Oklahoma Uniform Building Code Commission

Residential Fuel Gas, Mechanical, and Plumbing Technical Committee

Recommendations for the 2015 Edition of the International Residential Code®

Presented: September 15, 2015
By: Mr. John Harrod, Chairman

Commission Liaisons: Danny Hancock (Plumbing), Joe McKenzie (Mechanical)

Committee Members: John Harrod (Engineer/Chairman), Fred Blalock (Inspector Small Jurisdiction/Vice-Chairman), Stacey Coe (Plumbing Contractor or Journeyman), Rodney Hadley (Mechanical Contractor or Journeyman), David Goetzcke (Inspector Large Jurisdiction), Mark Sipe (Fire Representative), and James Strider (Architect)

Alternate Members: Jud Collins (Mechanical, Plumbing, or Pipe-Fitter Contractor or Journeyman) and Charles Snyder (Inspector Large or Small Jurisdiction)

General Commentary:

The Fuel Gas, Mechanical, and Plumbing Technical Committee conducted a thorough review of the 2015 Edition of the International Residential Code®, Chapters One, Two, Eleven, Twelve, Thirteen, Fourteen, Fifteen, Sixteen, Seventeen, Eighteen, Nineteen, Twenty, Twenty-one, Twenty-two, Twenty-three, Twenty-four, Twenty-five, Twenty-six, Twenty-seven, Twenty-eight, Twenty-nine, Thirty, Thirty-one, Thirty-two and Thirty-three, at the request of the Oklahoma Uniform Building Code Commission. The review process commenced on Tuesday, March 10, 2015; in the Construction Industries Board/Uniform Building Code Commission boardroom at Shepherd Mall, located at 2401 NW 23rd Street, Suite 2F, Oklahoma City, OK 73107.

Public Comment Forms:

Twenty-eight (28) public comment forms were received, two (2) public comment forms were revised for a total of thirty (30) public comment forms. Fourteen public comment forms were approved as written; two (2) public comment forms were approved as modified; one (1) public comment form was withdrawn; and thirteen (13) public comment forms were denied.

2009 Modifications Reviewed

Twenty-five (25) 2009 rule modifications were reviewed by the committee. Ten (10) modifications have been recommended to be carried over as-is; five (5) rule modifications have been recommended to be carried over with modifications; and nine (9) rule modifications have been recommended to be deleted from the current rules.

Chapter One – Scope and Administration
Unanimous vote to "Recognize Chapter One" (3/24/2015)

Chapter Two – Definitions
Unanimous vote to "Recognize Chapter Two subject to bringing it into alignment with the 2015 Commercial Committee changes" (3/24/2015)

Proposed Code Change: Modification of the definition of a "Building Drain"

BUILDING DRAIN. The lowest piping that collects the discharge from all other drainage piping inside the house and extends ~~30 inches~~ 5 feet (~~762~~ 1524 mm) in developed length of pipe, beyond the exterior walls and conveys the drainage to the building sewer.

Summary of Proposed Change: The 2015 Commercial Technical Committee received a comment form requesting the change to the definition of a building drain. The submitter noted the change was recommended to better align with the industry standard that the site sewer (civil) picks up 5 feet outside the building and it allowed sufficient length for required cleanouts instituted by Section 708.1.3 to be installed outside the building, especially where two-way cleanouts were installed. He added the distance better aligned with the separation distance required for septic tanks in Table 802.8 between the tank and the building, allowing the pipe in this distance to now be defined by a single term, i.e. building drain versus a 30-inch building drain, segment and a 30 inch building sewer segment as now set.

Committee Commentary: The 2015 committee did not discuss the change but did vote on Chapter Two with the understanding the modification would be made by OUBCC staff to align any definitions.

Committee Action Taken: Unanimous vote to “Recognize Chapter Two subject to bringing the definitions into alignment with the 2015 Commercial Committee changes” (3/24/2015)

Chapter Three – Building Plans
Unanimous vote to "Adopt Chapter Three as published" (3/24/2015)

Proposed Code Change: Public Comment Form FGMP-23, Section 313 Automatic Fire Sprinkler Systems (submitted 10/2/2015, page 67). The proposed change read:

Move all language in Section 313 into an appendix and replace it with the following:
Section 313.1 Townhouse automatic fire sprinkler systems. Where required by the Authority Having Jurisdiction, an ~~An~~ automatic residential fire sprinkler system shall be installed in townhouses as required in Appendix ???. ~~**Exception:** An automatic residential fire sprinkler system shall not be required where additions or alteration are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.~~

~~**Section R313.1.1 Design and installation.** Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with Section P2904 or NFPA 13D~~

Section R313.2 One- and two-family dwellings automatic fire sprinkler systems. Where required by the Authority Having Jurisdiction, an ~~An~~ automatic residential fire sprinkler system shall be installed in one- and two-family dwellings. ~~**Exception:** An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system.~~

~~**Section R313.2.1 Design and installation.** Automatic residential fire sprinkler systems shall be designed and installed in accordance with Section P2904 or NFPA 13D.~~

Summary of Proposed Change: The submitter noted the comment form was a revision from comment form FGMP-22 approved at the last meeting. He noted the previous submitter had proposed moving Section 2904 to an appendix to allow each local jurisdiction to choose if they wanted to include the fire sprinkler provisions in the code or work with their local stakeholders to develop mutually agreeable provisions.

Committee Commentary: The committee reviewed the comment form and discussed if Sections R313.1 and R313.1.1 should be included or stricken from the code all together and not placed in the appendix; which code the IRC or IFC had jurisdiction over townhomes as fire marshals had no jurisdiction over residential homes, but did townhomes through the IFC requirements as they usually had two or three families within the townhome structure; and if section 2904 should be referenced as there had been a previous vote to move that section into an appendix assigned by OUBCC staff. Committee consensus was to remove Sections R313.1 and R313.1.1 from the modification proposed in FGMP-23 allowing those sections to remain part of the code and require protection within townhouses. They determined the result of the action would be that Section R313.2 would be removed to an appendix and allow the local authority to determine if a requirement would be enforced for single family residences.

Committee Action Taken: Vote of 7 to 1 to "Approve Public Comment Form FGMP-23 as modified to remove Sections R313.1 and R313.1.1 and move Section R313.2 into an appendix"

Proposed Code Change: Public Comment Form FGMP-6, Section R315.2.2 Alteration, repairs, and additions (submitted 4/21/2015, page 68). The proposed modification read:

R315.2.2 Alteration, repairs, and additions. Where alterations, repairs or additions requiring a permit occur or where one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings.

Exceptions:

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck is exempt from the requirements of this section.
2. ~~Installation, alteration~~ Alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

Summary of Proposed Change: The submitter noted installations were permitted and regulated by inspections, but alterations and repairs were not usually permitted.

Committee Commentary: The committee discussed the proposed change. The submitter stated as an inspector, he believed it was hard to regulate repairs. There were others on the committee that disagreed because there could be rural places that allowed inspections to be passed without installing a carbon monoxide alarm. The committee discussed it was the responsibility of the contractor to make sure there was an alarm installed regardless of if the work was inspected.

Committee Action Taken: Unanimous vote to “Deny public comment form FGMP-6” (4/20/2015)

Chapter Eleven – Energy Efficiency

Proposed Code Change: Public Comment Form FGMP-21, Section N1101.14 Certificate (Mandatory) (submitted 9/21/2015, page 455). The proposed modification read:

Retain Section:
N1101.14 Certificate (Mandatory) A permanent certificate shall be completed by the builder or register design professional and posted on a wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label, or other required labels. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls foundations (slab, basement wall, crawl space and/or floor) and ducts outside conditioned spaces; U-factors for fenestration and solar heat gain coefficient (SHGC) of fenestration and the results from any required duct system and building envelope air leakage testing done on the building. Where there was more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater was installed in the residence; the certificate shall list " gas-fired" unvented room heater," electric furnace" or " baseboard electric heater" as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnace or electric baseboard heaters.

Summary of Proposed Change: The submitter noted the section provided protection to the homeowner by requiring the builder or registered design professional to post documentation as to the energy efficiency standard to which the home was built. Requiring this documentation does not add any additional

requirements above those outlined elsewhere in the code; it was evidence of the construction, which building inspectors, realtors and lenders can utilize in valuing the home in the future.

Committee Commentary: The committee reviewed the proposed change. They discussed if the requirement would add cost to the construction of the home; the intent of the Building Committee's decision to delete the requirement; consumer knowledge of energy efficiency requirements; benefit of having the certificate in the home; and upkeep of the certificate throughout the life of the home as items are upgraded or replaced.

Committee Action Taken: Vote of 4 to 3 to "Approve Public Comment Form FGMP-21 as written" (9/23/2015)

Proposed Code Change: Public Comment Form FGMP-19 (B-50), Section N1103.2.2 Sealing (submitted 9/21/2015, page 461). The proposed modification read:

N1103.3.2 Sealing Ducts, air handlers, filter boxes and building cavities used as ducts shall be sealed/ Joints and seams shall comply with ~~either the *International Mechanical Code*~~ or Section M1601.4. ~~of this code, as applicable~~ For duct systems with sheet metal plenums. Y's and supply boots only liquid applied sealants (Mastic or similar) shall be used to seal inner liner and start collars to plenum and any other seams in system. Duct tightness shall be verified by either of the following:

Exceptions:

1. Air-impermeable spray foam products shall be permitted to be applied without additional joint seals.
2. For duct having a static pressure classification of less than 2 inches of water column (500Pa), additional closure systems shall not be required for continuously welded joints and seams, and locking-type joints and seams of other than the snap-lock and button-lock types.

