2009 -2015 IPC Significant Changes Summary

Tier I

- 403.1 – Determining Minimum Number of Plumbing Fixtures -- The IBC occupancy classifications (A, B, M, etc.) are no longer used to determine which row in Table 403.1, Minimum Number of Required Plumbing Fixtures, to use for fixture quantities. The actual use of the building or space determines which row in the table to use.

- 403.2 – Separate Toilet Facilities in Group M Occupancies – The exemption from separate plumbing facilities for each sex in Group M mercantile occupancies now applies where the occupant load of the occupancy does not exceed 100.

- 403.2.1 – Family or Assisted-Use Toilet Facilities Serving as Separate Facilities – Where separate toilet facilities for each sex are required and only one water closet is mandated in each facility, two family or assisted-use toilet facilities are now permitted to substitute for the separate facilities for each sex.

- 403.3 – Required Public Toilet Facilities Exception -- Occupancies that have limited areas for public access, such as dry cleaners, take-out only restaurants and automated teller machine lobbies, do not require public toilet facilities for those limited areas (300 ft2 or less).

- 607.2 – Hot or Tempered Water Supply to Fixtures – The maximum distance a hot water supply source and all fixtures served by the supply source has been reduced from 100 feet to 50 feet.

- 607.5 – Hot Water Piping Insulation – The IECC requirement for insulating hot water piping in automatic temperature maintenance systems is now a provision in the IPC.

- 1105.2, 1106.2 – Sizing of Roof Drains, Vertical and Horizontal Storm Drain Piping -- Testing of many different sizes and configurations of roof drains from a variety of manufacturers indicated that the roof drain assembly is the limiting factor in the design of storm drain systems. Storm drainage piping must now be sized based on the published roof drain flow rate and anticipated ponding at the roof drain.

- Chapter 13 – Gray-Water Recycling Systems – Provisions addressing gray-water recycling systems have been relocated from Appendix C to a new Chapter 13 in the body of the code.

Tier II

- 308.9 – Parallel Water Distribution Systems -- In parallel water distribution systems, the hot and cold water piping may now be grouped in the same pipe bundle.
- 403.3.2 – Relationship of Toilet Rooms and Food Preparation Areas – The IBC requirement prohibiting the opening of toilet rooms directly into food preparation areas is now also established in the IPC.
- 403.3.6 – Locking of Toilet Room Doors – Locking devices are now specifically prohibited on the egress door of toilet rooms designed for multiple occupants.
- 403.4.1 – Directional Signage for Location of Public Toilet Facilities -- The provision for directional signs to public toilet facilities now requires that the signage be located at the main entrance to the building or tenant space.
- 403.5 – Drinking Fountain Locations – Where drinking fountains are required, the permitted locations of the fountains have been specified regarding their placement in multi-tenant facilities, similar to the permitted locations for required public toilet facilities.
- 405.3.1 – Minimum Water Closet Compartment Size – The minimum depth of a water closet compartment containing a wall-hung water closet has been reduced from 60 inches to 56 inches.
- 405.4 – Floor and Wall Drainage Connections – The use of a waste connector and sealing gasket is now permitted as an acceptable means to connect floor outlet plumbing fixtures, allowing for water closet installations that are provided with a gasketed waste tube outlet connection.
- 406.2, 409.2 – Backflow Protection for Clothes Washing and Dishwashing Machines -- The 2012 IPC required that an air gap within the appliance or an external backflow preventer in the appliance connections be provided. This modification adds the standards designations with which air gaps must comply, so that the enforcement can be accomplished by the inspector identifying those standard numbers either on the machines or in the literature for the machines. Otherwise, verification would have to be by physical inspection of the machines, which might be impossible to perform.
- 407.2 – Bathtub Waste Outlets and Overflows – Bathtubs are now required to be equipped with an overflow, and the required stopper must be watertight.410 – Minimum Required Number of Drinking Fountains – The IBC provisions addressing the minimum required number of drinking fountains have been replicated in the IPC to provide clarity and consistency of application.
- 605.2.1 – Lead Content of Components Conveying Drinking Water -- The code now has a more stringent limitation for lead content in pipe, pipe fittings, joints, valves, faucets and fixture fittings that convey water used for drinking and cooking.
- 607.2.1 – Hot Water Temperature Maintenance System Controls -- Changes in the commercial portion of the International Energy Conservation Code (IECC) caused changes in this IECC-controlled section of the IPC. This section requires temperature maintenance systems (for maintaining hot water temperature near plumbing fixtures) to be automatically turned off when there is not a demand for hot water. The code change also makes it clear that the Section 607.2.1 and its subsection 607.2.1.1 do not apply to Group R2, R3 and R4 occupancies that are 3 stories or less in height above grade plane, because those occupancies are covered by the residential portion of the IECC.
- 608.8, 608.8.1, 608.8.2 – Identification of nonpotable water -- Fixtures such as water closets and urinals that utilize nonpotable water must be identified with words and a symbol indicating that

nonpotable water is being used. The color purple is established for identifying distribution piping conveying nonpotable water.

