FAQ:

Summary of Code Updates for the 2018 Philadelphia Plumbing Code

Disclaimer: This document shall be utilized as guidance only. The design professional and licensed plumbing contractor is responsible for reviewing the provisions of the 2018 Philadelphia Plumbing Code and associated referenced Standards. The Department of Licenses and Inspections may only render a decision in response to a formal application for a plumbing permit or preliminary review.

Summary of code updates approved by City Council taking effect April 1, 2024, with changes as follows:

Chapter 2 (Definitions)

- Definition – Private Building Sewer
- Definition – Private Water Distribution Pipe
- Definition – Waste Receptor

Chapter 3 (General Regulations)

- Section P-306.4 – Tunneling
- Section P-306.5 – Shoring
- Section P-308.3 – Materials
- Section P-314.2.1.1 – Disposal into Cloths Washer Box

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- Section P-403.1.2 - Single-user toilet and bathing room fixtures
- Section P-403.2- Separate facilities
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- Section P-413.3 - Size of floor drains and trench drains
- Section P-414.1 – Approval - Sanitary floor sinks
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- Section P-602.3.1 – Sources
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- Section P-605.13.5- Press-connect joints
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- Section P-605.14.4- Push-fit joints
- Section P-608.18 Protection of individual water supplies
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- P-608.18.~~8~~7 Drainage
- Section P-614.1.1 Definitions (Master Meter, Private Water Infrastructure Pipe, Private Water Distribution Pipe)
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- Table P-702.2 Underground Building Drainage and Vent Pipe
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- Section P-702.2.1 High-rise material
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- Table P-706.3- Fittings for change in direction
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- Section P-1101.9 Backwater valves
- Section P-1102.2 Inside storm drainage conductors.
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- Table P-1109.4 Maximum Horizontal Projected Roof Area in Square Feet for Building Storm Drains at Various Slopes
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- Section P-1115.7 Protection of structures
- Section P-1115.10 Storm backflow

APPENDIX E SIZING OF WATER PIPING SYSTEM

- Definitions:
- Water Distribution Pipe
- Water Service Pipe
- Water Supply Pipes

Chapter 2 (Definitions)

- Private Building Sewer. Any sanitary drainage or storm drainage sewer privately owned and maintained and not directly controlled by the City of Philadelphia.

  This term defines the private building sewer which is that part of the drainage system that extends from the end of the building drain to the connection of the lateral pipe at the curb line and is privately owned. The maintenance is the sole responsibility of all the property owners connected to it. Private Building Sewers do not apply to private infrastructure.

- Private Water Distribution Pipe. The distribution pipe privately owned and maintained and not directly controlled by the City of Philadelphia. Private Water Distribution Pipes do not apply to private infrastructure.

  This term defines the private water distribution pipe which is the pipe from the curb stop or curb line to the structure or through the meter pit to the first point of use if there is no structure and is privately owned. The maintenance is the sole responsibility of all the property owners connected to it.

- Waste Receptor- A floor sink, standpipe, hub drain, ~~or~~ floor drain, or a mop/slop sink that receives the discharge of one or more indirect waste pipes.

  Adding a mop/slop sink as a waste receptor will allow a mop/slop sink to receive the discharge from HVAC condensate, water heater pans, temperature pressure relief valves, and other clear water waste. The use of a mop sink, slop and laundry tub is a common industry practice.

Chapter 3 (General Regulations)

- Section P-306.4 – ~~Where pipe is to be installed by tunneling, jacking or a combination of both, the pipe shall be protected from damage during installation and from subsequent uneven loading. Where earth tunnels are used, adequate supporting structures shall be provided to prevent future settling or caving. The length of tunneling~~ Tunneling shall be limited to only that required to clear the obstacle above.

  The text was deleted to avoid confusion. Tunneling is not allowed unless there are obstacles above the work area. (Example: Gas, water, sewer, electric utilities, etc.)

- Section P-306.5 – Shoring. Shoring shall be installed in ditches and trenches as per the Occupational Safety and Health Administration's (OSHA) Excavation standards, 29 Code of Federal Regulations (CFR), Subpart P.

  This section was added to remind contractors and plumbing contractors that they are to follow all OSHA requirements during all excavation operations.

- Section P-308.3 Materials. Hangers, anchors and supports shall support the piping and the contents of the piping. Hangers ~~and strapping material~~ shall be of approved material that will not promote galvanic action

  Strapping material commonly known as band iron is not permitted as a permanent form of pipe support for any piping materials.

- Section P-314.2.1.1 Disposal into Clothes Washer Box. Condensate shall be permitted to discharge into a clothes washer box with dual drainage outlets with one outlet dedicated to the clothes washer discharge and one outlet dedicated to condensate discharge. Condensate shall also be permitted to discharge into a clothes washer box with a single drainage outlet where the inlet of the clothes washer box outlet is sized to accommodate both the clothes washer discharge and the condensate discharge.

  This section was added to clarify that a dual outlet washing machine box must be utilized where one outlet is dedicated for the discharge of the clothes washer and one outlet is dedicated for the clear water condensate discharge from HVAC equipment (most used in multi-family occupancies).

Chapter 4 (Fixtures, Faucets and Fixture Fittings)

- Section P-403.1.1- Fixture calculations. To determine the occupant load of each ~~sex~~ gender, the total occupant load shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of each ~~sex~~ gender in accordance with Table 403.1. Fractional numbers resulting from applying the fixture ratios of Table 403.1 shall be rounded up to the next whole number. For calculations involving multiple occupancies, such fractional numbers for each occupancy shall first be summed and then rounded up to the next whole number.

  Exception:

  1. The total occupant load shall not be required to be divided in half where approved statistical data indicates a distribution of ~~the sex's~~ gender of other than 50 percent of ~~each sex~~ a gender.
  2. Where multiple-user facilities are designed to serve all genders, the minimum fixture count shall be calculated 100 percent, based on total occupant load. In such multiple-user facilities, each fixture type shall be in accordance with ICC A117.
  3. Distribution of genders is not required where single-user water closets and bathing room fixtures are provided in accordance with Section 403.1.2.

  This section includes three exceptions, each of which impacts the number of required plumbing fixtures for any given use. Exception 1 allows for the 50-50 gender distribution to be altered where statistical data approved by the code official justifies. This exception may be appropriate at an all-female college, a factory with a predominantly male workforce, or a number of other scenarios. Exception 2 allows for multiple-user facilities to be designed to serve all genders; however, the full occupant load must be used to determine the required number of fixtures. In addition, each fixture must comply with ICC A117.1, and each urinal must be in its own stall. Exception 3 accounts for uses where single-user water closets and bathing rooms are provided per section P-403.1.2.

- Section P-403.1.2- Single-user toilet and bathing room fixtures. The plumbing fixtures located in single-user toilet ~~facilities~~ and bathing rooms, including family or assisted- use toilet and bathing rooms that are required by Section 1109.2.1 of the International Building Code, shall contribute toward the total number of required plumbing fixtures for a building or tenant space. Single-user toilet ~~facilities~~ and bathing rooms, and family or assisted-use toilet rooms and bathing rooms shall be identified as being available for use by ~~either sex~~ all persons regardless of gender. The total number of fixtures shall be permitted to be based on the required number of separate facilities or based on the aggregate of any combination of single-user or separate facilities.

  Fixtures located in single-user and family or assisted-use toilet or bathing rooms are allowed to contribute to the total number of required fixtures for the building or tenant space. Where single-user toilet or bathing rooms are chosen for the location of the fixtures, or where family or assisted-use toilet or bathing rooms are required by the IBC, the fixtures in those rooms reduce the quantity of either male or female fixtures that need to be located elsewhere in the building or tenant space. Although such toilet facilities and bathing rooms are usable by either gender, the fixtures in those rooms cannot be "double-counted" to result in an overall reduction in the required quantity of fixtures for the building or tenant space.