Summary of Change: The submitter noted the text was being added to require a liquid sealant of metal connections of the supply and return duct distribution system because it was the only effective and long lasting way to ensure the HVAC system duct leakage can be reduced to acceptable levels to comply with the 2009 IRC® Chapter 11. It has been found that duct tapes over time lose their adhesiveness in the attic space where exposed to high temperature and are difficult to get wrapped properly with the inner liner of the insulted ducts. Cost impacts are minimal if

compared to the proper installation using duct tape products and proper execution was rarely achieved in use of those products and life expectancy of duct tapes is not acceptable.

Committee Commentary: The committee discussed FGMP-19 while reviewing FGMP-18. During the discussion the committee noted the change would not allow for other methods and would require a more stringent code as the minimum.

Committee Action Taken: Unanimous vote to "Deny Public Comment Form FGMP-19" (9/23/2015)

Proposed Code Change: Public Comment Form FGMP-28, Section N1103.3.2 Sealing (submitted 10/7/2015, page 461). The proposed change read (based on the BTC recommendation to utilize 2009 language):

Option 1: Move Exception 1 behind the two methods for verifying duct tightness and amend as follows:
N1103.3.2 (R403.3.2) Sealing (Mandatory). Ducts, air handlers, filter boxes, and building cavities used as ducts shall be sealed. Joints and seams shall comply with Section M1601.4. Duct tightness shall be verified by either of the following: **Exception:** ~~Visual inspection by an approved party or the Authority Having Jurisdiction may be used instead of the rough-in test and post-construction test.~~ Verification by the Authority Having Jurisdiction or an approved party is permitted in lieu of the rough-in and post construction test.

1. Post-construction test: Leakage to outdoors shall be less than or equal to 8 cfm (3.78 L/s) per 100 square feet (9.29 square meters) of conditioned floor area or a total leakage less than or equal to 12 cfm (5.66 L/s) per 100 square feet (9.29 square meters) of conditioned floor area when tested at a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's handler end closure. All register boots shall be taped or otherwise sealed during the test.

2. Rough-in test: Total leakage shall be less than or equal to 6 cfm (2.83 L/s) per 100 square feet (9.29 square meters) of conditioned floor area when tested at a pressure differential of 0.1 inch w.g. (25 Pa) across roughed in system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to 4 cfm (1.89 L/s) per 100 square feet (9.29 square meters) of conditioned floor space.

Exception: Duct tightness test is not required if the air handler and all ducts are located within conditioned space.

Option 2: Revise as follows:

N1103.3.2 ~~(R403.3.2)~~ Sealing ~~(Mandatory)~~. Ducts, air handlers, filter boxes, and building cavities used as ducts shall be sealed. Joints and seams shall comply with Section M1601.4. Duct tightness shall be verified by ~~either~~ one of the following: ~~**Exception:** Visual inspection by an approved party or the Authority Having Jurisdiction may be used instead of the rough-in test and post-construction test.~~

1. Post-construction test: Leakage to outdoors shall be less than or equal to 8 cfm (3.78 L/s) per 100 square feet (9.29 square meters) of conditioned floor area or a total leakage less than or equal to 12 cfm (5.66 L/s) per 100 square feet (9.29 square meters) of conditioned floor area when tested at a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's handler end closure. All register boots shall be taped or otherwise sealed during the test.

2. Rough-in test: Total leakage shall be less than or equal to 6 cfm (2.83 L/s) per 100 square feet (9.29 square meters) of conditioned floor area when tested at a pressure differential of 0.1 inch w.g. (25 Pa) across roughed in system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to 4 cfm (1.89 L/s) per 100 square feet (9.29 square meters) of conditioned floor space.

3. Visual verification by the Authority Having Jurisdiction or an approved agency.

Exception: Duct tightness test is not required if the air handler and all ducts are located within conditioned space.

Summary of Proposed Change: The submitter noted the current proposed language puts an exception before the two methods and that was not a common code format. He noted his proposal was common code format and makes the text more understandable.

Committee Commentary: The comment form was submitted during a meeting. It was the pleasure of the committee to discuss and vote on the comment form during the meeting. They discussed modifying the language into correct code language format and modifying the word "agency" to "agent" in the second option.

Committee Action Taken: Vote of 7 to 1 to "Approve Option Two (2) on Public Comment Form FGMP-28 as written" (10/7/2015)

Proposed Code Change: Public Comment Form FGMP-27, Sections N1103.4.1, N1103.5, N1103.5.1, N1103.5.1.2, N1103.5.2, and N1103.5.3 (submitted 10/5/2015, page 462). The proposed change read:

Retain Sections N1103.4.1 through N1103.5.1 with the following modifications:
N1103.4.1 ~~(R403.4.1)~~ Protection of piping insulation. Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance, and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted. <u>Heated circulation water systems shall include a readily accessible manual switch that can turn off the circulation pump when the system is not in use.</u>

N1103.5 (R403.5) Service hot water systems. Energy conservation measures for service hot water systems shall be in accordance with Sections N1103.5.1 and N1103.5.4.

N1103.5.1 ~~(R403.5.1)~~ Heated water circulation and temperature maintenance systems (Mandatory). Heated water circulation systems shall be in accordance with Section R1103.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R1103.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

N1103.5.1.1 ~~(R403.5.1.1)~~ Circulation systems. Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermo-syphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for the water.

N1103.5.1.2. ~~(R403.5.1.2)~~ Heat trace systems. Electric heat trace systems shall comply with IEEE 515.1 or UL 515. Controls for such systems shall automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy.

N1103.5.2 ~~(R403.5.2)~~ Demand recirculation systems. A water distribution system having one or more recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold water supply pipe shall be a demand recirculation water system. Pumps shall have controls that comply with both of the following:

1. The control shall start the pump upon receiving a signal from the action of a user or a fixture or appliance, sensing the presence of a user of a fixture or sensing the flow of hot or tempered water to a fixture fitting or appliance.
2. The control shall limit the temperature of the water entering the cold water piping to 104 degrees Fahrenheit (40 degrees Celsius).

N1103.5.3. ~~(R403.5.3)~~ Hot water pipe insulation ~~(Prescriptive)~~. Insulation for hot water pipe with a minimum thermal resistance (R-value) of R-3 shall be applied to the following:

1. Piping ~~¾~~ 1 inch (~~19~~ 25 mm) and larger in nominal diameter.
2. Piping serving more than one dwelling unit.
3. Piping located outside the conditioned space.
4. Piping from the water heater to a distribution manifold.
5. Piping located under a floor slab.
6. Buried in piping.
7. Supply and return piping in recirculation systems other than demand recirculation systems.

Summary of Proposed Change: The submitter stated the current proposed deletion of Chapter Eleven paragraphs relating to heated water systems, require reference to the 2015 IECC for only items relating to these systems. By making a few amendments to this section , confusion of the contractors and inspectors can be avoided.

Committee Commentary: The committee reviewed the proposed form and discussed the language would keep the inspectors and contractors to the IRC as the only source rather than requiring another code book.

Committee Action Taken: Vote of 7 to 0, with one abstention to "Approve Public Comment Form FGMP-27 as written." (10/7/2015)

Proposed Code Change: Public Comment Form B-44, Section N1104.1 Lighting equipment, (page 463). The proposed modification read:

N1104.1 Lighting equipment. A minimum of 50 percent of the lamps in permanently installed ~~lighting fixtures~~ luminaries shall be high-efficacy lamps.

Summary of Change: The comment form was submitted by the Residential Building Technical Committee to align the code language between the committees.

Committee Commentary: The committee discussed the need to vote on the change as a "housekeeping" action. They determined the change did not affect the FGMP committee and therefore no further action was needed.

Committee Action Taken: No action was taken after discussion (8/17/2015)

Proposed Code Change: Chapter Eleven modifications from the Residential Building Technical Committee (page 437).

Summary of Proposed Change: The Residential Building Technical Committee (RBTC) submitted a revised Chapter Eleven document to the Residential Fuel-Gas, Mechanical, and Plumbing Technical Committee for review and action. The proposed modifications encompassed changes to the entire chapter.

Committee Commentary: The committee reviewed the document provided, noting several sections dealt with the FGMP areas. The committee discussed Sections N1103.2.2, Sealing and N1102.4.2.2, Visual Inspection. They discussed the RBTC meeting had several different comment forms regarding the chapter and the intent of that committee to keep the requirements at the 2009 level because of construction costs. A motion was made to turn down the modifications to the mechanical sections of Chapter Eleven, but it failed due to a lack of a second. A motion was made to accept the modifications as submitted by the RBTC committee, but the motion failed in a vote of three to four. A motion was made to adopt Section N1103 from the 2015 code, but failed with a vote of three to four. A motion was made to strike the language added for a visual inspection by the RBTC committee, but failed due to a lack of a second. A motion was made to remove Section N1103.2.2 Sealing, but failed due to a lack of a second.

Committee Action Taken: The committee determined they could not reach a consensus on anything the other committee had submitted and no further action was taken (8/17/2015).

Chapter Twelve – Mechanical Administration
Unanimous vote to "Approve Chapter Twelve as written" (3/24/2015)

Chapter Thirteen – General Mechanical System Requirements
Unanimous vote to "Approve Chapter Thirteen as written" (3/24/2015)

Chapter Fourteen – Heating and Cooling Equipment and Appliances
Unanimous vote to "Approve Chapter Fourteen as written" (3/24/15)

Chapter Fifteen – Exhaust Systems
Unanimous vote to "Approve Chapter Fifteen as Modified" (7/22/2015)

Proposed Code Change: Review of the 2009 rule modification 748:20-5-13, and Public Comment Form FGMP-4 (Revised), Section M1502.3 Duct termination (submitted 7/22/2015, page 485). The proposed change read:

2009 Modification:
Section M1502.3 Duct Termination. Exhaust ducts shall terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. If the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than 3 feet (914 mm) in any direction from the openings into buildings. Exhaust duct terminations shall be equipped with a backdraft damper. Additionally, exhaust shall not terminate within 3 feet (914 mm) of condensing units. Screens shall not be installed at the duct termination.