- 702.5 -- Temperature Rating of Drainage Piping -- Wastewater having a temperature greater than 140°F (60°C) does not need to be cooled before it enters the drainage system if the drainage system piping is rated for the higher temperature.
- 703.6 – Connection to Combined Sanitary and Storm Public Sewer -- Building sanitary sewers and building storm sewers must be independent even though connecting to a combined sanitary/storm public sewer.
- 704.3, 711.2.1 – Horizontal Branch Connections – Horizontal braches are now permitted to connect at any point in a stack above or below a horizontal offset. In addition, horizontal branches are now allowed to connect to the base of stacks at a point located not less than 10 times the diameter of the drainage stack downstream from the stack.
- 708 -- Cleanouts for Drainage and Waste Systems -- The section on cleanouts has been completely reorganized and reworded for clarity. Brass cleanout plugs are permitted for metallic piping only. Where located at a finished wall, the cleanout must be within 11/2 inches of the finished surface. A cleanout is no longer required at the base of each waste or soil stack.
- Table 709.1 – Drainage Fixture Units for Bathroom Groups – Where fixtures are provided in addition to those in a bathroom group, the footnote addressing additional drainage fixture unit values is now also applicable to those bathroom groups not located with dwelling units.
- 715.1 – Exception for Backwater Valve Installations -- Retrofit of a backwater valve in accordance with the code in an existing building is nearly impossible without the new exception.
- 716 – Vacuum Drainage Systems -- Vacuum drainage system provisions (as opposed to gravity drainage system provisions) have been moved from the appendix to the code.
- 717 – Replacement of Sewers by Pipe-Bursting Method -- Replacement of building sewers by the pipe-bursting method has been used for many decades and is useful especially where excavation of the existing sewer is difficult and costly because of parking lots and other items on the ground surface that would need to be removed and replaced.
- 802.1, 802.1.1, 802.1.8 – Food-Handling Equipment Indirect Connection -- The section has been clarified to indicate that Section 802.1 and its subsections do not apply to fixtures and equipment in dwelling units. The section was modified to indicate the types of food-handling equipment that Sections 802.1 through 802.1.8 cover.
- 802.1.8 – Indirect Discharge of Food Preparation Sinks – Sinks used for food preparation and consumption purposes are no longer permitted to connect directly to the drainage system.
- 802.2 – Installation of Indirect Waste Piping – The thresholds at which indirect waste piping is required to be trapped have been increased and an exception has been added to address clear waste water.
- 802.3 – Waste Receptors, Hub Drains and Standpipes -- The code has clarified that standpipes are waste receptors. Some limitations for where waste receptors could not be located have been removed. Hub drains now require a strainer.
- 901.2, 918.8 – Air Admittance Valves for Chemical Waste Vent Systems – Air admittance valves complying with reference standard ASSE 1049, “Performance Requirements for Individual and Branch-Type Air Admittance Valves for Chemical Waste Systems,” are now permitted to be used for venting chemical waste systems.
- 903.1, 903.2 – Vent Terminations to Outdoors -- This change clarifies vent terminations to outdoors where roofs are used for purposes other than weather protection and where very cold weather conditions occur.

