstream of the hydrants in accordance with Table 5.1 and the hydrants are permanently identified as non-potable outlets by *approved* signage that reads as follows: “Caution, Non-Potable Water. Do Not Drink.”

506.6 Auxiliary Water Systems. An approved backflow-prevention assembly shall be installed at the service connection to any premises where there is an auxiliary water supply or system as follows:

506.6.1 Connections to Potable Water Systems. For connections to potable water systems, an air-gap separation or a reduced-pressure principle backflow-prevention assembly shall be installed at the interconnection when the auxiliary water supply is or may be contaminated to a degree that it would constitute a high hazard. A double check valve assembly shall be installed at the interconnection when the auxiliary water supply is verified as municipal grade potable water treatment under a Maryland Department of the Environment permit.

506.6.2 Private Water Supplies and Secondary Sources of Water. For private water supplies and secondary sources of water, an air-gap separation or a reduced-pressure principle backflow-prevention assembly shall be installed at the interconnection because the private water supply and/or secondary source of water are un-regulated and may be contaminated.

506.6.3 Used Waters and Industrial Fluids. For used waters and industrial fluids, an air-gap separation or a reduced-pressure principle backflow-prevention assembly shall be installed where there is a high hazard.

506.7 Fire Hydrant Meters and Backflow Preventers for Temporary or Seasonal Use.

506.7.1 General. WSSC may authorize use of a fire hydrant water meter to applicants requiring water for temporary use as follows:

506.7.2 Small Hydrant Meter. A WSSC small hydrant meter (3/4inches) shall include an integral hose-connected vacuum breaker (ASSE 1011).

506.7.3 Large Hydrant Meter. For a WSSC large hydrant meter (3 inches), the applicant shall provide a reduced pressure principle backflow assembly (ASSE 1013) suitable for high-hazard applications. The assembly must carry a satisfactory test tag current within six months.

The BFP shall be located within 20 feet of the Hydrant Meter, ahead of any water take-offs, and the inlet piping/or hose shall not be concealed.

506.7.4 Fire Hydrant's Use Restrictions. Fire hydrant use shall be restricted to temporary or seasonal applications such as, but not limited to: Tank-truck filling, temporary water for construction sites, special events (e.g., charity walks, fairgrounds), and seasonal uses (e.g., irrigation). Fire hydrants shall not be used to circumvent the need to obtain service connections to supply water to full-time businesses, nurseries with retail and maintenance buildings, and similar applications. Such applications shall require a permanent service connection.

506.8 Parallel Systems. In commercial applications [and in R-3 occupancies] where a [13R] fire sprinkler system is specified, multiple water systems may be established in parallel as follows:

506.8.1 Fire Sprinkler Systems – shall be the first supply branch; this branch may be ahead of an inside domestic meter [providing a detector meter type BFP is used; see 502.5.2 and 502.5.4 below].

506.8.2 Irrigation – branch shall be downstream of an inside meter; ahead of pressure reducing station, if applicable; backflow commiserate with hazard.

506.8.3 Domestic – branch shall be downstream of an inside meter; containment backflow commiserate with hazard.

506.8.4 Non-potable system – branch shall be downstream of an inside meter; containment backflow shall be an ASSE 1013 RP.

506.9 Automatic Residential Fire Sprinkler Systems. On residential buildings equipped with an NFPA 13D OR 13R residential fire sprinkler system, the tee feeding the residential fire sprinkler system shall be located on the *outlet side* of the meter. Potable water systems shall be protected against backflow from automatic fire sprinkler systems by a minimum of a dual check valve, ASSE 1024, CSA B64.6. Chemical additives shall be *prohibited* in residential fire sprinkler systems. *No valve* shall be installed on the tee branch supplying the fire sprinkler system.

506.10 Automatic Commercial Fire Sprinkler Systems. Where potable water is used to serve or supplement a fire sprinkler system, backflow prevention shall be as follows;

506.10.1 ASSE 1015 DCVA – [Metered water;] no chemical additives.

[506.10.2 ASSE 1048 DCDA – Un-metered water; no chemical additives.]

506.10. [3]2 ASSE 1013 RPZA – [Metered water;] with chemical additiveS.

[502.10.4 ASSE 1047 RPDA – Un-metered water; with chemical additive.]

506.10. [5]3 ASSE 1024 DCV - Limited System up to 7 heads; no chemicals or pump.

506.11 Exceptions to Requirements of 506.9 and 506.10.

506.11.1 Where systems are installed as a portion of the water distribution system in accordance with the requirements of this Code and the IPC and are not provided with a fire department connection, isolation or the water supply system shall not be required.