Summary of 2009 Change: The 2009 modification was made to require exhaust ducts not terminate within three feet of a condensing unit because of damage to condensing units caused by the poor placement of the exhaust termination.

Public Comment Form FGMP-4
Section M1502.3 Duct Termination. Exhaust ducts shall terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. If the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than 3 feet (914 mm) in any direction from openings into

buildings nor less than 12 inches from finished ground level or other obstruction. Exhaust duct terminations shall be equipped with a backdraft damper. Additionally, exhaust shall not terminate within 3 feet (914 mm) of condensing units and minimum 12 inches from the ground or any obstruction. Screens shall not be installed at the duct termination.

Summary of Proposed Change: The submitter stated there were manufacturer's installation instructions that required a 12 inch clearance that may not be available when the dryer was installed or changed without the requirement in the code.

Committee Commentary: The committee was asked to review the 2009 modification and determine if the modification should be brought forward into the 2015 code. The committee determined it was still relevant and should be kept. The original public comment form FGMP-4 was discussed, after the vote to bring forward the modification made to the same section in the 2009 adoption. The committee requested the submitter withdraw the form and resubmit based upon the previous vote. A revised version was submitted and discussed at the April 20th meeting. There were members who did not agree with the revised version and the form was denied. A third version that added the wording "nor less than 12 inches from finished ground level or other obstruction" was submitted and discussed at the July 22nd meeting. The committee agreed with the third and final version.

Committee Action Taken: Unanimous vote to "Carry forward the same modification to the 2015 code" (3/24/2015) Unanimous voted to "Approve Public Comment Form FGMP-4 (revised) as written" (7/22/2015)

Proposed Code Change: Public Comment Form FGMP-13, Section 1502.4.2, Duct Installation (submitted 8/13/2015, page 485). The proposed change read:

Delete:
~~**M1502.4.2 Duct installation.** Exhaust ducts shall be supported at intervals not to exceed 12 feet (3658 mm) and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1 and shall be mechanically fastened. Ducts shall not be joined with screws or similar fasteners that protrude more than 1/8 inch (3.2 mm) into the inside of the duct.~~

Replace with:
M1502.4.2 Duct Installation. Exhaust ducts shall be supported at 4 foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude into the inside of the duct.

Summary of Proposed Change: The submitter noted the language suggested came from the 2009 code and the concern with the language in the 2015 code was that dryer ducts were required to be mechanically fastened. He noted the new language allowed for screws or similar fasteners so long as they did not penetrate 1/8 inch. He stated the section seemed to be pushing installers to use manufactured mechanical joints. He noted the screw protrusions would be hard to enforce since there was not a way to observe the penetration depth.

Committee Commentary: The committee discussed the proposed change. They determined the submitter pointed to another section of the code 1601.4.1 that still allowed for the use of mastics and other ways to do seams, joints and connections. After discussion, committee consensus was the 2015 language was okay.

Committee Action Taken: Unanimous vote to "Deny Public Comment Form FGMP-13" (8/17/2015)

Commission Action Taken: At the October 20, 2015 meeting, the Commission voted to approve the proposed change listed above.

Proposed Code Change: Public Comment Form FGMP-3, Section M1503.4.1, Location (submitted 3/16/2015, page 486). The proposed modification read:

M1503.4.1 Location. Kitchen exhaust makeup air shall be discharged into the same room in which the exhaust system is located. ~~or into rooms or~~ Using the Mechanical equipment the exhaust makeup air can be introduced into the mechanical duct systems that communicate through one or more permanent openings with the room in which such exhaust system is located. Such permanent openings shall have a net cross-sectional area not less than the required area of the makeup air supply openings.

Summary of Proposed Change: The submitter stated using the mechanical equipment the makeup air can be brought into the equipment through dampers.

Committee Commentary: The committee discussed the proposed change and determined there was no need for the change.

Committee Action Taken: Unanimous vote to "Deny Public Comment Form FGMP-3" (3/24/2015)

Proposed Code Change: Public Comment Form FGMP-14, Table M1506.2 Duct Length (submitted 8/13/2015, page 487). The proposed change read:

Duct Type	Flex Duct								Smooth-Wall Duct							
Fan airflow rating (CFM @ 0.25 inch Wc[a])	50	80	10	125	150	200	250	300	50	80	100	125	150	200	250	300
Diameter[b] (inches)	Maximum length[c,d,e] (feet)															
3	~~X~~ 15	X	X	X	X	X	X	X	~~5~~ 15	X	X	X	X	X	X	X
4	56	4	X	X	X	X	X	X	114	31	10	X	X	X	X	X
5	NL	81	42	16	2	X	X	X	NL	152	91	51	28	4	X	X
6	NL	NL	158	91	55	18	1	X	NL	NL	NL	168	112	53	25	9
7	NL	NL	NL	NL	161	78	40	19	NL	NL	NL	NL	NL	148	88	54
8 and above	NL	NL	NL	NL	NL	189	111	69	NL	NL	NL	NL	NL	NL	198	133

For SI : 1 foot = 304.8 mm
a. Fan air flow rating shall be in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51.
b. For noncircular ducts, calculate the diameter as four times the cross-sectional area divided by the perimeter.
c. This table assumes that elbows are not used. Fifteen feet of allowable duct length shall be deducted for each elbow installed in the duct run.
d. NL = no limit on duct length of this size.
e. X = not allowed. Any length of duct of this size with assumed turns and fittings will exceed the rated pressure drop.

Summary of Proposed Change: The submitter noted 3 inch diameter ducts have been used for bathroom exhausts for decades with few reported problems upon duct sizing.

Committee Commentary: The committee reviewed the proposed change but did not have much comment.

Committee Action Taken: Vote of 6 to 0, with 1 abstention to “Deny Public Comment Form FGMP-14” (8/17/15).

Proposed Code Change: Public Comment Form FGMP-11, Sections M1507.1 through 1507.3.3 and Tables M1507.3.3(1) and M1507.3.3(2) (submitted 7/29/2015, page 487). The proposed modification read:

Move the entire section of 1507 Mechanical Ventilation to the appendix.

M1507.1 General. Where local exhaust or whole-house mechanical ventilation is provided, the equipment shall be designed in accordance with this section.

M1507.2 Recirculation of air. Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another dwelling unit and shall be exhausted directly to the outdoors. Exhaust air from bathrooms and toilet rooms shall not discharge into an attic, crawl space or other areas inside the building.

M1507.3 Whole-house mechanical ventilation system. Whole-house mechanical ventilation systems shall be designed in accordance with Sections M1507.3.1 through M1507.3.3.

M1507.3.1 System design. The whole-house ventilation system shall consist of one or more supply or exhaust fans, or a combination of such, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered as providing supply ventilation.

M1507.3.2. System controls. The whole-house mechanical ventilation system shall be provided with controls that enable manual override.

M1507.3.3 Mechanical Ventilation rate. The whole-house mechanical ventilation system shall provide outdoor air at a continuous rate of not less than that determined in accordance with Table M1507.3.3.(1). Exception: The whole-house mechanical ventilation system is permitted to operate intermittently where the system has controls that enable operation for not less than 25-percent of each 4-hour segment and the ventilation rate prescribed in Table M1507.3.3(1) is multiplied by the factor determined in accordance with Table M1507.3.3(2).

TABLE M1507.3.3(1)
CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	>7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 – 3,000	45	60	75	90	105
3,001 – 4,500	60	75	90	105	120
4,501 – 6,000	75	90	105	120	135
6,001 – 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

For SI: 1 square foot = 0.0929 square meters, 1 cubic foot per minute = 0.0004719 meters cubed/s

TABLE M1507.3.3(2) INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS[a,b]

RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	25%	33%	50%	66%	75%	100%
Factor[a]	4	3	2	1.5	1.3	1.0

a. For ventilation system run time values between those given, the factors are permitted to be determined by interpolation.
b. Extrapolation beyond the table is prohibited.

Summary of Proposed Change: The submitter requested the section be moved to the appendix to leave the adoption of these requirements to the local jurisdiction having authority.

Committee Commentary: The committee reviewed the comment form and discussed air exchange rates; requirements of the energy standards the homes were built too; the ability for a jurisdiction to adopt the appendices, when the section would be applicable; and if every house would need a whole-house ventilation system.

Committee Action Taken: Vote of 5 to 0, with 2 abstentions to "Deny Public Comment Form FGMP-11" (8/17/15)

Chapter Sixteen – Duct Systems
Unanimous vote to "Approve Chapter Sixteen as written" (3/24/2015)

Proposed Code Change: Public Comment Form FGMP-8, Table M1601.1.1, Duct construction minimum sheet metal thickness for single dwelling units (submitted 6/15/2015, page 490). The proposed modification read:

Table M1601.1.1 – Delete the current table

~~ROUND DUCT DIAMETER (inches)~~	~~STATIC PRESSURE~~			
	~~½ Inch water gage~~		~~1 Inch water gage~~	
	~~Thickness (inches)~~		~~Thickness (inches)~~	
	~~Galvanized~~	~~Aluminum~~	~~Galvanized~~	~~Aluminum~~
~~≤ 12~~	~~0.013~~	~~0.018~~	~~0.013~~	~~0.018~~
~~12 to 14~~	~~0.013~~	~~0.018~~	~~0.016~~	~~0.023~~
~~15 to 17~~	~~0.016~~	~~0.023~~	~~0.019~~	~~0.027~~
~~18~~	~~0.016~~	~~0.023~~	~~0.024~~	~~0.034~~
~~19 to 20~~	~~0.019~~	~~0.027~~	~~0.024~~	~~0.034~~
~~RECTANGULAR DUCT DIMENSION (inches)~~	~~STATIC PRESSURE~~			
	~~½ Inch water gage~~		~~1 Inch water gage~~	
	~~Thickness (inches)~~		~~Thickness (inches)~~	
	~~Galvanized~~	~~Aluminum~~	~~Galvanized~~	~~Aluminum~~
~~≤ 8~~	~~0.013~~	~~0.018~~	~~0.013~~	~~0.018~~
~~9 to 10~~	~~0.013~~	~~0.018~~	~~0.016~~	~~0.023~~
~~11 to 12~~	~~0.016~~	~~0.023~~	~~0.019~~	~~0.027~~
~~13 to 16~~	~~0.019~~	~~0.027~~	~~0.019~~	~~0.027~~
~~17 to 18~~	~~0.019~~	~~0.027~~	~~0.024~~	~~0.034~~
~~19 to 20~~	~~0.024~~	~~0.034~~	~~0.024~~	~~0.034~~