- Section P-403.1.3- Lavatory distribution. Where two or more toilet rooms are provided for each ~~sex~~ gender, the required number of lavatories shall be distributed proportionately to the required number of water closets.

  Some buildings and larger tenant spaces could be designed with several gang toilet facilities for each gender. The required number of lavatories for the building or tenant space should be distributed proportionately between each gang toilet facility.

- Section P-403.2- Separate facilities. Where plumbing fixtures are required, separate gender-based facilities shall be provided ~~for each sex~~.

  Exceptions:

  5. Separate facilities shall not be required to be designated by gender where single-user toilet rooms are provided in accordance with Section 403.1.2.
  6. For occupancy classifications requiring the same number of water closets and lavatories for male and female under Table 403.1, Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by all genders and privacy for water closets is provided in accordance with Section 405.3.4. Urinals shall not be permitted in facilities designed for use by all genders.

  Exception 5 allows for single-user toilet rooms, not designated by gender, to take the place of separate gender facilities, provided that the provisions of Section P-403.1.2 are met. Exception 6 allows for rooms designed for use by all genders simultaneously, provided that each water closet meets the level of privacy required by Section 405.3.4. The privacy requirements of Exception 6 are intended to ensure that occupants of all genders can utilize needed plumbing fixtures in an environment that is safe, private and comfortable.

- P-403.2.1 Family or assisted-use toilet facilities serving as separate facilities**.** Where a building or tenant space requires a separate toilet facility for each ~~sex~~ gender and each toilet facility is required to have only one water closet, two family or assisted-use toilet facilities shall be permitted to serve as the required separate facilities. Family or assisted- use toilet facilities shall not be required to be identified for exclusive use by either ~~sex~~ gender as required by Section 403.4.

- Section P-405.3.4.1 Water closet compartments serving all genders. Partitions and doors enclosing a water closet in a toilet room serving all genders shall extend from floor to ceiling.

  This section is intended to ensure that occupants of all genders can utilize needed plumbing fixtures in an environment that is safe, private, and comfortable.

- P-406.2 Waste connection**.** The waste from an automatic clothes washer shall discharge through an air break into a standpipe in accordance with Section ~~802.3.3~~ 802.4.3 or into a laundry sink. The trap and fixture drain for an automatic clothes washer standpipe shall be not less than 2 inches (51 mm) in diameter. The fixture drain for the standpipe serving an automatic clothes washer shall connect to a 3-inch (76 mm) or larger diameter fixture branch or stack. Automatic clothes washers that discharge by gravity shall be permitted to drain to a waste receptor or an approved trench drain.

- Section P-410.6- Education facilities. (Drinking fountains) Structures or portions of structures used for educational occupancies shall be equipped with one drinking fountain for every 100 students or fraction thereof-. At least one fountain shall be on each occupied floor of the building, without regard to the number of students. Water dispensers may be substituted for not more than fifty percent (50%) of the required number of drinking fountains. Each drinking fountain shall include a filtered water supply with a filter meeting or exceeding NSF/ANSI 53 and 42 requirements and a filter change indicator in accordance with NSF/ANSI 53.

  This section was added to mirror city council bill #220221 drinking fountains in educational facilities.

- Section P-413.3- Size of floor drains and trench drains. Floor drains, emergency floor drains, and trench drains shall have a drain outlet not less than 3 inches (76 mm) in diameter. Note: An adjustable repair coupling shall be permitted to connect underground piping to a floor drain or trench drain.

  Emergency floor drains was included with floor drains and trench drains to have a drain outlet not less than 3". Adjustable repair couplings (ARC) were added for connections to floor and trench drains as an additional joining method.

- Section P-414.1- Approval. Sanitary floor sinks shall conform to the requirements of ASME A112.6.7. Note: An adjustable repair coupling shall be permitted to connect underground piping to a floor sink.

  Adjustable repair couplings (ARC) were added for connections to floor and trench drains as an additional joining method.

- Section P-419.1- Approval. Lavatories shall conform to ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124. Group wash-up equipment shall conform to the requirements of Section 402. Every 20 inches (508 mm) of rim space, including a faucet, shall be considered as one lavatory. The distance between the centerline of each faucet shall be no less than 20".

  The rim space calculation is used to determine the minimum number of required fixtures and the maximum permitted water consumption. This calculation is not intended for use in determining the DFU value of the fixture, which is based on the trap size.

- Section P-421.3- Shower waste outlet. Waste outlets serving showers shall be not less than 1-1/2 inches in diameter and, for other than waste outlets in bathtubs, shall have removable strainers not less than 3 inches in diameter with strainer openings not less than 1/4 inch in least dimension. Where each shower space is not provided with an individual waste outlet, the waste outlet shall be located and the floor pitched so that waste from one shower does not flow over the floor area serving another shower. Waste outlets shall be fastened to the waste pipe in an approved manner.

  Exception:

  A linear shower drain shall be permitted when sized and installed in accordance with the linear drain manufacturer. The area of any linear shower drain shall be a minimum of 7 square inches.

  This section was added to allow for the use of linear shower drains. And they must have a minimum of 7 square inches which is equal to the area of a 3 inch round shower drain.

- P-425.3 Water closet seats. Water closets shall be equipped with seats of smooth, nonabsorbent material. Seats of water closets provided for public or employee toilet facilities shall be of the hinged open-front elongated type. Integral water closet seats shall be of the same material as the fixture. Water closet seats shall be sized for the water closet bowl type.

Chapter 5 (Water Heaters)

- Section P-504.6- Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:
  1. Not be directly connected to the drainage system.
  2. Discharge through an air gap located in the same room as the water heater.
  3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
  4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
  5. Discharge to the floor, ~~to the pan serving the water heater or storage tank,~~ to a waste receptor or to the outdoors.
  6. Discharge in a manner that does not cause personal injury or structural damage.
  7. Discharge to a termination point that is readily observable by the building occupants.
  8. Not be trapped.
  9. Be installed so as to flow by gravity.
  10. Terminate not more than 6 inches (152 mm) above and not less than two times the discharge pipe diameter above the floor or flood level rim of the waste receptor.
  11. Not have a threaded connection at the end of such piping.
  12. Not have valves or tee fittings.
  13. Be constructed of those materials listed in Section 605.4 or materials tested, rated and approved for such use in accordance with ASME A112.4.1. 14. Be one nominal size larger than the size of the relief valve outlet, where the relief valve discharge piping is installed with insert fittings. The outlet end of such tubing shall be fastened in place.

The discharge of a pressure relief valve, temperature relief valve, or combination pressure and temperature relief valve was removed from draining into the emergency pan from item #5 of section 504.6. It's been determined that a water heater drain pan is of insufficient size to handle the volume of water when the pressure relief valve, temperature relief valve, or combination pressure and temperature relief valve discharges in an over pressure or over temperature condition potentially causing significant property damage.

- Section P-504.7.2- Pan Drain termination. The pan drain shall extend full size and terminate over a suitably located indirect waste receptor or floor drain or extend to the exterior of the building and terminate not less than 6 inches and not more than 24 inches above the adjacent ground surface. Where a pan drain was not previously installed, a pan drain shall not be required for a replacement water heater installation. The pan drain shall be permitted to discharge into a clothes washer box with dual drainage outlets with one outlet dedicated to the clothes washer discharge and one outlet dedicated to the pan drain. The pan drain shall also be permitted to drain into a clothes washer box with a single drainage outlet where the inlet of the clothes washer box outlet is sized to accommodate both the clothes washer discharge and the pan drain discharge.