506.11.2 Isolation of the water distribution system is not required for deluge, preaction or dry pipe systems.

506.12 Retrofits and Existing Commercial Fire Sprinkler Systems. Existing Commercial Fire Sprinkler Systems shall be required to update/upgrade the backflow prevention as follows:

506.12.1 Ten Head Rule. Where more than ten sprinkler heads are added or relocated in conjunction with interior building renovations, a testable backflow assembly corresponding to 506.10 shall be installed.

506.12.2 Single Check Valves. Older systems (untouched or retrofitting up to ten heads), utilizing a single check valve for backflow prevention are not required to upgrade to a testable assembly provided all of the following conditions are met:

506.12.2.1 No chemical additives are present or have ever been utilized.

506.12.2.2 Single check valves are replaced every five years. New check valves shall be tagged with the installation date; the expiration date; and a notice identifying the requirement to replace by the expiration date.

506.12.2.3 Where possible, a testable backflow assembly per 506.10 shall be installed.

506.12.3 Unprotected Systems. Unprotected systems shall be required to have a testable backflow assembly installed per 506.10.

506.12.4 Hydraulic Consideration. Where backflow protection is added or upgraded, the owner/applicant, their design team, and/or their installing contractor shall be required to coordinate/permit these changes with the appropriate county or local fire officials in order to ensure the changes meet hydraulic and flow requirements of the fire department. Proof of coordination/permit shall be required.

SECTION 604 INSIDE WATER METERS

604.1 Freeze Protection. Water meters installed inside of buildings shall be located in an area capable of maintaining a minimum temperature of 50 degrees Fahrenheit, as follows:

604.1.1 Critical Dates. The meter room or area shall be heated from November 1 through March 31.

604.1.2 Insulation. A meter room or area with outdoor exposure shall be thermally protected in accordance with International Building Code requirements. Meter rooms or areas with no direct exposure to the outdoors, shall *not* require extra thermal protection.

604.1.3 Heat Source. Where a heat source is required, it shall be thermostatically controlled within the meter room or area. As an alternative, heat may be provided indirectly with prior approval by the code official.

604.2 Lighting. Adequate permanent electric lighting shall be provided.

604.3 Building Service Valves

604.3.1 First Valve (Service/Meter Isolation Valve). A full-flow building water service valve shall be installed within 3-feet of where the building water service enters the building, as close as practical to the meter, and shall be in the same room as the water meter.

604.3.2 Second Valve (Domestic Isolation). When a NPFA 13D **OR 13R** fire sprinkler system is specified, a second full-flow valve shall be installed to provide domestic isolation and to provide an uninterrupted fire sprinkler supply. Irrigation supplies, hose bibbs, and pressure reducing valves, shall be installed after the fire sprinkler supply tee, and may be installed ahead of the domestic isolation valve.

604.3.3 Parallel Systems. When a NPFA 13 [or 13R] fire sprinkler system is specified, [a minimum of a double check detector assembly (ASSE 1048) shall be installed to protect] the domestic water **SHALL BE PROTECTED AGAINST BACKFLOW COMMENSURATE WITH THE REQUIREMENTS SET FORTH IN CHAPTER 5 OF THIS CODE** [from the fire sprinkler system as well as meter the fire sprinkler water]. The supply for the fire sprinkler system shall tee off before the domestic meter assembly. Downstream of the domestic meter assembly, process water/non-potable systems may be established in parallel to the domestic water branch; each branch shall contain an ASSE 1013 RP backflow preventer.

[604.3.3.1 Double Check Detector Assembly. A double check detector assembly (DCDA) shall be installed under a separate long form permit. The DCDA shall be procured without the 5/8" meter; the Commission will furnish and install the meter. The DCDA may be installed in a vertical orientation, including the meter, when listed by the manufacturer for vertical installation. Excluding the meter, the DCDA shall remain the property of, and be maintained by, the owner.]

604.3.4 Meter Isolation and Bypass. Valves on larger meters, meter isolation and bypass valves shall be in the same room as the meter, and as close as practical to the meter.

604.3.4.1 BYPASS VALVE REQUIREMENT. THE REQUIRED BYPASS SHUT OFF VALVE WITHIN AN INDIVIDUAL METER PIPING ASSEMBLY SHALL BE A TAMPER RESISTANT AND LOCKABLE TYPE BALL VALVE.

604.4 Remote Reader. Provisions for a WSSC remote reader shall be provided for *all inside* Commission meters as follows:

604.4.1 Conduit and Cable Exit. 18 to 48 inches above grade; do not locate in a fenced or rear yard; preferred along the front wall or sides near front corners.