~~For SI: 1 inch = 25.4 mm, 1 inch water gage = 249 Pa.~~
~~Duct work that exceeds 20 inches by dimension or exceeds a pressure of 1 inch water gage (250 Pa) shall be constructed in accordance with SMACNA HVAC Duct Construction Standards – Metal and Flexible.~~

and replace with the following:

DUCT SIZE	GALVANIZED		APPROXIMATE ALUMINUM B & S GAGE
	Minimum Thickness (inches)	Equivalent Galvanized Gage No.	
Round ducts and enclosed	-	-	-
Rectangular ducts	-	-	-
14 inches or less	0.013	30	26
Over 14 inches	0.016	28	24
Exposed rectangular ducts	-	-	-
14 inches or less	0.016	28	24
Over 14 inches	0.019	26	22

For SI: 1 inch = 25.4 mm

Duct work that exceeds 20 inches by dimension or exceeds a pressure of 1 inch water gage (250 Pa) shall be constructed in accordance with SMACNA HVAC Duct Construction Standards – Metal and Flexible.

Summary of Proposed Change: The submitter noted industry practice was to use gage sizes to order duct work and the new table in the 2015 code was confusing. The table he requested to replace the new table was the one used in previous versions of the code.

Committee Commentary: The committee and the submitter discussed static pressure and industry use for residential, micrometer settings, listing on architectural plans, concerns that the previous table was not as specific as the new table and contained less dimensions, modifying the new table to include gage sizes, availability of materials in the dimensions listed on the new table, that the minimum thickness noted in the new table could meet the specifications for more than one gage size, commercial use practices of using gages based on static pressure, tolerance levels for materials; spiral metal, zinc plating processes, issues with using gages that didn't meet the minimum thickness levels and common use of flexible duct.

Committee Action Taken: Unanimous vote to "Approve Public Comment Form FGMP-8" (8/17/2015)

Proposed Code Change: Public Comment Form FGMP-18, Section M1601.4.1, Joints, seams and connections (submitted 9/1/2015, page 490). The proposed modification read:

M1601.4.1 Joints, seams and connections- Longitudinal and transverse joints, seams and connections in metallic and non metallic ducts shall be constructed as specified in SMACNA HVAC *Duct Construction Standards-Metal and flexible and NAIMA Fibrous Glass Duct Construction Standards.* Joints, longitudinal and transverse seams, and connection in ductwork shall be securely fastened and sealed with welds, gaskets, mastics(adhesive), mastic-plus-embedded-fabric systems, liquid sealants or tapes. Tapes and mastics used to seal fibrous glass duct work shall be listed and labeled in accordance with UL 181A and shall be marked "181A-P" for pressure-sensitive tape, "181 A-M" for mastic or "181 A-H" for heat sensitive tape.

Tape and mastics used to seal metallic and flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 BM" for mastic. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C. Crimps joints for round metallic ducts shall have a contact lap of not less than 1 inch (25mm) and shall be mechanically fastened by means of not less than three sheet-metal screws or rivets equally spaced around the joint.

Closure systems used to seal all ductwork shall be installed in accordance with the manufactures' instructions.

Exceptions:

1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.
2. Where duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.

3. For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams of other than the snap-lock and button-lock types.
4. For duct systems with sheet metal plenums, Y's and supply boots, only liquid applied sealants (mastic or similar) shall be used to seal inner liners and start collars to plenum and any other seams in system.

Summary of Proposed Change: The submitter stated this text was being added to require a liquid sealant of metal connections of the supply and return duct distribution system because it was the only effective and long lasting way to ensure the HVAC system duct leakage can be reduced to acceptable levels to comply with the 2009 IRC® Chapter 11. It has been found that duct tapes over time lose there adhesiveness in the attic space where exposed to high temperatures and are difficult to get wrapped properly with the inner liner of the insulated ducts. Cost impacts are minimal if compared to the proper installation was rarely achieved in use of those products and life expectancy of ducts was not acceptable.

Committee Commentary: The submitter addressed the committee and stated the Building Technical Committee had discussed Chapter Eleven extensively and noted that the committee did not feel duct testing or blower door testing was in the best interest for the consumers in the State of Oklahoma and would drive up costs. He and the committee discussed if manufacturers were aware of issues addressed in the Building Technical Committee meetings; third party testing on mastic tapes; heat insulation requirements; alignment with Chapter Eleven changes by the Building Technical Committee. They discussed other options for modifying the section submitted

on another comment form; regular flex duct; if the change should be an exception or a requirement in the code; that the proposal would eliminate duct tape sealing; and the change would not allow other methods to be utilized.

Committee Action Taken: Unanimous vote to “Deny Public Comment Form FGMP-18” (9/23/2015)

Chapter Seventeen – Combustion Air
Unanimous vote to "Approve Chapter Seventeen as written" (3/24/2015)

Chapter Eighteen – Chimneys and vents
Unanimous vote to "Approve Chapter Eighteen as written" (3/24/2015)

Chapter Nineteen – Special Appliances, Equipment and Systems
Unanimous vote to "Approve Chapter Nineteen as modified " (9/23/2015)

Proposed Code Change: Public Comment Form FGMP-20, Section M1903.1.1 Electrical requirements (submitted 9/21/2015, page 499) The proposed modification read:

M1903.1 General. Stationary fuel cell power plants having power output not exceeding 1,000 kW, shall comply with ANSI/CSA America FC 1 and shall be installed in accordance with the manufacturer's installation instructions and NFPA 853.

M1903.1.1 Electrical requirements. In addition to the requirements of M1903.1, interconnection and all associated wiring shall be installed in accordance with NFPA 70 NEC® Article 692 Fuel Cell Systems.

Summary of Proposed Change: The submitter noted while NFPA 853 references electrical wiring, the RETC agrees that adding the reference to NFPA 70 NEC® Article 692 Fuel Cell Systems, gives the designer, installer, and inspector and additional code Article to reference for a more comprehensive electrical installation requirement, on that is more complete than NFPA 853. A Fuel Cell System is considered a power supply system. Article 692 also provides for the requirement of a plaque or directory at all service entrance locations, identifying the location of all power supply systems. The intent of the RETC is to provide more clarity with the addition of sub-section M1903.1.1. On September 02,2015, RETC unanimously accepted PCF E9,with modification, and directed a PCF be submitted to RFGMP Committee for their consideration and acceptance of M1903.1.1.

Committee Commentary: The submitter and the committee discussed Stationary Fuel Cell Power Plants; the Electrical Technical Committee's belief further language should be added to the section; references in NFPA 853 for building, installation, and ventilation requirements; how the change could provide more references to designers; and if Article 692 in the NEC 2014 covered all fuel systems.

Committee Action Taken: Unanimous vote to "Approve public comment form FGMP-20 as Written" (09/23/2015)

Chapter Twenty – Boilers and Water Heaters
Unanimous vote to "Approve Chapter Twenty as written (3/24/2015)

Chapter Twenty-one – Hydronic Piping
Unanimous vote to "Approve Chapter Twenty-one as written" (4/20/2015)

Chapter Twenty-two – Special Piping and Storage Systems
Unanimous vote to "Approve Chapter Twenty-two as written" (3/24/2015)

Chapter Twenty-three – Solar Thermal Energy Systems
Unanimous vote to "Approve Chapter Twenty-three as written" (4/20/2015)

Chapter Twenty-four – Fuel Gas
Unanimous vote to "Approve Chapter Twenty-four as written" (5/18/2015)

Proposed Code Change: Review of the 2009 Rule 748: 20-5-14(1), Section G2406.3 (306.6) Outdoor locations.

2009 Modification:
Section G2406.3 (306.6) Outdoor locations. Appliances installed in outdoor locations shall be either listed for outdoor installation or provided with approved protection from outdoor environmental factors that influence the operability, durability and safety of the appliance.

Summary of 2009 Change: The 2009 committee felt the way the code was written without the modification it removed the original intent of requiring manufacturer's listing or direction and gave no replacement authority. The 2009 modification made it a requirement to have the protection for outdoor appliances be approved.

Committee Commentary: The 2015 committee was asked to review the 2009 modification and determine if the same change should be made to the 2015 code. The committee determined that the wording "approved" was not required.

Committee Action Taken: Unanimous vote to "Delete the 2009 rule and revert to the 2015 code language" (4/20/2015)

Proposed Code Change: Review of 2009 Rule 748:20-5-14(2), Tables G2413.4(3) [402.4(7)] and G2413.4(4) [402.4(7)] tables for copper tubing

2009 Modification: Tables G2413.4(3), G2413.4(4). These tables have been stricken from the code.

Summary of 2009 Change: The 2009 committee felt that copper should be removed from the code because gas providers would not provide documentation or stand behind the product guaranteeing their gas contained less than 0.3 grains of hydrogen sulfide gas per 100 cubic feet.

Committee Commentary: The committee was asked to review the 2009 code modification as well as the modification made to the 2015 commercial code; which struck the 2009 modifications from the rules and allowed the code to revert back to the 2015 published language. The committee agreed with the 2015 commercial technical committee and determined the residential code should align with the commercial code.