  This section was added to clarify that a dual outlet washing machine box must be utilized where one outlet is dedicated for the discharge of the clothes washer and one outlet is dedicated for the water heater pan discharge (most used in multi-family occupancies).

Chapter 6 (Water Supply and Distribution)

- Section P-602.1.1 Separate Water Connection**.** A building having plumbing fixtures installed and intended for human habitation, occupancy or use on premises abutting on a street, alley, or easement in which there is a public water main shall have a separate connection to the public water main. Where located on the same deeded property and maintained under the same ownership, multiple buildings shall not be prohibited from connecting to a common private water distribution pipe that connects to the public water main provided that the common private water distribution pipe is not placed underneath any building or structure and is connected after the existing water meter.

- Section P-602.2.1 - Non-residential. Non-residential buildings and other structures on the same deeded property and maintained under the same ownership shall be permitted to connect to a common water supply.

- Section P-602.2.2- Residential. Where one building stands in the rear of another building on the same deeded property and maintained under the same ownership, and a separate water supply cannot be provided for the rear building through an alley, yard or other open public space, the water supply of the front building shall be permitted to serve the rear building, provided the water supply of the front building is of adequate size and in suitable condition to serve both front and rear buildings.

  Sections P-602.1.1, P-602.1, P-602.2.2 were added to be consistent with sections P-701.3, P-701.3.1, P-701.3.2. All of these sections were historically in all past plumbing codes in order to accommodate land locked properties as long as they maintain the same ownership and not sub-divided.

- Section P-602.3.1- Sources. Dependent on geological and soil conditions and the amount of rainfall, individual water supplies are of the following type ~~types~~: drilled well. ~~driven well, dug well, bored well, spring, stream or cistern. Surface bodies of water and land cisterns shall not be sources of individual water supply unless properly treated by approved means to prevent contamination.~~ Individual water supplies shall be constructed and installed in accordance with the applicable state and local laws. Where such laws do not address all of the requirements set forth in NGWA-01, individual water supplies shall comply with NGWA-01 for those requirements not addressed by state and local laws. Note: Each well's water quality requires approval by the Department of Public Health.

  Driven wells, dug wells, bored wells, springs, streams, and cisterns were removed from the approved types of wells allowed for an individual water supply. To maintain water quality, only drilled wells are allowed when approved.

- Section P-602.4- Private Water Distribution Pipe. Repairs to existing private water distribution pipe materials shall be in accordance with Section P-605. New or extended water distribution pipes may not cross any adjoining property lines except private water infrastructure designed in accordance with Section P-614.

  This section was added to clarify the material requirements for Private Water Distribution pipes as well as reference to configuration of such.

- Section P-603.3- Property Lines. Water distribution pipes may not cross adjoining property lines except private water infrastructure designed in accordance with Section P-614.

  This section was added to clarify configuration and design of water distribution pipes with exceptions for Private Water Infrastructure.

- Section P-604.5 Size of fixture supply ~~- Design of Building Water Supply System.~~ The minimum size of a fixture supply pipe shall be as shown in Table 604.5. The fixture supply pipe shall terminate not more than 30 inches (762 mm) from the point of connection to the fixture. A reduced-size flexible water connector installed between the supply pipe and the fixture shall be of an approved type. The supply pipe shall extend to the floor or wall adjacent to the fixture. The minimum size of individual supply lines utilized in gridded or parallel water supply systems shall be as shown in Table 604.5. A ridged water connector shall be required in all occupancies other than one- and two-family dwellings and apartments.

  Section P-604.5 limits the use of flexible water connectors for one- and two-family dwellings and apartments. Flexible water connections shall be consistent with the standards listed in 605.6.

- Section P-605.3- Water Distribution Pipe. Water distribution pipe shall conform to NSF 61 and shall conform to one of the standards listed in Table 605.3. Water distribution pipe or tubing, installed underground and outside of the structure, shall have a working pressure rating of not less than 160 psi (1100 kPa) at 73.4ºF (23°C). Where the water pressure exceeds 160 psi (1100 kPa), piping material shall have a working pressure rating not less than the highest available pressure. Water distribution piping materials not third-party certified for water supply shall terminate at or before the full open valve located at the entrance to the structure. Ductile iron water distribution piping shall be cement mortar lined in accordance with AWWA C104/A21.4. Any water distribution pipe serving or located within occupancies other than one-and two-family dwellings and apartments shall be metallic piping in accordance with this section and listed on Table P-605.3. All water service piping from the City water main tap to the curb stop shall conform to the regulations as set forth by the Philadelphia Water Department.

  Language added to this section is intended to clarify material use.

- P-605.4 Water ~~distribution~~ supply pipe. Water ~~distribution~~ supply pipe and tubing shall conform to NSF 61 and shall conform to one of the standards listed in Table 605.4. Hot water distribution *supply* pipe and tubing shall have a pressure rating of not less than 100 psi (690 kPa) at 180ºF (82ºC). Any water supply piping supplying or located within occupancies other than one- and two-family dwellings and apartments shall be metallic piping in accordance with this section.

  Wording in this section was modified to identify proper components of the domestic water system.

- Section P-605.4.1- High rise materials. Metallic piping shall be installed in buildings with an occupied floor located more than 75 feet (22,860 mm) ~~or more in height as measured from~~ above the lowest level of fire department vehicle access.

  Exception:

  1. Nonmetallic piping may be used within demised individual residential dwelling units located within new construction of buildings with an occupied floor located more than 75 feet (22,860 mm) and not more than 150 feet (45,720 mm) ~~in height as measured from~~ above the lowest level of fire department vehicle access.

  Language in this section was added to clarify the definition of high rise building height to be consistent with the language contained in the 2018 IBC.

- Section P-605.6- Flexible water connections. Flexible water connectors shall be prohibited.

  Exception:

  In one- and two-family dwellings and apartments, flexible water connectors where exposed to continuous pressure shall conform to ASME A112.18.6/CSA B125.6. Access shall be provided to all flexible water connectors.

  Section P-605.6 limits the use of flexible water connectors for one and two family dwellings and apartments. Flexible water connections shall be consistent with the standards listed in 605.6.

- Section P-605.13.5- Press-connect joints. Press-connect joints shall conform to one of the standards indicated in Table 605.5, and shall be installed in accordance with the manufacturer's instructions. Cut tube ends shall be reamed to the full inside diameter of the tube end. Joint surfaces shall be cleaned. The tube shall be fully inserted into the press- connect fitting. Press-connect joints shall be pressed with a tool certified by the manufacturer. Press-connect joints shall be limited to above ground installations only.

  Press-connect joints are limited to above ground use due in part to the unstable and aggressive soil conditions in certain areas of the city.

- Section P-605.13.7- Push-fit joints. Push-fit joints shall conform to ASSE 1061 and shall be installed in accordance with the manufacturer's instructions and limited to above ground installations only.

  Push-fit-joints are limited to above ground use due in part to the unstable and aggressive soil conditions in certain areas of the city.

- Section P-605.14.4- Push-fit joints**.** Push-fit joints shall conform to ASSE 1061 and shall be installed in accordance with the manufacturer's instructions and limited to above ground installations only.

  Push-fit-joints are limited to above ground use due in part to the unstable and aggressive soil conditions in certain areas of the city.

- Section P-608.18 Protection of individual water supplies. An individual water supply shall be located and constructed so as to be safeguarded against contamination in accordance with Sections 608.18.1 through 608.18.~~8~~7.

  This modification is intended to clarify the appropriate section for reference.