604.4.2 Conduit. Conduit shall be 1/2" minimum I.D. and shall have no fittings greater than 45 degrees; fittings may not be insert type.

604.4.3 Conductor Cable. Conductor cable shall be supplied by the Commission; 2 feet of excess cable shall be left at each end; multiple cables may share a conduit, proper identification is required.

604.4.4 Penthouse Mechanical Rooms. The conduit and cable shall be routed such that the remote reader can be located on an accessible exterior wall of the mechanical room. Where an accessible exterior wall is not available, an alternate location shall be pre-approved by the Commission's meter services department.

604.5 Inside Meters Size ¾-Inch Through 2-Inch

604.5.1 Water Service Connection. In general, water service connections, size 1-inch through 2-inch, shall be located in the public right-of-way in accordance with Commission Standard Details. The Commission water service connection shall terminate with a curb valve at the property line; *or*, from the edge of the right-of-way, whichever is closer to the main.

604.5.2 Activities by Plumbers

604.5.2.1 General. Plumbers shall connect to the Commission's curb valve. Commission service connections or any portion thereof, shall not be removed, altered, or replaced unless directed by a code official.

604.5.2.2 Curb Valve Depth. The *maximum* depth from finished grade to the curb valve shall be 60-inches; *minimum* depth shall be 42-inches.

604.5.2.3 Valve Box Required. A pre-manufactured cast *metal* valve/curb box shall be furnished and installed by the plumber at the property line, and shall consist of the valve box, adjustable top section, and lid. An extension stem and guide shall be installed on a curb stop valve 1" and smaller. 1-1/2" and 2" curb valves shall not be outfitted with an extension stem and guide.

604.5.2.3.1 PERMANENT MARKING REQUIRED. WHERE A VALVE/CURB VALVE IS SERVING A PROPERTY UNDER ANY OF THE FOLLOWING CONDITIONS, THE ACCESS ASSEMBLY (CURB VALVE BOX) TOP SHALL BE PERMANENTLY MARKED/LABELED WITH THE CORRESPONDING ADDRESS (HOUSE/UNIT NUMBER):

- **MULTIPLE WATER SERVICE CONNECTIONS TO MULTIPLE HOMES/UNITS ON A SINGLE LOT/TRACT OF PROPERTY.**
- **WITHIN 20' OF AN ADJACENT VALVE/CURB VALVE ACCESS ASSEMBLY.**
- **ANY SCENARIO WHERE IT MAY NOT BE READILY APPARENT TO FUTURE SERVICE PROVIDERS AS TO WHICH HOME/UNIT IS SERVED BY ANY GIVEN VALVE/CURB VALVE. (E.G. CUL-DE-SAC, FLAG LOTS, ETC.)**

604.5.2.4 Valve Box Support. The valve box assembly shall be installed on a firm foundation. It shall be installed on undisturbed earth, compacted or granular fill, or structural wood bridging supported by undisturbed earth, as approved by the code official. In vehicular traffic areas, a formed concrete pad 24-inches square or round, by 4 inches thick shall be provided to support the valve box. The concrete pad may be below finished paving.

605.5.2.5 NFPA 13D OR 13R Residential Fire Sprinkler Connection. On residential buildings equipped with a NFPA 13D OR 13R residential fire sprinkler system, the tee feeding the residential fire sprinkler system shall be located on the *outlet* side of the meter. No valve shall be installed on the tee branch supplying the fire sprinkler system.

604.5.2.6 Final Plumbing Inspection. The plumber shall verify that the top of the curb box is complete, operational, and flush with the permanent grade; and that the correct size and type of meter as shown on the plumbing permit has been installed; prior to FINAL inspection. See Section 107.4.1.5.

604.6 Meter Test Sleeves Not Required. Meter Test Sleeves/Piping shall not be required for any 1-1/2" meter or for any submeter located in a penthouse mechanical room. All other meter applications require test sleeves/piping according to Commission Standard Details.

SECTION 818

FOOD SERVICE ESTABLISHMENT DISCHARGE REQUIREMENTS

818.1 Applicability. The regulations in this Section shall apply to establishments where food is served to or provided for the public, with or without charge, including, but not limited to restaurants, cafeterias, hotel kitchens, church kitchens, school kitchens, hospital cafeterias, bars, or any other commercial operation that has the potential to discharge grease laden wastewater; hereafter referred to as Food Service Establishments (FSE).