Committee Action Taken: Unanimous vote to "Delete the 2009 modification and revert to the 2015 code language to align with the commercial code." (4/20/2015)

Proposed Code Change: Review of 2009 Rule 748:20-5-14(3), 2414.5.2 Copper tubing.

2009 Modification: ~~Copper and brass tubing shall not be used if the gas contains more than an average of 0.3 grains of hydrogen sulfide per 100 standard cubic feet of gas (0.7 milligrams per 100 liters).~~ Copper tubing shall be prohibited for natural gas installations, but shall be allowed for liquefied petroleum gas installations.

Summary of 2009 Change: The 2009 residential committee felt that copper should be removed from the code because gas providers would not provide documentation or stand behind the product guaranteeing their gas contained less than 0.3 grains of hydrogen sulfide gas per 100 cubic feet of gas.

Committee Commentary: The committee was asked to review the 2009 modification as well as the 2015 commercial committee modification, which struck the 2009 modification from the rules and allowed the code to revert to the 2015 published language. They determined the 2015 commercial committee was correct and the codes should be aligned.

Committee Action Taken: Unanimous vote to "Delete the 2009 rule change and revert to the 2015 code language to align with the commercial code" (4/20/2015)

Proposed Code Change: Public Comment Form FGMP-9, Section G2414.5.3, Corrugated stainless steel tubing (submitted 7/8/2015, page 552). The proposed change read:

G2414.3.1 (403.5.4) Corrugated stainless steel tubing. Corrugated stainless steel tubing shall be listed in accordance with ANSI LC 1/CSA 6.26, and listed to ICC-ES PMG LC1027.

Summary of Proposed Change: The submitter noted ICC-ES PMG LC1027 was a listing test criteria which subjected the CSST system to the highest lightning energy test in the industry. He stated CSST products which met, and were listed to that criteria were subjected to 8 times more electrical arcing test energy than the next highest available industry testing level.

Committee Commentary: The committee discussed the comments made by the submitter and were concerned if the change was made, it could create a monopoly in the industry as only one company had a product that met that standard. The committee also discussed the code set by the OUBCC was a minimum code and not a maximum code and jurisdictions could make the code more stringent if they felt the change was needed.

Committee Action Taken: Unanimous vote to "Deny Public Comment Form FGMP-9" (7/22/2015)

Proposed Code Change: Public Comment Form FGMP-5, Section 2415.12, Minimum burial depth (submitted 4/21/2015, page 555). The proposed change read:

G2415.12 (404.12) Minimum burial depth. Underground piping systems shall be installed a minimum depth of ~~12~~ 18 inches (~~305~~ 457.5 mm) below grade, except as provided for in Section G2415.12.1.

Summary of Proposed Change: The submitter noted the public comment form aligned the residential code with the modifications made to the commercial code.

Committee Commentary: The committee discussed the modification and determined it was a good modification to make.

Committee Action Taken: Vote of 5 Aye to 2 Nay to "Approve Public Comment Form FGMP-5 as written" (7/22/2015)

Proposed Code Change: Review of 2009 Rule 748:20-5-14(4), Section 2417.7 (406.7) Purging.

2009 Rule Modification: The 2009 rule modification replaced the entire section regarding purging with an emergency amendment.

Summary of 2009 Change: For both the 2009 residential and commercial code adoptions, the section was replaced by an emergency amendment published by the International Code Council in response to a loss of life.

Committee Commentary: The committee was asked to review the 2009 code modification made as well as the 2015 commercial code changes. The committee recognized the 2015 code language included the 2009 emergency amendment.

Committee Action Taken: Unanimous vote to "Delete the 2009 rule modification and revert to the 2015 code language" (4/20/2015)

Chapter Twenty-five – Plumbing Administration
Unanimous vote to "Approve Chapter Twenty-five as modified" (7/22/2015)

Proposed Code Change: Review of rule 748:20-5-15(1) and FGMP-7, Section P2503.4 Building Sewer Test (submitted 4/21/2015, page 591).

2009 Rule Modification:
P2503.4 Building sewer test. When required by the local authority having jurisdiction, the ~~The~~ building sewer shall be tested by insertion of a test plug at the point of connection with the public sewer and filling the building sewer with water, testing with not less than a 10-foot (3048 mm) head of water and be able to maintain such pressure for 15 minutes.

A forced sewer test shall consist of pressurizing the piping to a pressure of not less than 5 psi (34.5 kPa) greater than the pump rating and maintaining such pressure for not less than 15 minutes. The forced sewer shall be water tight at all points.

Summary of 2009 Rule Change: The 2009 modification was to note the building sewer test was only necessary when the local authority having jurisdiction required the test be done.

FGMP-7 Code Modification:
P2503.4 Building sewer test. When required by the local authority having jurisdiction, the building sewer shall be tested by insertion of a test plug at the point of connection with the public sewer, filling the building sewer with water and pressurizing the sewer to not less than ~~10~~ 5-foot (~~3048~~ 1024 mm) head of water. The test pressure shall not decrease during a period of not less than 15 minutes. The building sewer shall be watertight at all points.

A forced sewer test shall consist of pressurizing the piping to a pressure of not less than 5 psi (34.5 kPa) greater than the pump rating and maintaining such pressure for not less than 15 minutes. The forced sewer shall be water tight at all points.

Summary of Proposed Change: The submitter noted the comment form was to align with the modifications made to the 2015 commercial code. He noted he added the wording "When required by the local authority having jurisdiction" changing it from "When required."

Committee Commentary: The committee was asked to review the 2009 modification and the 2015 commercial code modification and determine what if any modification should be made. They were then asked to review a public comment form that further modified the section.

Committee action taken: Unanimous vote to "Modify and align the code to the 2015 commercial code language." (4/20/2015) Unanimous vote to "Approve Public Comment Form FGMP-7 as written" (7/22/15)

Proposed Code Change: Review of rule 748:20-15(2), Section P2503.6 Shower liner test.

2009 Rule Modification:
Section P2503.6 Shower liner test. Where shower floors and receptors are made water tight by the application of materials required by Section P2709.2, the completed liner installation shall be tested at plumbing final. The pipe from the shower drain shall be plugged water tight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches (51 mm) measured at the threshold. Where a threshold of at least 2 inches (51 mm) does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches (51 mm) deep measured at the threshold. The water shall be retained for a test period of not less than 15 minutes and there shall be no evidence of leakage.

Summary of 2009 Change: The 2009 committee noted the intent of the code was to confirm the shower pan was water tight at the time it was ready to be used. They noted testing the pan during construction would leave it open to damage and more than likely to leak when used.

Committee Commentary: The committee was asked to review the 2009 modification and the 2015 commercial code modification to determine what if any modifications should be made. They discussed the original modification intent, modification made by the Commercial Technical Committee to strike the modification and allow the 2015 text to revert to it's published format. At the end of the first discussion, the committee voted to keep the 2009 modification. However the section was discussed at a later meeting and the committee determined the modification made by the commercial code was correct.

Committee Action Taken: Unanimous vote to "Keep the 2009 modification" (4/20/2015), Vote of 5 to 2 to "Bring forward the commercial modification" which deleted the wording "at plumbing final." (7/22/2015)

Proposed Code Change: Review of rule 748:20-5-15(3) and Public Comment Form FGMP-15, Section P2503.7 Water-supply system testing (submitted 8/13/2015, page 592).

2009 Modification:
Section 2503.7 Water-supply system testing. Upon completion of the water-supply system or a section of it, the system or portion completed shall be tested and proved tight under a water pressure of not less than the working pressure of the system or, for piping systems other than ~~plastic~~ PVC or CPVC, by an air test of not less than 50 psi (345 kPa). This pressure shall be held for not less than 15 minutes. The water used for tests shall be obtained from a potable water source.

Summary of 2009 Change: The 2009 committee noted the word "plastic" no longer defined the materials that cannot be air tested. PEX and similar piping does have air pressure ratings capable of allowing the required air test.

FGMP-15 Modification:
Section 2503.7 Water-supply system testing. Upon completion of the water-supply system or a section of it, the system or portion completed shall be tested and proved tight under a water pressure of not less than the working pressure of the system or, for piping systems other than plastic, by an air test of not less than 50 psi (345 kPa). This pressure shall be held for not less than 15 minutes. The water used for tests shall be obtained from a potable water source. **Exception:** PEX piping systems where allowed by the manufacturer may be air tested.

Summary of Proposed Change: The submitter of Public Comment Form FGMP-15 noted that PEX piping had historically been allowed to be air tested by both the Authority Having Jurisdiction and the piping manufacturers. He noted the word “plastic” in the section was broad and most individuals would consider PEX piping a form of plastic and there was no reason to forbid the practice.

Committee Commentary: The committee was asked to look at the 2009 code modification as well as the modification made by the commercial committee and determine, what if any change should be made. They discussed bringing the modification forward or following the lead of the commercial committee which deleted the original modification and allowed the code to return to the 2009 published language. The committee reviewed public comment form FGMP-15 at the 8/17/15 meeting and discussed the proposed change. Committee consensus was to continue to utilize the 2009 language.

Committee Action Taken: Vote of 1 to 7 to “Bring forward the 2015 commercial code language” (7/22/2015); Vote of 5 to 2, with 2 abstentions to “Deny Public Comment Form FGMP-15 and bring forward the 2009 code language that replaced the word “plastic” with “PVC or CPVC” 5 (8/17/2015).

Chapter Twenty-six – General Plumbing Requirements
Unanimous vote to "Approve Chapter Twenty-six as amended" (4/20/15)

Proposed Code Change: Public Comment Form FGMP-2, Section 2603.4, Pipes through foundation walls (submitted 3/10/2015, page 593). The proposed change read:

P2603.4 Pipes through foundation walls. A pipe that passes through a foundation wall shall be provided with a relieving arch, or a pipe sleeve shall be built into the foundation wall. The relieving arch or pipe sleeve shall conform to one of the materials and standards listed in Table P3002.1(2). The sleeve shall be two pipe sizes greater than the pipe passing through the wall.