- Section P-608.18.1- Well locations. A potable ground water source or pump suction line shall not be located closer to potential sources of contamination than the distances shown in Table 608.18.1. In the event the underlying rock structure is limestone or fragmented shale, the local or state health department shall be consulted on well site location. The distances in Table 608.18.1 constitute minimum separation and shall be increased in areas of creviced rock or limestone, or where the direction of movement of the ground water is from sources of contamination toward the well. Note: All well-water quality requires approval by the Department of Public Health

  Language was added to this section to identify the proper authority having jurisdiction as samples of the well water are required to be tested and then approved by the Department of Public Health.

- ~~Section P-608.18.6 Dug or bored well casings. Dug or bored well casings shall be of watertight concrete, tile or galvanized or corrugated metal pipe extending to not less than 10 feet (3048 mm) below the ground surface. Where the water table is more than 10 feet (3048 mm) below the ground surface, the water-tight casing shall extend below the table surface. Well casings for dug wells or bored wells constructed with sections of concrete, tile or galvanized or corrugated metal pipe shall be surrounded by 6 inches (152 mm) of grout poured into the hole between the out- side of the casing and the ground and extending not less than 10 feet (3048 mm) below the ground surface.~~

  This section was removed because the information listed is no longer applicable.

- Section P-608.18.~~7~~*6* Cover. Potable water wells shall be equipped with an overlapping water-tight cover at the top of the well casing or pipe sleeve such that contaminated water or other substances are prevented from entering the well through the annular opening at the top of the well casing, wall or pipe sleeve. Covers shall extend downward not less than 2 inches (51 mm) over the outside of the well casing or wall. A dug well cover shall be provided with a pipe sleeve permitting the withdrawal of the pump suction pipe, cylinder or jet body without disturbing the cover. Where pump sections or discharge pipes enter or leave a well through the side of the casing, the circle of contact shall be water tight.

  Language in this section has not changed – numerical sequencing was corrected.

- Section P-608.18.~~8~~7 Drainage. Potable water wells and springs shall be constructed such that surface drainage will be diverted away from the well or spring.

  Language in this section has not changed – numerical sequencing was corrected.

- Section P-614.1.1 Definitions.

  Master Meter. A measuring device owned and maintained by the Philadelphia Water Department used to collect data and indicate water usage from multiple individually metered units in a Condominium or ~~of~~ Planned Community.

  Private Water Infrastructure Pipe. The ~~water distribution~~ pipe that is constructed on private property between the Master Meter and the Private Water ~~Service~~ Distribution Pipe owned and maintained by the Unit Owner's Association to serve some or all units within a Condominium or Planned Community.

Private Water ~~Service~~ Distribution Pipe**.** For the purposes of this section, this is limited to the section of pipe located between the Private Water Infrastructure Pipe and the individual building.

Wording in this section was modified to identify proper components of the private domestic water system.

- Section P-614.2 Materials. The Private Water Infrastructure Pipe and Private Water Distribution Pipe ~~and the Private Water Service Pipe~~ shall conform to one of the standards listed in Table 605.3 of this code and the requirements shall be consistent with all materials, joints and connections listed in Section 605.

  Language added to this section is intended to clarify material use.

- Section P-614.3 Connections. The Private Water ~~Service~~ Distribution Pipe for each house or structure shall be connected to the Private Water Infrastructure Pipe separately. A Private Water Infrastructure Pipe used to convey both domestic and fire protection in a single pipe is permitted.

  Wording in this section was modified to identify proper components of the private domestic water system.

- Section P-614.3.1 Shut off valves. Each connection of the Private Water ~~Service~~ Distribution Pipe to the Private Water Infrastructure Pipe shall have an accessible shut off valve installed no less than 3 feet (914 mm) from the outside of the building wall and in line with the ferrule connection on the Private Water Infrastructure Pipe.

  Wording in this section was modified to identify proper components of the private domestic water system.

- Section P-614.5 Protection of structures. The Private Water Infrastructure Pipe installed parallel to footings and walls shall not extend into the bearing plane of a footing or wall in accordance with Section 307.5 of this code. Private Water Infrastructure pipe shall not be installed within 5 feet (1524 mm) of any adjoining property line. Private Water Infrastructure Pipe shall not be installed within ~~5~~ 3 feet (914 mm) of any parallel ~~adjoining property~~ building foundation.

  Wording in this section was modified to include another level of protection to buildings or structure's foundations.

- P-614.6 Fire hydrants. The Private Water Infrastructure Pipe with Fire hydrant connections shall be metered and require backflow protection in accordance with Philadelphia Water Department (PWD) Regulations. The Philadelphia Fire Department shall govern the placement of fire hydrants. PWD may direct the placement of blow-offs and meters on the Private Water [Service] Distribution Pipe to ensure water uality-614.6 Fire hydrants. The Private Water Infrastructure Pipe with Fire hydrant connections shall be metered and require backflow protection in accordance with Philadelphia Water Department (PWD) Regulations. The Philadelphia Fire Department shall govern the placement of fire hydrants. PWD may direct the placement of blow-offs and meters on the Private Water ~~Service~~ Distribution Pipe to ensure water quality

  Wording in this section was modified to identify proper components of the private domestic water system.

- P-614.7 Easement required. Private Water Infrastructure Pipe shall require an easement with a minimum width of 12 foot (3657 mm) and must provide adequate space to replace/ repair the private infrastructure. Minimum vertical drive height clearance of 13 feet 6 inches (4115 mm) or two times the pipe depth to pipe bottom, whichever is greater, shall be provided. The easement shall also provide access to individual Private Water ~~Service~~ Distribution pipes and valves and allow for shut- offs when necessary. No permanent structures shall be built over or in the easement unless these vertical height clearances are met.

  Wording in this section was modified to identify proper components of the private domestic water system.

Chapter 7 (Sanitary Drainage)

- Section P-701.2 Connection to sewer required. Sanitary drainage piping from plumbing fixtures in buildings and sanitary drainage piping systems from premises shall be connected to a public sewer. Where a public sewer is not available, the sanitary drainage piping and systems shall be connected to a private sewage disposal system in compliance with ~~state or local requirements~~. the regulations of the ~~Philadelphia Health~~ Department of Public Health. ~~Where state or local requirements do not exist for private sewage disposal systems, the sanitary drainage piping and systems shall be connected to an approved private sewage disposal system that is in accordance with the International Private Sewage Disposal Code~~

  Language was added to this section to identify the proper authority having jurisdiction.

- Section P-701.2.1 - Private Building Sewer. Repairs to existing private building sewer pipe materials shall be in accordance with Table P-702.3. New or extended private building sewers may not cross any adjoining property lines except private sanitary sewer infrastructure designed in accordance with Section P-717.

  Language added to this section is intended to clarify material use and to clarify configuration and design of new or extended private sewer pipes with exceptions for Private Sanitary Sewer Infrastructure.

- Section P-701.8- Abandonment of building sewer**.** Abandoned laterals shall have the house trap removed, and the pipe shall be hermetically sealed by a cap or plug encased in concrete at the curb line. Laterals 8 inches (203 mm) and greater shall be sealed by a cap or plug encased in concrete at the point of connection to the public sewer. Abandoned drainage piping within the building shall be hermetically sealed by a cap or plug.

  Language was added to this section to include appropriate requirements for the proper sealing of laterals.

- Section P-701.9- Property Lines. Drainage piping may not cross adjoining property lines except private sewer infrastructure designed in accordance with Section P-717.

  Language added to this section is intended to clarify configuration and design of drainage pipes with exceptions for Private Sewer Infrastructure.