- 903.5 – Location of Vent Terminals – The prohibited locations for vent terminals have been revised to provide consistency with the IMC.
- 915.2 – Combination Waste and Vent System Sizing – The length of a combination waste and vent system is unlimited.
- 917 – Single-Stack Vent Systems – The single-stack vent system method, similar to the Philadelphia stack drainage system, has been added as an acceptable venting system.1002.1 – Exception for Traps for Parking Garage Floor Drains -- Traps are not required for parking garage floor drains where the drains are connected to a storm sewer system.
- 1002.4, 1002.4.1 – Trap seal protection against evaporation can now be accomplished in a variety of ways.
- 1003.1 – Interceptors and Separators – It has been clarified that required interceptors and separators are permitted to be located downstream of the building drain.
- 1003.3.1 – Alternate Grease Interceptor Locations – Grease interceptors are now permitted to be installed in series instead of requiring replacement of an existing grease interceptor that is too small.
- 1003.3.4 – Hydromechanical Grease Interceptors – In regard to grease interceptors, the new term “Hydromechanical” provides a clear distinction from gravity interceptors in order to provide clarity regarding the applicable requirement s for each type of interceptor.
- 1003.3.6 – Gravity Grease Interceptors – A section and standard covering gravity grease interceptors have been added to the code.
- 1003.3.7 – Direct Connection of Grease Interceptor Discharge – Grease interceptor discharge piping must connect directly to the sanitary drainage system.
- 1003.4 – Oil Separator required -- Section 1003.4 has been clarified to indicate where oil separators are required. An addition to the exception concerning alarm systems has been made.
- 1003.6 – Clothes Washer Discharge Interceptor – The requirement for interceptors for clothes washer discharges has been clarified.
- 1003.9 – Venting of Interceptors and Separators – Interceptors and separators must be vented.
- 1105 – Roof Drain Strainers – Outdated code requirements have been replaced with new provisions that properly address the installation and sizing of roof drains.
- 1106.3, 1106.6 -- The 2012 Table 1106.2(2), which covered the vertical leader sizing requirements, has been replaced by the simplified Table 1106.3. The 2012 Table 1106.6, which covered horizontal gutter sizing requirements, has been replaced by the simplified Table 1106.6. These sizing methods correspond with American Society of Plumbing Engineers’ (ASPE) sizing tables.
- 1107 – Siphonic Roof Drainage Systems – New requirements have been added to address the design of Siphonic roof drainage systems by referencing the standard ASPE 45 for design for the system and ASME A112.6.9 for use of the roof drain.

Tier III

- 202 – Plumbing Fixture Definition – Definition modified to include fixtures such as waterless urinals.

- 202 – Plumbing Appliance Definition Change – definition changed to clarify the difference between appliances and fixtures.
- 202 – Grease Interceptor Definition Change – definition modified for consistency with current industry terms for the two general types of grease interceptors being used in plumbing installations.
- 202 -- Alternate Onsite Nonpotable Water Definition -- This term has been added to support a revised Chapter 13 that covers how various nonpotable waters are to be collected, stored and distributed.
- 202 – Backflow Preventer Definition -- This definition has been made more specific about what constitutes a backflow preventer: a backflow prevention assembly, a backflow prevention device or other means or methods.
- 202 – Mechanical Joint Definition -- A connection between pipes, fittings, or pipes and fittings that is not screwed, caulked, threaded, soldered, solvent cemented, brazed, or welded or heat-fused. A joint in which compression is applied along the centerline of the pieces being joined. In some applications, the joint is part of a coupling, fitting, or adapter.
- 202 -- Toilet Facility Definition -- This definition has been added to clarify that a toilet facility is a room or space that contains not less than one water closet and one lavatory.
- 202 -- Waste Receptor Definition -- This definition has been added to clarify what is considered a waste receptor.
- 202, 410.4 – Drinking Fountain, Water Cooler and Water Dispenser Definitions; Substitution for Drinking Fountains -- These definitions for a drinking fountain, a water dispenser and a water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitutions for 50 percent of the required number of drinking fountains.
- 202 -- Grease Interceptor Definition of Fats, Oils and Greases (FOG) Disposal System -- Another type of grease interceptor, the Fats, Oils and Greases (FOG) disposal system, has been added to support the revised text in Section 1003.3.4 covering grease interceptors.
- 303.1, 303.4 – Material Identification and Third-Party Certification – Clarifies the identification requirements of plumbing materials.
- Table 308.5 – Mid-Story Pipe Guide -- Footnote “b” of Table 308.5 in previous editions of the code required a mid-story guide for pipe sizes 2 inches and smaller for some types of pipes. Because the code did not define what a mid-story guide was, there was uncertainty about what was necessary to be installed. The revised language provides the clarification.
- 315.1 – Sealing of Annular Spaces at Penetrations – The provisions for sealing any annular spaces created at piping penetrations have been revised to be consistent with the building envelope sealing requirements of the IECC.
- 413.1 – Food Waste Disposer Approval -- Terminology for food waste grinders has been changed to a more industry-accepted term. For electrical safety, domestic food waste disposers must be listed and labeled to a standard.
- 417.4.1 – Walls and Floors in Bathtub and Shower Areas -- Bathtub floors, shower floors and the walls above those areas need to be watertight and of a material that will be durable under wet conditions. This section has been modified to make the existing requirements more clear.
- 417.5.2.6 – Shower Pan Liner Materials – Recognition of an acceptable shower pan liner system using liquid-type, trowel-applied, load-bearing, bonded waterproof materials has been added to the current listing of acceptable shower floor liner methods.