Summary of Proposed Change: The submitter noted there was confusion about the materials that could be used in the making of the relieving arches and the materials listed in Table P3002.1(2) were used for underground applications and would be suitable for the relieving arches or sleeves.

Committee Commentary: The committee discussed the proposed change and noted it would align the 2015 editions of the IRC® and IPC®.

Committee Action Taken: Unanimous vote to "Approve the Public Comment Form FGMP-2 as written" (4/20/2015)

Proposed Code Change: Review of 2009 Rule 748:20-5-16, Section 2603.6.1 Sewer depth (page 594).

2009 Modification:
Section 2603.6.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of 12 inches (305 mm) or as approved by the authority having jurisdiction below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 12 inches (305 mm) below grade.

Summary of 2009 Change: The 2009 committee noted the code required a number be inserted and the IRC® graphs of frost levels indicated a state wide depth of 12 inches was required. The committee noted for septic applications the authority having jurisdiction should be able to adjust that depth.

Committee Commentary: The committee stated they agreed with numbers being added in and that was what the committee wanted to do. It was stated by a committee member what the 2015 code language was saying to not add a number into the blank area. The committee stated the section numbers had changed from 2009 to 2015. It was noted the thought of some type number needed to be added and not to leave it blank. It was stated there are some places that were not jurisdictions and should have some type of minimum to abide by. The committee agreed there needed to be some number listed for the rural areas to abide by. One committee member stated he thought two numbers would be good to list there but 12 inches would be just fine for all of the State of Oklahoma. It was decided by the committee they agreed with the 12 inches that was listed on the 2009 modification and preferred to bring that information forward.

Committee Action Taken: Unanimous vote to "Bring forward the 2009 modification" (9/23/2015)

Chapter Twenty-seven – Plumbing Fixtures
Unanimous vote to "Approve Chapter Twenty-seven as amended" (4/20/2015)

Proposed Code Change: Review of rule 748:20-5-17(1), P2704.1 General (page 597).

2009 Code Modification:
Section P2704.1 General. Slip joints shall be made with an approved elastomeric gasket and shall be installed ~~only on the~~ from the fixture to trap outlet, ~~trap inlet and within the trap seal~~. Fixtures with concealed slip-joint connections shall be provided with an access panel or utility space at least 12 inches (305 mm) in its smallest dimensions or other approved arrangement so as to provide access to the slip connections for inspection and repair.

Summary of 2009 Modification: The committee felt the description was confusing and hard to administer. They modified the language to clarify the intent of the section.

2015 Commercial Modification:
405.8 Slip joint connections. Slip joints shall be made with an approved elastomeric gasket and shall only be installed from fixture outlet to ~~trap outlet seal~~ within 18 inches (457 mm) downstream of trap outlet seal. Fixtures with concealed slip-joint connections shall be provided with an access panel or utility space at least 12 inches (305 mm) in its smallest dimension or other approved arrangement so as to provide access to the slip joint connections for inspection and repair.

Summary of 2015 Commercial Modification: A comment form was utilized to bring forward the modification to the 2009 IPC which matched the modification made to the 2009 IRC. The committee discussed the modification, felt it was a good idea, but further modified the language as noted above.

Committee Commentary: The committee was asked to review the 2009 code modification and the 2015 commercial modification and determine if either of the modifications should be brought forward into the 2015 code. They determined the 2015 IRC® language should be modified to reflect the same language utilized for the 2015 IPC®.

Committee Action Taken: Unanimous vote to "Align with the Commercial Code" modification (4/20/15)

Proposed Code Change: Public Comment Form FGMP-10, Section 2706.1 General (submitted 7/9/2015, page 597). The proposed change reads:

2706.1 General. For other than hub drains that receive only clear-water waste and standpipes, a removable strainer or basket shall cover the waste outlet of waste receptors. Waste receptors shall not be installed in concealed spaces. Waste receptors shall not be installed in plenums, attics, crawl spaces or interstitial spaces above ceilings and below floors. Waste receptors shall be readily accessible. **Exception:** Where attic spaces are "conditioned space" by the installation of prescribed amount of polyurethane foam insulation at the underside of the roof deck, waste receptors will be allowed in the attic space.

Summary of Proposed Change: The submitter noted the apparent purpose of the requirement in the code was to prevent freezing problems associated with waste receptors located in vented attics and other non-conditioned spaces. As written, the requirement did not recognize the benefit of using foam insulation on the underside of roof decks thereby moving the thermal boundary to the outside building envelope. Moreover, the requirement prevents the usage of high efficiency furnaces (92% or higher) in attics since condensate is a combustion by-product of those units.

Committee Commentary: The committee discussed the modification and did not agree with the submitter.

Committee Action Taken: Vote of 4 to 0, with 3 abstentions to "Deny public comment form FGMP-10" (7/22/2015)

Proposed Code Change: Review of rule 748:20-5-17(2), Section P2709.2 Lining required (page 599).

2009 Code Modification:
Section P2709.2 Lining required. Where required ~~The~~ the adjoining walls and floor framing enclosed on-site built-up shower receptors shall be lined with one of the following materials:

1. Sheet lead,
2. Sheet copper,
3. Plastic liner material that complies with ASTM D 4608 or ASTM D 4551.
4. Hot mopping in accordance with Section P2709.2.3 or
5. Sheet-applied load-bearing, bonded waterproof membranes that comply with ANSI A118 10.

The lining material shall extend not less than 3 inches (76 mm) beyond or around the rough jambs and not less than 3 inches (76 mm) above finished thresholds. Sheet-applied load bearing, bonded waterproof membranes shall be applied in accordance with the manufacturer's installation instructions.

Summary of 2009 Change: The 2009 committee felt some receptors built with modern materials like block walls or otherwise sealed compartments did not need liners.

Committee Commentary: The committee was asked to review the 2009 modification and determine if the change should be included in the 2015 adoption. They discussed the modification and determined the change allowed the authority having jurisdiction to approve alternate materials not listed as an approved material.

Committee Action Taken: Unanimous vote to “Approve as modified” (4/20/2015)

Proposed Code Change: Review of rule 748:20-5-17(3), Section 2715.1 Laundry tray waste outlet (page 601).

2009 Rule Modification:
P2715.1 Laundry ~~tub~~ tray waste outlet. Each compartment of a laundry ~~tub~~ tray shall be provided with a waste outlet not less than 1 1/2 inches (38 mm) in diameter and a strainer or crossbar to restrict the clear opening of the waste outlet.

Summary of 2009 Modification: The 2009 committee noted the words "tub" and "tray" were both used interchangeably in the code and this modification made the code more uniform.

Committee Commentary: Since there is confusion in the industry and the terms are used interchangeably, no action was taken. The committee tabled the item until a public comment form could be submitted. The committee discussed the section again at the October 7, 2015 meeting as no comment form had been submitted. They determined the modification should carry forward.

Committee Action Taken: Unanimous vote to “Approve and carry forward the 2009 modification” (10/7/15)

Chapter Twenty-eight – Water Heaters
Unanimous vote to "Approve Chapter Twenty-eight as written" (5/18/2015)

Proposed Code Change: Review of rule 748:20-5-18(1), Section 2801.5 Required pan (page 603).

2009 Code Modification:
Section 2801.5 Required pan. Where tank type water heaters or hot water storage tanks are installed in locations where leakage of the tanks or connections will cause damage, the tank or water heater shall be installed in a galvanized steel pan having a material thickness of not less than 0.0236 inch (0.6010 mm) (No. 24 gage), or other pans approved for such use. Listed pans shall comply with CSA LC3.

Summary of 2009 Change: The 2009 committee noted with the more common use of tank-less water heaters, the appliances did not have storage tanks and did not need pans.

Committee Commentary: The committee was asked to review the 2009 modification and determine if it was still applicable. The committee discussed the additional wording to the section in the 2015 code.

Committee Action Taken: Unanimous vote to "Delete the 2009 modification and revert to the 2015 code language" (5/18/2015)

Proposed Code Change: Review of rule 748:20-5-18(2), Section 2803.1 Relief valves required (page 603).

2009 Code Modification:
Section 2803.1 Relief valves required. Tank type ~~Appliances~~ appliances and equipment used for heating water or storing hot water shall be protected by:

1. A separate pressure-relief valve and a separate temperature-relief valve; or
2. A combination pressure- and temperature-relief valve.

Summary of 2009 Change: The 2009 committee felt with the more common use of tank-less water heaters, the appliances did not have storage tanks and did not need relief valves.

Committee Commentary: The committee was asked to review the 2009 modification and determine if it was still applicable. The committee discussed the need for the modification and that the section number had changed in the 2015 code to Section 2804.1.

Committee Action Taken: Unanimous vote to "Delete the 2009 modification and revert to the 2015 code language" (5/18/2015)

Chapter Twenty-nine – Water Supply and Distribution
Unanimous vote to "Approve Chapter Twenty-nine as modified" (8/17/2015)

Proposed Code Change: Review of rule 748:20-5-19(1), and Public Comment Form FGMP – 12, Section P2902.5.3 Lawn irrigation systems (submitted 8/5/2015, page 608).

2009 Code Modification:
Section P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-~~type~~ vacuum breaker assembly or ~~a reduced pressure principle backflow preventer~~ a spill resistant backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

Summary of 2009 Change: The 2009 committee felt the code left out new devices available from the list in the code. They noted spill resistant backflow preventers had the same safety ratings as the others but, didn't discharge to the environment.