- Table P-702.1- Above-ground drainage and vent pipe. (K copper for urinals minimum thickness)

MATERIAL	STANDARD
Copper or copper-alloy tubing [a] (Type K, L, M or DWV)	ASTM B75; ASTM B88; ASTM B251; ASTM B306

This Table was modified to include footnote “a” which clarifies when utilizing copper piping for the drainage of urinal waste piping, Type K copper must be used.

- Section P-702.1.1- High-rise material. Metallic piping shall be installed throughout buildings with an occupied floor located more than 75 feet (22,860 mm) ~~or more in height as measured from~~ above the lowest level of fire department vehicle access.

  Language in this section was added to clarify the definition of high-rise building height to be consistent with the language contained in the 2018 IBC.

- TABLE P-702.2 Underground Building Drainage and Vent Pipe

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid~~, cellular core or composite~~ wall	ASTM D2661; ~~ASTM F628; ASTM F1488;~~ CSA B181.1
Cast-iron pipe	ASTM A74; ~~ASTM A888; CISPI 301~~
***	***
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid~~, cellular core or composite~~ wall	ASTM D2665; ~~ASTM F891; ASTM F1488;~~ CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25-inch O.D. and a solid~~, cellular core or composite~~ wall	ASTM D2949~~, ASTM F1488~~
***	***
Ductile iron pipe class 56	***AWWA C151/A21.51; AWWA C115/A21.15***

  Standards removed from this Table are intended to clarify material use.

- Table P-702.2- Underground building sanitary drainage and vent pipe. Ductile iron pipe class 56 AWWA C151/A21.51; AWWA C115/A21.15.

  Standards updated in this Table are intended to clarify material use.

- Section P-702.2.1 High-rise material**.** Metallic piping shall be installed for all underground building sanitary drainage and vent piping for buildings- with an occupied floor located more than 75 feet (22,860 mm) ~~or more in height as measured from~~ above the lowest level of fire department vehicle access.

  Language in this section was added to clarify the definition of high-rise building height to be consistent with the language contained in the 2018 IBC.

- Table P-702.3- Underground building sanitary drainage pipe.

Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140) with a solid ~~cellular core or composite~~ wall	**ASTM D2661; ~~ASTM F628; ASTM F1488;~~ CSA B181.1**
Acrylonitrile butadiene styrene (ABS) plastic pipe in sewer and drain diameters, including SDR 42 (PS 20), PS 35, SDR 35 (PS 45), PS 50, PS 100, PS 140, SDR 23.5 (PS 150) and PS 200; with a solid~~, cellular core or composite~~ wall	**~~ASTM F1488;~~ ASTM D2751**
Cast-iron pipe	**ASTM A74; ~~ASTM A888; CISPI 301~~**
* * *	* * *
Ductile iron pipe class 56	***AWWA C151/A21.51; AWWA C115/A21.15***
* * *	* * *
Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters, including PS 25, SDR 41 (PS 28), PS 35, SDR 35 (PS 46), PS 50, PS 100, SDR 26 (PS 115), PS 140 and PS 200; with a solid~~, cellular core or composite~~ wall	**~~ASTM F891; ASTM F1488;~~ ASTM D3034; CSA B182.2; CSA B182.4**
Polyvinyl chloride (PVC) plastic pipe with a 3.25-inch O.D. and a solid~~, cellular core or composite~~ wall	**ASTM D2949~~; ASTM F1488~~**
* * *	* * *

Standards removed and included in this Table are intended to clarify material use.

- Section P-702.3.1- Building sewer pipe. **High-rise material.** Metallic piping shall be installed for all building sewer pipe for buildings <u>with an occupied floor located more than</u> 75 feet (22,860 mm) ~~or more in height as measured from~~ <u>above</u> the lowest level of fire department vehicle access.

  Language in this section was added to clarify the definition of high-rise building height to be consistent with the language contained in the 2018 IBC.

- Table P-702.4 Pipe Fittings- <u>Ductile iron pipe class 56 AWWA C151/A21.51; AWWA C115/A21.15</u>

  Standards updated in this Table are intended to clarify material use.

- Section P-703.4.1- Connections to existing private building sewers. <u>Where connections are made to existing private building sewers, all provisions of 703.4 shall apply including confirmation and acceptance of condition and sizing by a registered design professional.</u>

  This section was added to clarify the requirements for connection to an existing private **building sewer**.

- Section P-703.4.1.1- Extensions of existing private building sewers. Extension of existing private building sewers is prohibited.

  This section was added to clarify extension of private **building sewers** is prohibited.

- Section P-704.1- Slope of horizontal drainage piping. Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The slope of a horizontal drainage pipe shall be not less than that indicated in Table 704.1 except that where the drainage piping is upstream of a grease interceptor, the slope of the piping shall be not less than ¼ inch per foot (2- percent slope). **Building sewer** force mains are not permitted.

  This verbiage was added to clarify **building sewer** force mains are prohibited.

- Table P-706.3- Fittings for change in direction.

TYPE OF FITTING PATTERN	CHANGE IN DIRECTION		
	Horizontal to vertical	Vertical to horizontal	Horizontal to horizontal
Quarter bend	X	X [a, d]	X [a]

  d. A quarter bend shall be permitted, in lieu of an ideal bend, on a dry vent above the highest fixture and in a storm system.

  This Table was modified to include footnote “d” which clarifies the permitted use for a quarter bend.

- Section P-708.1- Cleanout required. Cleanouts shall be provided for drainage piping in accordance with Sections 708.1.1 through 708.1.11. A cleanout shall be provided at or near the base of each vertical waste or soil stack.

  This section was revised to include the requirement for cleanouts at or near the base of vertical stacks.

- Section P-708.1.1- Horizontal drains and building drains. Horizontal drainage pipes and building drains ~~in buildings~~ shall have cleanouts located at intervals of not more than ~~100~~ 50 feet (~~30480~~ 15240 mm) for lines four inch in diameter or less. Horizontal drainage pipes and building drains shall have cleanouts located at intervals of not more than 100 feet (30480 mm) for lines five inch in diameter and above except where manholes are used instead of cleanouts, the manholes shall be located at intervals of not more than ~~400~~ 200 feet (~~122~~ 61 m). The interval length shall be measured from the cleanout or manhole opening, along the developed length of the piping to the next drainage fitting providing access for cleaning, the end of the horizontal drain or the end of the building drain.

  Exception:

  Horizontal fixture drain piping serving a nonremovable trap shall not be required to have a cleanout for the section of piping between the trap and the vent connection for such trap.

  This section was revised to include both horizontal drain pipes and building drains as well as cleanout interval requirements.

- Section P-708.1.10.2- Floor cleanout assemblies. Where it is necessary to protect a cleanout plug from the loads of vehicular traffic, cleanout assemblies in accordance with ASME A112.36.2M shall be installed. Note: An adjustable repair coupling shall be permitted to connect underground piping to a cleanout.

  Adjustable repair couplings (ARC) were added for connections to underground piping to a cleanout as an additional joining method.

- Table P-709.

DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS

FIXTURE TYPE	DRAINAGE FIXTURE UNIT VALUE AS LOAD FACTORS	MINIMUM SIZE OF TRAP (inches)
***	***	***
Emergency floor drain	0	~~2~~ *3*
Floor drain	~~2~~ *3*	~~2~~ *3*
***	***	***

This table was revised to clarify the drainage fixture unit value and minimum trap size serving floor drains and emergency floor drains.

- Section P-712.3.2- Sump pit. The sump pit shall be not less than 18 inches (457 mm) in diameter and not less than 24 inches (610 mm) in depth, unless otherwise approved. The pit shall be provided with access and shall be located such that all drainage flows into the pit by gravity. The sump pit shall be constructed of tile, concrete, steel, plastic or other approved materials. The pit bottom shall be solid and pro- vide permanent support for the pump. The sump pit shall be fitted with a gastight removable cover that is installed not more than 2 inches (51 mm) below grade or floor level. The cover shall be adequate to support anticipated loads in the area of use. The sump pit shall be vented in accordance with Chapter 9.