818.2 Permit Required. All qualifying Food Service Establishments (FSE) shall obtain or be issued a FSE Wastewater Discharge Permit. New and existing FSEs may be required to complete a fully signed permit survey to document their Discharge Permit. Failure to return a completed permit survey can subject the FSE to enforcement actions. If the Commission deems the FSE qualifies for a Discharge Permit, the FSE survey may also be used as the permit application requiring the FSE's Commission account number and a responsible party signature.

818.2.1 To ensure the FSE is aware of Code requirements or other federal, state or Commission deadlines, the Commission reserves the right to issue a FSE Discharge Permit prior to receiving an FSE's completed permit survey.

818.2.2 The Commission shall make the determination that an FSE Discharge Permit is warranted under one or more of the following conditions:

818.2.2.1 Prior to a new FSE opening with a valid Health Department Permit

818.2.2.2 At the time of the Commission's full initial inspection of an open FSE

818.2.2.3 Upon receipt of a fully completed permit survey or application

The Commission shall issue a permit if it is determined that pretreatment facilities are adequate for efficient treatment of discharged waste and that the discharged waste complies with the discharge limitations of these regulations.

818.2.3 Survey or Application Review. The Commission shall review the application or survey submitted by the FSE and may require additional information.

818.2.4 Duration. The FSE Wastewater Discharge Permit shall be issued for a specified time period determined by the Commission. This permission shall be conditional on compliance with FSE Discharge Permit requirements and this code.

818.2.5 FSE Wastewater Discharge Permit Requirements. The FSE Wastewater Discharge Permit contains requirements necessary for the Commission to assess and ensure compliance with these Regulations. The FSE Wastewater Discharge Permit shall, at a minimum, contain the following:

- (1) Best Management Practices (BMPs) for controlling FOG discharges
- (2) Grease abatement system operations and maintenance standards, when applicable
- (3) On-site record keeping requirements (see Section 808.1.3)
- (4) Statement of non-transferability.
- (5) The FSE Wastewater Discharge Permit may contain other conditions as deemed appropriate by the Commission to ensure compliance with all applicable regulations.

818.2.6 FSE Wastewater Discharge Permit Modifications. The Commission may modify the FSE Wastewater Discharge Permit for good cause including, but not limited to, the following:

- (1) To incorporate any new pretreatment standards or requirements.
- (2) To address significant alterations or additions to the FSE's operations since the time of FSE Wastewater Discharge Permit issuance.

818.2.7 Permit Transferability. The FSE Wastewater Discharge Permit shall not be reassigned or transferred without prior written approval by the Commission.

818.2.8 Discharge Fee. Issuance and validity of the FSE Wastewater Discharge Permit shall be conditional on payment by the FSE of the annual Discharge Fee as determined

by the Commission. Failure to pay the Discharge Fee shall render the FSE Wastewater Discharge permit invalid.

818.2.9 Other Permits. Food Service Establishments shall maintain the required County Health Department permits at all times. Failure to maintain health department permits may render the FSE Wastewater Discharge permit invalid.

818.3 Inspections. All Food Service Establishments are subject to routine inspections as determined by the Commission. (see also Section 807)

818.4 Grease Abatement System Installation and Maintenance Requirements, General. When directed by the Commission, FSEs shall install and maintain a WSSC approved grease abatement system that meets or exceeds minimum requirements cited in Section 302.10.

818.4.1 Wastewater Discharge Permittee/Property Owner's Responsibility. Grease Abatement Systems shall be maintained in efficient operation at all times by the owner/operator at the owner's/operator's expense.

818.4.2 25% Rule. It shall be the Permittee's/Property Owner's responsibility to ensure that the accumulation of FOG and solids does not exceed 25% of the liquid retention capacity of the Grease Abatement System. If a grease abatement system is specifically designed to function properly with FOG and solids accumulation greater than 25%, the allowable accumulation of FOG and solids may be adjusted by WSSC on a case-by-case basis.