FGMP-12 Modification: (08/17/2015)
Section P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric vacuum breaker, a pressure vacuum breaker assembly or a spill resistance vacuum breaker or a reduced pressure principle backflow prevention assembly. Valves shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly.

Summary of Proposed Change: The submitter of FGMP-12 noted many lawn irrigation system backflow devices were being installed inside the structure. He noted a spill resistant would reduce any water damage when backflow happens.

Committee Commentary: The committee was asked to review the 2009 code modification and determine if it was still applicable. The committee determined the added language was redundant. The committee reviewed Public Comment Form FGMP-12 and discussed if the change made a mandatory requirement or if it would just allow another option and that jurisdictions were already enforcing the requirement.

Committee Action Taken: Unanimous vote to "Delete the 2009 code modification and revert to the 2015 code language" (5/18/2015); Unanimous vote to "Approve Public Comment Form FGMP-12" (8/17/2015); Unanimous vote to "Approve Public Comment Form FGMP-12" (9/23/2015).

Proposed Code Change: Review of rule 748:20-5-19(2) and Public Comment Form FGMP-25, Section P2903.8.6 Hose bibb bleed (submitted 10/2/2015, page 611).

2009 Rule Modification:
Section P2903.8.~~6.~~5 Hose bibb bleed. Where the authority having jurisdiction requires a ~~A~~ readily accessible air bleed shall be installed in hose bibb supplies at the manifold or at the hose bibb exit point.

Summary of 2009 Change: The 2009 committee felt the IPC® did not address hose bibb bleed and it was not applicable in residential applications, so the authority having jurisdiction would decide if it was needed.

FGMP-25
Section P2903.8.5 Hose bibb bleed. ~~Where the authority having jurisdiction requires a~~ A readily accessible air bleed shall be installed in hose bibb supplies at the manifold or at the hose bibb exit point.

Summary of Proposed Change: The submitter noted the section referred to manifold systems and without an air bleed, the air locks that occur cannot be relieved. He noted the section should be left as it was written in the 2015 IRC.

Committee Commentary: The committee discussed the requirement at the May 18, 2015 meeting and voted to delete the modification and revert to the 2015 code language. The issue was brought up and voted on again at the July 22, 2015 meeting reversing the original vote on May 18. A subsequent comment form was submitted and discussed at the October 7, 2015 meeting. The committee discussed the reasoning behind the 2009 modification and if the Authority Having Jurisdiction should be the one to make that decision.

Committee Action Taken: Unanimous vote to "Bring forward the 2009 language as written" (7/22/2015); Unanimous vote to "Approve Public Comment Form FGMP-25 as written" (10/7/2015)

Proposed Code Change: Review of rule 748:20-5-19(3) and Public Comment Form FGMP-24, P2903.9.1 Service valve (submitted 10/2/2015, page 611).

2009 Modification:
P2903.9.1 Service valve. Each dwelling unit shall be provided with an accessible main shutoff valve near the entrance of the water service. The valve shall be of a full-open type having nominal restriction to flow~~, with provision for drainage such as a bleed orifice or installation of a separate drain valve~~. Additionally , the water service shall be valved at the curb or ~~property~~ lot line in accordance with local requirements.

Summary of 2009 Change: The 2009 committee felt the intent and equipment was not applicable to residential design because of the under floor distribution system.

FGMP-24
P2903.9.1 Service valve. Each dwelling unit shall be provided with an accessible main shutoff valve near the entrance of the water service. The valve shall be of a full-open type having nominal restriction to flow, with provision for drainage such as a bleed orifice or installation of a separate drain valve. Additionally , the water service shall be valved at the curb or property lot line in accordance with local requirements.

Summary of Proposed Change: The submitter noted the provision is an added value to the homeowner and plumbing contractors. Homeowners have the ability to drain their distribution system if they plan to be gone for an extended vacation or for the winter. Contractors can drain

systems for repair or replacement. The cost for such a drain is minimal. Also, removing "property" from the section does not accomplish anything. The last sentence refers to "local requirements."

Committee Commentary: The committee reviewed the original modification and debated including the same language in the 2015 code. The committee determined the modification should be brought forward into the 2015 code language. A subsequent comment form was submitted and reviewed at the October 7, 2015 meeting. The committee discussed how the requirement could benefit homeowners and the cost to the homeowner.

Committee Action Taken: Unanimous vote to "Bring forward the 2009 modification" (5/18/2015); Unanimous vote to " Approve Public Comment Form FGMP-24 to bring forward the 2015 language and delete the 2009 modification" (10/7/2015)

Proposed Code Change: Review of rule 748:20-5-19(4), Section P2903.10 Hose bibb.

2009 Code Modification:
Section P2903.10 Hose bibb. Hose bibbs subject to freezing, including the "frost-proof" type, shall be equipped with an accessible ~~stop-and-waste type~~ valve inside the building so that they can be controlled and~~/or~~ drained during cold periods. ~~Exception: Frostproof hose bibs installed such that the stem extends through the building insulation into an open heated or semiconditioned space need not be separately valved (see Figure P2903.10).~~

Summary of 2009 Change: The modifications were originally made as the first committee felt that all hose bibbs should have an "accessible shut off valve" to isolate for service and replacement.

Committee Commentary: The committee was asked to review the 2009 modification and determine if the same changes should be made to the 2015 code. The committee reviewed the changes, the original reasoning for them and determined the changes should be brought forward into the 2015 code.

Committee Action Taken: Unanimous vote to "Bring the modification forward" (5/18/2015)

Proposed Code Change: Review of rule 748:20-5-19(5) and Public Comment Form FGMP-22 Section 2904.1 General (submitted 9/22/2015, page 613).

2009 Code Modification:
Section 2904.1 General. Where installed, residential fire sprinkler systems, or portions thereof, shall be in accordance with NFPA 13D ~~or Section P2904, which shall be considered equivalent to NFPA 13D. Section P2904 shall apply to stand-alone and multipurpose wet-pipe sprinkler systems that do not include the use of antifreeze. A multipurpose fire sprinkler system shall supply domestic water to both fire sprinklers and plumbing fixtures. A stand-alone sprinkler system shall be separate and independent from the water distribution system. A backflow flow preventer shall not be required to separate a stand-alone sprinkler system from the water distribution system~~.

Summary of Change: The 2009 committee felt the IRC was not capable of governing fire sprinkler installations. They noted the Health Department that governed and licensed this type of work did not recognize the IRC as an installation standard.

FGMP-22: (move section 2904.1 General into an appendix)
Section 2904.1 General. The design and installation of residential fire sprinkler systems, or portions thereof, shall be in accordance with NFPA 13D or Section P2904, which shall be considered equivalent to NFPA 13D. Partial residential sprinkler systems shall be permitted to be installed only in building not required to be equipped with a residential sprinkler system. Section P2904 shall apply to stand-alone and multipurpose wet-purpose sprinkler systems that do not include the use of antifreeze. A multipurpose fire sprinkler system shall provide domestic water to both fire sprinklers and plumbing fixtures. A stand-alone sprinkler system shall be separate and

independent from the water distribution system. A backflow preventer shall not be required to separate a stand-alone sprinkler system from the water distribution system.

Summary of Proposed Change: The submitter noted by moving Section 2904.1 in its entirety to the appendix, we allow each local jurisdiction to chose whether to adopt the code in part or in whole as it relates to the needs of their community. Further, it removes it as a state mandated code for all communities across the state.

Committee Commentary: The committee did not discuss the rule modification, however public comment form FGMP-22 was submitted recommending section 2904.1 (General) be moved into an appendix. During discussion on the comment form, the committee determined the entire section 2904 (Dwelling Unit Fire Sprinkler Systems) should be moved to the appendix.

Committee Action Taken: Vote of 6 to 1 to "Approve Public Comment Form FGMP-22 as modified to move Section 2904 into an appendix." (9/23/15)

Proposed Code Change: Review of rule 748:20-5-19(6), Deletion of Sections P2904.1.1 – P2904.8.2 dwelling Unit Fire Sprinkler System Provisions and Certain Tables

2009 Rule Modification:
Sections P2904.1.1, P2904.2, P2904.2.1, P2904.2.2, P2904.2.3, P2904.2.4, P2904.2.4.1, P2904.2.4.2, P2904.2.4.2.1, P2904.2.4.2.2, P2904.2.5, P2904.2.6, P2904.3, P2904.3.1 P2904.3.1.1, P2904.3.2, P2904.3.3, P2904.3.4, P2904.4, P2904.4.1, P2904.4.2, P2904.5, P2904.5.1, P2904.5.2, P2904.6, P2904.6.2, P2904.6.2.1, P2904.6.2.2, P2904.7, P2904.8, P2904.8.1, and P2904.8.2; and Tables P2904.6.1, P2904.6.2(1), P2904.6.2(2), P2904.6.2(3), P2904.6.2(4), P2904.6.2(5), P2904.6.2(6), P2904.6.2(7), P2904.6.2(8), and P2904.6.2(9) have been stricken from the section.

Summary of 2009 Change: The 2009 committee felt the IRC® was not capable of governing fire sprinkler installations. They noted the Health Department that governed and licensed this type of work did not recognize the IRC® as an installation standard.

Committee Commentary: The committee discussed the fire industry still wanted all the sections listed above in the appendix because they did not have any jurisdiction over family dwellings. They noted residential sprinkler systems did not have a testing requirement and that if a jurisdiction wanted to, they could insert the sections back into their local ordinances.

Committee Action Taken: Vote of 5 to 0, with 2 abstentions to "Move the sections to Appendix as written" (7/22/2015)

Proposed Code Change: Public Comment Form FGMP-16 on Section 2905.1 Heated water circulation systems and heat trace systems and Section 2905.2 Demand recirculation systems (submitted 8/13/2015, page 624). The proposed change read:

P2905.1 Heated water circulation systems and heat trace systems. Circulation systems and heat trace systems that are installed to bring heated water in close proximity to one or more fixtures shall meet the requirements of Section ~~N1103.5.1~~ R403.5.1 of the 2015 IECC.