- 420.1 – Water Closet Approval -- Dual-flush water closets have become popular in recent years. The code now has a standard that covers those types of water closets.
- 421.1 – Whirlpool Tub Approval -- Dual-flush water closets have become popular in recent years. The code now has a standard that covers those types of water closets.
- 423.3 – Footbaths, Pedicure Baths and Head Shampoo Sinks -- Water-temperature-limiting devices are required for footbaths (integral or not integral to pedicure chairs) and head shampoo sinks.
- 424.8 – Deck-Mounted Bath/Shower Transfer Valves -- The standard to which deck-mounted bath/ shower transfer valves must comply has changed.
- 424.9 – Water Closet Personal Hygiene Devices – The recognition of performance standard ASME A112.4.2 now ensures the protection of the public by setting temperature limits and minimum acceptable backflow protection requirements for water closet personal hygiene devices.
- 501.3 Water Heater Drain Valves -- The standard covering water heater drain valves has been discontinued by the standard promulgator. Minimum criteria for drain size and the hose connection have been added to the code for these valves.
- 504.4.1 – Water Heater Storage Tank Relief Valves – It has been clarified that water heaters with separate storage tanks shall be provided with complying temperature and pressure protection.
- 504.6 – Temperature And Pressure Relief Discharge Piping -- The temperature and pressure relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply distribution system of the building.
- 504.7 – Water Heater Pans – It has been clarified that drain pans are only required for storage-tank-type water heaters or hot water storage tanks.
- 504.7.2 – Water Heater Pan Drain Line -- In a replacement water heater installation situation, there might not be a nearby drain point for a required pan for the water heater. This code modification allows a pan to not have a drain line if one is not present.
- 601.5 – Rehabilitation of Piping Systems by Internal Lining - An epoxy lining system standard has been added to the code.
- 605 – Polyethylene of Raised-Temperature (PE-RT) Plastic Tubing – Polyethylene of raised-temperature (PE-RT) plastic hot and cold water tubing and distribution systems are now recognized by the IPC.
- Tables 605.3 and 605.4, Section 605.16 – A new type of CPVC pipe has been added to Chapter 6.
- Tables 605.3, 702.2, 702.3, 702.4, 1102.4, 1102.5 – Asbestos Cement Pipe – References to asbestos cement pipe and applicable referenced standards have been removed from the code.
- Table 605. 3 -- Polyethylene (PE) Water Service Pipe – Reference standard AWWA C901, “Polyethylene (PE) Pressure Pipe and Tubing, ½ in. through 3 in., for Water Service,” has been added to the list of standards in Table 605.3 regulating PE plastic water service pipe tubing.
- Table 605.3 – PEX Water Service Pipe – Reference standard AWWA C904, “Cross-Linked Polyethylene (PEX) Pressure Pipe, ½ in. through 3 in. for Water Service,” has been added to the list of standards in Table 605.3.
- TABLE 605.5, SECTIONS 605.14.3, 605.14.5, 605.18.3, 605.22.2, 605.23.3 – Groove and Shouldered Mechanical Joints and Press-Connect Fittings – Two standards for groove and shouldered mechanical joints and press-connect fitting standard have been added to the code.
- 605.7, TABLE 605.7 VALVE COMPLIANCE TO STANDARDS – Valve Compliance to Standards -- All types of valves that supply drinking water must now comply with NSF 61. Standards for numerous types of valves have been added to the code.

- 607.3 – Hot Water Thermal Expansion Pressure Control -- The available method to control closed-system pressure increases caused by the heating of water has been limited to the use of thermal expansion tanks only.
- 606.7 – Labeling of Water Distribution Pipes in Bundles – Water distribution piping that is installed in bundles must now be labeled for content and direction of flow.
- 607.1.1 – Water-Temperature-Limiting Means – A water heater thermostat is now prohibited from being used as the temperature-limiting device where the code requires limit for hot or tempered water.
- 705.11.2 – Exception for Solvent Cementing PVC Piping 4 inches and Smaller -- The application of a primer to drain, waste and vent PVC pipe and fittings prior to solvent cementing is not required for 4-inch pipe size and smaller.
- 712.3.3 – Sump Pump and Ejector Discharge Pipe and Fittings – Materials acceptable for use in sump pump and ejector pipe and fittings materials are now specifically listed.
- 712.3.5 – Sump Pump Connection to the Drainage System – Where sump pumps connect to the drainage system, they are now permitted to connect to a building sewer, building drain, soil stack, waste stack or horizontal branch drain.
- 714.1 – Fixture Protection from Sewage Backflow – In the determination of backwater valve protection from sewage backflow, the use of the finished floor elevation where the fixtures are installed rather than the flood level rim of the fixtures provides a new point of reference.