  Exception: An elevator sump pit shall not require a sealed cover.

  This section was modified to clarify requirements for elevator sump pits.

- Section P-714.1- Backwater valves. Where plumbing fixtures are installed on a floor with a finished floor elevation below the fresh air inlet termination ~~elevation of the manhole cover of the next upstream manhole in the public sewer,~~ such fixtures shall be protected by a backwater valve installed in the building drain, or horizontal branch serving such fixtures. Plumbing fixtures installed on a floor with a finished floor elevation above the elevation of the fresh air inlet termination ~~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 fresh air inlet termination ~~manhole cover of the next upstream manhole in the public sewer~~ shall not be prohibited from discharging through a backwater valve. Note: For building sub-drains that service fixtures below the fresh air inlet termination that discharges into the building gravity drainage system by automatic pumping equipment, the required check valve installed with the pump shall provide sufficient means of protection against backflow.

  This section was modified to clarify backwater valve requirements relative to drainage system components.

- Section P-715.2.5- Vacuum drainage systems. Vacuum drainage pipe, fitting and valve materials shall be in accordance with the vacuum drainage system manufacturer's instructions and the requirements of this chapter and supersede the requirements contained in Section 702.

  This section was modified to clarify materials utilized in vacuum drainage systems.

- Section P-717.2- Materials. Private Sanitary Sewer Infrastructure shall conform to ~~one of the standards~~ all of the requirements listed in ~~Table 702.3~~ Section 702 of this code.

  This section was modified to clarify materials utilized in private sanitary sewer systems.

- Section P-717.3 Slope of private sanitary sewer infrastructure**.** Private sanitary sewer infrastructure shall be installed in uniform alignment at uniform slopes. The slope of private sanitary sewer infrastructure shall be in accordance with ~~Table 704.1~~ Section 704 of this code.

  This section was modified to clarify piping installation requirements for private sanitary sewer systems.

- Section P-717.7 Protection of structures. Private sanitary sewer infrastructure piping installed parallel to footings and walls shall not extend into the bearing plane of a footing or wall in accordance with Section 307.5 of this code. Private sanitary sewer infrastructure piping shall not be installed within 5 feet (1524 mm) of any adjoining property line. Private sanitary sewer infrastructure Pipe shall not be installed within ~~5~~ 3 feet (914 mm) of any ~~adjoining property~~ parallel building foundation.

  Wording in this section was modified to include another level of protection to building's or structure's foundations.

Chapter 8 (Indirect/Special Waste)

- Section P-802.1.4- Swimming pools. ~~Where w~~ Waste water from swimming pools, backwash from filters shall discharge to the sanitary drainage system and water from pool deck drains discharge to the ~~building~~ sanitary drainage system,~~. the~~ Swimming pool waste water discharge and pool deck drains shall be through an indirect waste pipe by means of an air gap.

  This section was modified to clarify swimming pool discharge requirements.

- Section P-802.1.5- Nonpotable clear-water waste. Where devices and equipment such as process tanks, filters, drips and boilers discharge nonpotable water to the building drainage system, the discharge shall be through an indirect waste pipe by means of an air break or an air gap. Note: This waste may discharge on to a roof and into the storm system

  This section was modified to clarify clear water waste discharge requirements.

- Section P-802.1.7- Food utensils, dishes, pots and pans sinks. Sinks, in other than dwelling units, used for the washing, rinsing or sanitizing of utensils, dishes, pots, pans or service ware used in the preparation, serving or eating of food shall discharge indirectly through an air gap ~~or an air break~~ to the drainage system.

  This section was modified to clarify the requirements for the discharge of food preparation equipment.

- Section P-802.4 Waste receptors. For other than hub drains that receive only clear-water waste and standpipes, a removable strainer or basket shall cover the outlet of waste receptors. Waste receptors shall not be installed in concealed spaces. Waste receptors shall not be installed in plenums, crawl spaces, attics, interstitial spaces above ceilings and below floors. Ready access shall be provided to waste receptors. For the purpose this section, a mop/slop sink shall be considered a waste receptor for clear water waste only.

  Adding a mop/slop sink as a waste receptor will allow a mop/slop sink to receive the discharge from HVAC condensate, water heater pans, temperature pressure relief valves, and other clear water waste. The use of a mop sink, slop and laundry tub is a common industry practice.

- Section P-802.4.2 Hub drains and floor sinks. A hub drain shall be in the form of a hub or a pipe extending not less than 1 inch (25 mm) above ~~a water-impervious~~ the finished floor. Floor sinks shall be set not less than 1 inch (25 mm) above ~~[a water-impervious]~~ the finished floor to the flood level rim.

  This section was modified to clarify height requirements for hub drains and floor sinks.

Chapter 9 (Vents)

- Section P-917.6 Additional venting required. Additional venting shall be provided where more than one water closet discharges to a horizontal branch and where the distance from a fixture trap to the stack exceeds the limits in Section 917.4. Where additional venting is required, the fixture(s) shall be vented by individual vents, common vents, wet vents, circuit vents, or a combination waste and vent pipe. The dry vent extensions for the additional venting shall connect to a branch vent, vent stack, stack vent, ~~air admittance valve~~, or shall terminate outdoors.

  This section was modified to clarify the appropriate means of permissible venting.

- Section P-919.1 Scope. The City of Philadelphia has the oldest known model plumbing code in the country dating back to June 30, 1885. Since the inception of the Philadelphia Plumbing Code, one of the main characteristics and theories has been the single stack method of waste and vent. This code and the single stack theory has stood the test of time and continues today to be a model code copied by many other codes as a base line. Every building and structure in the City of Philadelphia as of this writing has been built incorporating this methodology of the single stack theory. This section is intended to be used ~~[as an option]~~ for any modification or rebuilding of any of these existing structures, homes or buildings or as an option for any planned new construction in the future. Systems utilizing this section shall not be permitted to incorporate any other methods of design contained in other sections of this ~~[Chapter]~~ Code.

  This section was modified to clarify plumbing drainage waste and vent system design criteria options.

- Section P-919.2.2.1 Values for indirect waste receptor. The drainage fixture unit load of an indirect waste receptor receiving the discharge of indirectly connected fixtures shall be the sum of the drainage fixture unit values of the fixtures that discharge to the receptor, but not less than the drainage fixture unit value given for the indirect waste receptor in Table P-919.2(a) or 919.2(b).

  This section was included to clarify drainage fixture unit loads for receptors receiving indirect waste.

- Section P-919.2.2.2 Clear-water waste receptors. Where waste receptors such as floor drains, floor sinks and hub drains receive only clear-water waste from display cases, refrigerated display cases, ice bins, coolers and freezers, such receptors shall have a drainage fixture unit value of one half.

  This section was included to clarify drainage fixture unit loads for receptors receiving indirect waste.

- Section P-919.2.5 Soil stack size. The size of a soil or waste stack is determined by the fixture units on the stack plus the fixture units on the horizontal branch from the base of the soil or waste stack connected to the ~~[house]~~ building drain.

  Wording in this section was modified to identify proper components of the sanitary drainage system.

- Section P-919.2.6 Horizontal branch size. The size of all horizontal branch lines including the horizontal branch from the base of the soil or waste stack connected to the ~~[house]~~ building drain is determined by the fixture units and gradient fall

  This section was modified to clarify design requirements for horizontal branch piping and to identify proper components of the sanitary drainage system.