818.4.3 Maintenance and Inspection Intervals. The minimum maintenance [and cleaning] frequency for Volume-Based Grease Interceptors, **INCLUDING CLEANING, shall be quarterly, OR SHALL BE DETERMINED BY THE MANUFACTURERS' RECOMMENDATIONS, OR** by the Code Official's directive, or by the "25% rule", whichever is more stringent. Volume-Based Grease Interceptors shall be internally inspected annually by a qualified inspection service to determine needs for additional cleaning or repair work **OR OTHER MAINTENANCE ACTIVITIES.** The **MINIMUM** maintenance **FREQUENCY** [and cleaning for] Flow-Based Grease Interceptors, **INCLUDING CLEANING,** shall be conducted **DETERMINED BY** [pursuant to] manufacturers' recommendations, **OR** by the Code Official's written directive, or by the "25% rule," whichever is more stringent. Flow-based Grease Interceptors shall be inspected weekly [for operations] **SO AS TO IDENTIFY ANY OPERATIONAL OR MAINTENANCE ISSUES AND TO MONITOR COMPLIANCE WITH THE APPLICABLE MAINTENANCE REQUIREMENTS.** [Requests for] Deviation from required maintenance intervals [less frequent than minimums determined by the Commission] **LISTED ABOVE** shall be submitted to [the Commission] **AND APPROVED OR DISAPPROVED BY THE WSSC** in writing **PRIOR TO IMPLEMENTATION.** [Approval of such request is subject to the Commission's discretion.] **WSSC SHALL MAINTAIN A LIST OF ALL SUCH APPROVED DEVIATIONS, AND SHALL PROVIDE SAID LIST TO MDE AND EPA UPON WRITTEN REQUEST.**

818.4.3.1 FSEs who deviate from the frequency of pumping or maintenance requirements of their WSSC issued Maintenance Directive, without prior WSSC approval, will be in violation and are subject to a civil citation at the discretion of the code official.

818.5 Waste Hauler. A valid WSSC Waste Hauler Permit is required for all Waste Haulers performing pumping and cleaning services on Grease Abatement Systems located in the WSSC service area. Pumping and disposal of the contents shall be performed in accordance with conditions of the waste hauler discharge permit cited in Section 814.

818.6 Use of Additives. The introduction into the plumbing system of any surfactant, solvent, emulsifier, free enzymes or material that allows the grease to pass from the grease abatement system into the collection system is prohibited.

818.6.1 Use of a biological additive may be conditionally allowed with WSSC's approval if the product manufacturer or distributor can demonstrate to the satisfaction of the WSSC that:

- (1) The additive will not interfere with the normal operation of the grease interceptor.
- (2) The additive will not interfere with operations of the receiving wastewater treatment plant.
- (3) The use of the additive does not increase the potential for FOG to be discharged to the sanitary sewer.
- (4) The only active ingredients are bacterial products.
- (5) The use of the additive will not cause foaming in the sanitary sewer.
- (6) The pH of the additive is between 6 and 10.

818.6.2 The use of an additive will not substitute for the need for proper cleaning or maintenance of the grease abatement device and cannot be used as justification for altering the cleaning frequency.

818.6.3 Additives that are added to drain lines that do not connect to a grease abatement device are not impacted by this restriction.

818.6.4 Normal kitchen and dish cleaning products are not considered additives for the purpose of this section.

818.7 On-Site Plumbing System Maintenance. The on-site plumbing system for commercial and multi-unit residential properties shall be maintained by, and at the expense of the property owner; including cleaning of the system due to grease related discharges. All jetted material must

be removed at the nearest downstream manhole. Chemical cleaning of sewer lines is prohibited, except in conjunction with a jetting operation.

818.8 Violations.

818.8.1 Violations of the Food Service Establishment shall include, but not be limited to, the following:

818.8.1.1 Failure to properly maintain a grease abatement system

818.8.1.2 Failure to keep or to present records of maintenance

818.8.1.3 Unauthorized removal and/or tampering with the flow control device

818.8.1.4 Failure to present Food Service Establishment Discharge Permit

818.8.1.5 Failure to comply with any condition of a FSE Wastewater Discharge Permit

818.8.1.6 Failure to use a permitted Waste Hauler for interceptor maintenance

818.8.1.7 Failure to use a WSSC registered Master Plumber for correcting any and all enforcement actions that require plumbing work

818.8.1.8 Bypassing, tampering or otherwise preventing normal operation of a grease abatement device

818.8.1.9 Pass through of observable and measureable amounts of fats, oils or grease to the Commission's sewer service

818.8.2 Violations shall subject the Food Service Establishment to penalties and other enforcement action as provided for in this Code and the Commission's FSE Enforcement Response Plan.

818.8.3 Failure to properly maintain a grease abatement system or to present records of maintenance; removal and/or tampering with the flow control device; or failure to comply with any condition of a FSE Wastewater Discharge Permit shall be a violation of this Code, and shall subject the permittee to penalties and other enforcement action as provided for in the Commission's FSE Enforcement Response Plan.

818.8.4 Repeated violations for failure to clean or maintain a flow-based grease interceptor shall result in a requirement to install a volume-based interceptor as provided for in the Commission's FSE Enforcement Response Plan.

818.8.5 Repeated violations for failure to clean or maintain a volume-based grease interceptor will subject the FSE to increased enforcement as provided for in the Commission's FSE Enforcement Response Plan.