P2905.2 Demand recirculation systems. Demand recirculation water systems shall be in accordance with Section ~~N1103.5.2~~ R403.5.2 of the 2015 IECC.

Summary of Proposed Change: The submitter noted the Building Technical Committee had effectively adopted the 2009 version of Chapter Eleven of the International Residential Code and the section references would no longer exist as those sections did not exist in the 2009 version. He noted the modification would avoid confusion and supply appropriate section references with effectively the same language provided to direct designers and installers to an appropriate reference.

Committee Commentary: The committee discussed the proposed modification and determined the other section could not be modified if the 2009 edition of Chapter Eleven was being adopted.

Committee Action Taken: Unanimous vote to "Deny Public Comment Form FGMP-16" (8/17/2015) and (09/23/2015)

Proposed Code Change: Review of rule 748:20-5-19(7), Section P2905.4 Water service pipe, (Section 2906.4 in the 2015 code language, page 624).

2009 Rule Modification:
P2905.4 Water service pipe. Water service pipe shall conform to NSF 61 and shall conform to one of the standards listed in Table P2905.4. Water service pipe or tubing, installed underground and outside of the structure, shall have a minimum working pressure rating of 160 pounds per square inch at 73 degrees Fahrenheit (1103 kPa at 23 degrees Celsius). Where the water pressure exceeds 160 pounds per square inch (1103 kPa), piping material shall have a rated working pressure equal to or greater than the highest available pressure. Water service piping materials not third-party certified for water distribution shall terminate at <u>least 30 inches outside the exterior wall</u> ~~or before the full open valve located at the entrance to the structure~~. Ductile iron water service piping shall be cement mortar lined in accordance with AWWA C104.

Summary of 2009 Change: The committee felt the code left too much up to interpretation and the change clarified it.

Committee Commentary: The 2015 committee was asked to review the 2009 modification and determine if the change needed to be kept or if the rule modification should be deleted.

Committee Action Taken: Unanimous vote to "Bring forward the 2009 rule modification" (8/17/2015)

Proposed Code Change: Review of rule 748:20-5-19(8), Table P2906.4 Water service pipe (page 625)

2009 Code Modification:
The use of asbestos cement pipe was stricken from the table.

Summary of 2009 Change: The committee noted asbestos cement pipe was no longer available in residential sizes.

Committee Commentary: The committee reviewed the previous change noting asbestos cement pipe was not in the 2015 table.

Committee Action Taken: Unanimous vote to "Approve the 2015 code language" (09/23/2015)

Chapter Thirty – Sanitary Drainage
Unanimous vote to "Approve Chapter Thirty as modified" (6/15/2015)
Unanimous vote to "Approve Chapter Thirty as written and carry over the 2009 modifications made to the chapter where applicable" (8/17/2015)

Proposed Code Change: Review of rule 748:20-5-20(1) and Public Comment Form FGMP-26, Section P3003.2 Prohibited joints (submitted 10/2/2015, page 637).

2009 Rule Modification:
Section P3003.2 Prohibited joints. Running threads and bands shall not be used in the drainage system. Drainage and vent piping shall not be drilled, tapped, burned or welded.

The following types of joints and connections shall be prohibited:

1. Cement or concrete.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not approved for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe.
6. Saddle-type fittings.

Exception: Saddle type fittings may be used to connect the building sewer to a public sewer.

Summary of 2009 Change: The committee recognized the long used standard for connecting to the public sewer with saddle type fittings and added the exception to continue the application.

FGMP-26

Section P3003.2 Prohibited joints. Running threads and bands shall not be used in the drainage system. Drainage and vent piping shall not be drilled, tapped, burned or welded.

The following types of joints and connections shall be prohibited:

1. Cement or concrete.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not approved for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe.
6. Saddle-type fittings.

Exception: Where approved by the authority having jurisdiction, ~~Saddle~~ saddle type fittings ~~may~~ shall be ~~used~~ permitted to connect the building sewer to a public sewer.

Summary of Proposed Change: The submitter stated the word "may" was not enforceable and did not belong in the code. The revised language is preferred since it allows the jurisdiction to decide if they want to allow saddle type fittings in this application.

Committee Commentary: There was no discussion on this section, but was included in a vote to approve Chapter Thirty as written and to "carry over" the 2009 modifications "where applicable." The committee discussed the language was clean up from an earlier discussion.

Committee Action Taken: Unanimous vote to "Approve Chapter 30 as written and carry over the 2009 modifications where applicable." (8/17/2015); Vote of 7 to 0 with one abstention to "Approve Public Comment Form FGMP-26 as written" (10/7/2015)

Proposed Code Change: Public Comment Form FGMP-1, Section 3003.9.2 Solvent cementing (submitted 3/10/2015, page 638). The proposed modification read:

P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B 137.3 or CSA B181.2 shall be applied to all joint surfaces. The joint shall be made while the cement is wet, and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be installed above or below ground. ~~**Exception:** A primer is not required where all of the following conditions apply:~~

~~1. The solvent cement used is third-party certified as conforming to ASTM D 2564.~~

~~2. The solvent cement is used only for joining PVC drain, waste and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inches (102 mm) in diameter.~~

Summary of Proposed Change: The submitter noted glue manufactures state their products are a two-step process in joining PVC pipe and fittings. He noted Charlotte Pipe and foundry states "to properly join pipe and fittings a two-step process is needed."

Committee Commentary: The committee discussed the modification would keep the code in alignment with the commercial code adoption. This was an approval as a of a blanket motion made to approve the chapter "as written" with a caveat to "carry over" the 2009 modifications "where applicable."

Committee Action Taken: Unanimous vote to approve FGMP-1 as written (6/15/2015)

Proposed Code Change: : Review of rule 748:20-5-20(2) and Public Comment Form FGMP-17, Section P3008.1 Sewage backflow (submitted 8/13/2015, page 644). The proposed modification read:

2009 Rule Modification:
Section P3008.1 Sewage backflow. Where the flood level rims of plumbing fixtures are below the elevation of the manhole cover of the next upstream manhole in the public sewer, the fixtures shall be protected by a backwater valve installed in the building drain, branch of the building drain or horizontal branch serving such fixtures. ~~Plumbing fixtures having flood level rims above the elevation of the manhole covering of the next upstream manhole in the public sewer shall not discharge through a backwater valve.~~

Summary of 2009 Change: The 2009 committee felt the deleted requirement created too much cost by requiring even a single level home to have two drainage systems. They felt it was better to allow all waste lines to go through backwater valves when required.

FGMP-17
R3008.1 Sewage backflow: Where the flood level rims of plumbing fixtures are below the elevation of the manhole cover of the next upstream manhole in the public sewer, the fixture shall be protected by a backwater valve installed in the building drain, branch of the building drain or horizontal branch serving such fixtures. ~~Plumbing fixtures having flood level rims above the elevation of the manhole cover of the next upstream manhole in the public sewer shall not discharge through a backwater valve.~~ ~~**Exception:** In existing buildings, fixtures above the elevation of the manhole cover of the next upstream manhole in the public sewer shall not be prohibited from discharging through a backwater valve.~~

Summary of Proposed Change: The submitter noted the modification made by the 2009 committee was not brought forward. He noted the change mirrored the current and historic construction practices throughout Oklahoma. He noted some cities require backwater valves on all new plumbing installations as a safeguarded against backflow regardless of manhole elevations. He noted the section as originally written would require that in most cases where a backwater valve was warranted, that a second drain line would be installed to the exterior of the home bypassing the backwater valve and then the line could tie into the sewer line after the backwater valve. He noted it would imply that most second stories would have to be ran in this manner where a backwater valve was required. He noted he struck the exception as it was not needed if the modification to the section was made.

Committee Commentary: The committee reviewed the proposed public comment form and determined they had previously discussed the section but could not remember what was decided. They noted the previous discussion dealt with a multi-use building and how the code section would affect the floors and that committee consensus after that discussion was that upper floors should be discharged downstream of the backwater valve. The committee noted that there was a motion made at the previous discussion but no vote was taken. They discussed if the proposed change would allow the entire house to run through one line and go through the backwater valve; if the change was not made, then in a two-story house, two lines were needed with the second floor tying into the same line after the backwater valve; flooding issues; and discharging through the manhole.

Committee Action Taken: Vote of 6 to 1 to “Deny public comment form FGMP-17” (8/17/2015)

Chapter Thirty-One – Vents
Unanimous vote to "Approve Chapter Thirty-one as written and carry over the 2009 modifications made to the chapter where applicable" (8/17/2015)

Proposed Code Change: Review of rule 748:20-5-21, Section P3103.4 Prohibited use (page 647).

2009 Rule Modification:
Section P3103.4 Prohibited Use. Vent terminals shall not be used as a flag pole or to support flag poles, TV aerials, or similar items. ~~except when the piping has been anchored in an approved manner.~~

Summary of 2009 Change: The 2009 committee felt plumbing lines should have only one purpose and that is to convey sewer not to support accessories.

Committee Commentary: There was no discussion on this section, rather approval was part of a blanket motion made to approve the chapter "as written" with a caveat to "carry over" the 2009 modifications "where applicable."

Committee Action Taken: Approve Chapter Thirty-one as written and carry over the 2009 modifications made to the chapter where applicable" (8/17/2015).

Chapter Thirty-two – Traps
Unanimous vote to "Approve Chapter Thirty-two as written" (8/17/2015)

Chapter Thirty-three – Storm Drainage
Unanimous vote to "Approve Chapter Thirty-three as written" (8/17/2015)

Commission Action Taken on Presentation: At the October 20, 2015 meeting, the Commission voted to "Accept the presentation as given, except for Chapters Three, Eleven and Sixteen and the modification voted on for Chapter Fifteen"