- Section P-919.2.7 Building drain/building sewer size. The size of the ~~[house]~~ building drain is determined by its gradient fall and total number of fixture units.

  Wording in this section was modified to identify proper components of the sanitary drainage system.

- Section P-919.2.10 High-rise buildings. If the building is 75 feet (23 m) in height and not more than 160 feet (49 m) in height, as measured from the lowest level of fire department vehicle access, the vertical soil or waste stacks connected to the house drain or to any of its branches shall be one size larger than given in Table 919.2(c), and this shall also apply when the soil or waste stacks are connected to a horizontal branch pipe that discharges into a soil or waste stack. If the building is more than 160 feet in height, the vertical soil or waste stacks connected to the house drain or to any of its branches shall be two sizes larger than given in Table 919.2(c), and this shall also apply when the vertical soil or waste stacks are connected to the horizontal branch pipe that discharges into a soil or waste stack. The size of the main soil stack shall be sized according to the largest branch entering the stack, except if the amount of fixture units requires a larger size. The developed length of the soil or waste stacks shall be determined by measuring the distance between the center line of the horizontal branch pipe and the roof. If a relief vent is installed on all horizontal branches below the top floor and between the soil or waste stacks and the first fixture on the horizontal branch, the soil or waste stack sizes shall be in accordance with Table 919.2(c), regardless of the height of the building. The diameter of a relief vent shall not be less than one-half the diameter of the horizontal branch to which it is connected, with a minimum size of 1½ inches (38 mm). The maximum number of fixture units connected to the relief vent shall be in accordance with Table 919.9(a). The size of the branch line and its stack shall be determined by the developed length of the stack.

  This section was modified to clarify drainage system design requirements.

- Table P-919.2(a) - Table.

TABLE P-919.2(a) - FIXTURE-UNIT VALUES

FIXTURES	*PRIVATE INSTALL-ATIONS*	*PUBLIC INSTALL-ATIONS*	***MINIMUM TRAP SIZES (INCHES)***
Bathroom group consisting of 1 lavatory, 1 water closet, 1 bathtub or shower stall	*6*	*-*	*-*
Bathtub with 1-1/2 inch trap [a]	*2*	*3*	***1-1/2***
Bathtub with 2-inch trap [a]	*3*	*4*	***2***
Cup sink	*-*	*2*	***1-1/4***
Dishwashers, domestic, automatic	*4*	*-*	***1-1/2[c]***
Drinking fountain	*-*	*1/2*	***1-1/4***
Floor drain	*3*	*3*	***3***
Kitchen sink with 1-1/2 inch trap [b]	*3*	*3*	***1-1/2***
Kitchen sink with 2-inch trap [b]	*-*	*4*	***2***
Laundry tray with 1-1/2 inch trap (1 or 2 compartment)	*3*	*3*	***1-1/2***
Laundry tray with 2-inch trap	*-*	*4*	***2***
Lavatory with 1-1/4 inch or 1-1/2 inch trap	*1*	*2*	***1-1/4***
Lavatory, barber, beauty parlor, or surgeons	*-*	*3*	***1-1/2***
Service sink (slop sink), mop receptor	*-*	*3*	***3***
Service sink, flushing rim with flush valve	*-*	*6*	***3***
Shower stall with 1-1/2 inch or 2 inch trap	*2*	*3*	***1-1/2***
Shower stall with required 3-inch trap	*-*	*6*	***3***
Urinal, stall and washout	*-*	*2*	***1-1/2***
Urinal, pedestal, siphon-jet and blow-out	*-*	*4*	***2***
Urinal, non-water	*-*	*1*	***1-1/2***
Wash fountain, duo	*-*	*2*	***2***
Wash fountain, any other size	*-*	*5*	***2***
Washing machine, domestic, automatic	*4*	*-*	***2***
Water closet	*3*	*6*	***3***
Fountain c uspidor (dental chair)	*-*	*1*	***1-1/4***
Sink, soda fountain or bar	*-*	*2*	***1-1/2***

For SI:1 inch=25.4 mm
a. With or without showerhead over bathtub.
b. With or without garbage grinder unit, or dishwasher, in sink with 1-1/2 or 2-inch trap.
c. Commercial dishwasher shall include minimum 2-inch trap.

This Table was modified to include Minimum Trap Sizes for fixtures listed

- Section P-919.7.2 Yoke venting offsets. Such offsets shall be provided with a yoke vent equal to one-half the diameter of the vent stack or soil stack but not less than 11/2 inches (38 mm). The lower end of the yoke vent shall connect to the soil or waste stack through a wye below the offset and above the next lower horizontal branch, and the upper end shall connect to the stack vent or the vent stack not less than 6 inches (152 mm) above the the highest fixture. The yoke vent may connect to a vent stack on the floor level above or higher provided the connection is a minimum of 6 inches (152 mm) above the flood level rim of the next fixture on the stack above the offset

  This section was modified to clarify drainage and vent system design requirements.

- Section P-919.9.3 size of vent stacks. A vent stack or main vent connecting relief vents, circuit vents or loop vents shall have a diameter of at least one-half the diameter of the soil or waste stack to which the vent stack or main vent is connected, but in no case less than 1-1/2 inches (38 mm). The maximum number of fixture units connected to the vent stack shall be in accordance with Table 919.9(a). The vent stack or main vent shall not be less in size than the branch, circuit, or loop vent it is servicing. Where fixtures are installed on the house drain behind the line of vent, a minimum vent stack of 1-1/2 inches (38 mm) shall be required for small fixtures having a fixture unit value not greater than 10 drainage fixture units and a minimum of a 2 inch~~[es]~~ (51 mm) vent for one or more water closets and other fixtures, except if a larger size is required according to Table 919.9(a).

  This section was modified to clarify drainage and vent system design requirements.

Chapter 10 (Traps, Interceptors and Separators)

- Section P-1002.3- Prohibited traps. The following types of traps are prohibited:

  Exceptions:

  1. Drum traps used as solids interceptors and drum traps serving chemical waste systems shall not be prohibited.
  2. "S" traps are permitted to be used as a direct replacement to a previously installed "S" trap

  The exception was modified to clarify the limited permitted use of "S" traps.

- Section P-1003.1 Where required. Interceptors and separators shall be provided to prevent the discharge of oil, grease, sand and other substances harmful or hazardous to the public sewer, the private sewage system or the sewage treatment plant or processes. Interceptors and separators shall be connected to the sanitary sewer.

  This section was modified to clarify appropriate system connection requirements.

- Section P-1003.2.2 Approval. The size, type and location of each interceptor and of each separator shall be designed and installed in accordance with the manufacturer's instructions and the requirements of this section based on the anticipated conditions of use. Wastes that do not require treatment or separation shall not be discharged into any interceptor or separator. As an appurtenance contained within the plumbing system, the interceptor or separator shall not be limited by the material construction of the unit.

  Language added to this section is intended to clarify material use.

- Section P-1003.3.5.1 Grease interceptor capacity. Grease interceptors shall have the grease retention capacity indicated in Table 1003.3.5.1 for the flow-through rates indicated with a minimum capacity of 20 gallons per minute of flow and 40 pounds of grease retention capacity.

  Language was added to this section to identify minimum capacity requirements.

- Table P-1003.3.5.1- Capacity of grease interceptors.

TABLE 1003.3.5.1 – CAPACTIY OF GREASE INTERCEPTORS

TOTAL FLOW-THROUGH RATING (gpm)	GREASE RETENTION CAPACITY (pounds)
4	8
~~6~~	~~12~~
~~7~~	~~14~~
~~9~~	~~18~~
~~10~~	~~20~~
~~12~~	~~24~~
~~14~~	~~28~~
20	40
25	50
35	70
50	100
75	150
100	200

  This table was modified to indicate minimum capacity requirements.

- Section P-1003.4 Oil separators required. At repair garages where floor or trench drains are provided, car washing facilities, factories where oily and flammable liquid wastes are produced and hydraulic elevator pits, oil separators shall be installed into which oilbearing, grease-bearing or flammable wastes shall be discharged before emptying into the building drainage system or other point of disposal. Interceptors and separators shall be connected to the sanitary sewer.

  This section was modified to clarify appropriate system connection requirements.

- Section P-1003.11 Hair interceptor. An approved hair interceptor shall be installed wherever hair is introduced into the drainage system in sufficient quantity to cause line stoppage and shall be installed in connection with the following uses or occupancies ~~[when required by the Industrial Waste Division of the Water Department]~~.

  This section was modified to eliminate the industrial wastewater department jurisdictional requirement.

Chapter 11 (Storm Drainage)

- Section P-1101.1(.1) Private Building Storm Sewer. Repairs to Existing Private Building Storm Sewer pipe materials shall be in accordance with Table P-1102.4. New or extended private Building Storm Sewers may not cross any adjoining property except when included as part of an approved post-construction Storm Water Management Plan in accordance with Philadelphia Water Department regulations or private storm sewer infrastructure designed in accordance with P-1115.

  This section was added to clarify configuration and design of Private Building Storm Sewers.

- Section P-1101.3 Prohibited drainage. Storm water shall not be drained into sewers intended for sewage only.
  Exceptions:
  1. Drains contained in enclosed parking garage not exposed to the outside climatic elements.
  2. Drains receiving washdown, soil, oil, fat/grease or any other hazardous waste.

  These exceptions were added to clarify configuration and design of storm drainage systems.

- [BS]1 P-1101.7 Roof design. Roofs shall be designed for the maximum possible depth of water that will pond thereon as determined by the relative levels of roof deck and overflow weirs, scuppers, edges or serviceable drains in combination with the deflected structural elements. In determining the maximum possible depth of water, all primary roof drainage means shall be assumed to be blocked. The maximum possible depth of water on the roof shall include the height of the water required above the inlet of the secondary roof drainage means to achieve the required flow rate of the secondary drainage means to accommodate the design rainfall rate as required by Section 1106.

  Exception:

  Canopies, marquees, balconies, and similar extended roof surfaces with a total of 300 square feet or less, shall not require drainage unless the areas include a parapet.

  These exceptions were added to clarify configuration and design of storm drainage systems.

- Section P-1101.9 Backwater valves. Storm drainage systems shall be provided with backwater valves as required for sanitary drainage systems in accordance with Section 714. For building sub-drains that service fixtures below the fresh air inlet termination that discharges into the building gravity drainage system by automatic pumping equipment, the required check valve installed with the pump shall provide sufficient means of protection against backflow.

  This section was modified to clarify backwater valve requirements relative to drainage system components.

- Section P-1102.2 Inside storm drainage conductors. Inside storm drainage conductors installed above ground shall conform to ~~one~~ all of the requirements and standards listed in ~~Table~~ Section 702 ~~702.1~~

  This section was modified to clarify material use.

- Section P-1102.3 Underground building storm drain pipe. Underground building storm drain pipe shall conform to ~~one~~ all of the requirements and standards listed in ~~Table~~ Section 701 ~~702.2~~

  This section was modified to clarify material use.

- Section P-1109.3 Size of existing combined building drains and building sewers when adding additional load. The size of a combination sanitary and storm drain or sewer shall be computed in accordance with the method in Table 1109.4. The fixture units shall be converted into an equivalent projected roof or paved area. ~~[Where the total fixture load on the combined drain is less than or equal to 256 fixture units, the equivalent drainage area in horizontal projection shall be taken as 4,000 square feet (372 m2). Where the total fixture load exceeds 256 fixture units, each additional fixture unit shall be considered the equivalent of 15.6 square feet (1.5 m2) of drainage area.]~~ Allowance in square feet of pitched roofs or paved areas for fixture units shall be as follows: 7 square feet for each of the first 1,500 Fixture Units; 5 square feet for each of the next 1,500 Fixture Units, 4 square feet for each of the next 2,000 Fixture Units, and 3 square feet for each Fixture Unit thereafter. These values are based on a rainfall rate of 6 inches (127 mm) per hour.

This section was modified to clarify configuration, design, and sizing of existing combined sanitary and storm drainage systems.

- DELETE TABLE P-1109.4 AND REPLACE:

  TABLE P-1109.4 MAXIMUM HORIZONTAL PROJECTED ROOF AREA IN SQUARE FEET FOR BUILDING STORM DRAINS AT VARIOUS SLOPES.

Diameter (Inches)	*Fall Per Foot*			*Vertical Leaders*
	1/8"	*1/4"*	*1/2"*	
3		*930*	*1,300*	*1,750*
4	*1,585*	*2,100*	*3,300*	*3,650*
5	*2,875*	*3,800*	*5,300*	*6,000*
6	*4,300*	*6,000*	*9,000*	*10,800*
8	*9,200*	*13,000*	*18,000*	*23,000*
10	*16,500*	*25,000*	*35,000*	*40,000*
12	*26,600*	*40,000*	*60,000*	*65,000*
15	*47,500*	*75,000*	*100,000*	*115,000*
16	*57,250*	*92,500*	*131,000*	
18	*67,000*	*110,000*	*162,000*	
20	*85,500*	*135,000*	*196,000*	
24	*155,000*	*225,000*		
30	*295,000*	*416,000*		

This table was included to clarify sizing requirements of existing storm drainage systems and combined sanitary and storm drainage systems.

- Section P-1114.2.1 Green roof rainfall rates. The green roof drainage system shall be designed based on the reduced rainfall rate in accordance with Section 1106.1 only where approved through the Philadelphia Water Department and shall satisfy the design, installation and maintenance requirements set forth by the Philadelphia Water Department ~~[storm water management regulations]~~ and, if applicable, the Philadelphia Zoning Code.

  This section was modified to eliminate water department jurisdictional storm water management regulations.

- Section P-1115.3 Slope of private storm sewer infrastructure. Private storm sewer infrastructure shall be installed in uniform alignment at uniform slopes. The slope of private storm sewer infrastructure shall be in accordance with ~~[Table 704.1]~~ Section 704 of this code.

  This section was modified to clarify design of private storm sewer infrastructure.

- Section P-1115.7 Protection of structures. Private storm sewer infrastructure installed parallel to footings and walls shall not extend into the bearing plane of a footing or wall in accordance with Section 307.5 of this code. Private storm sewer infrastructure shall not be installed within 5 feet (1,524 mm) of any adjoining property line. Private storm sewer infrastructure Pipe shall not be installed within ~~[5-]~~ 3 feet (914 mm) of any ~~[adjoining property]~~ parallel building foundation.

  Wording in this section was modified to include another level of protection to building's or structure's foundations.

- Section P-1115.10 Storm backflow. Backwater valves shall be installed in accordance with Section 1101.9 of this code. For building sub-drains that service fixtures below the fresh air inlet termination that discharges into the building gravity drainage system by automatic pumping equipment, the required check valve installed with the pump shall provide sufficient means of protection against backflow

  Wording in this section was included to identify proper components of the storm drainage system.

APPENDIX E SIZING OF WATER PIPING SYSTEM

- WATER DISTRIBUTION PIPE. The pipe from the curb stop or curb line to the structure or through the meter pit to the first point of use if there is no structure.

- WATER SERVICE PIPE. The pipe from the water main to the curb stop or curb line as regulated by Philadelphia Water Department Regulations.

- WATER SUPPLY PIPES. The pipes within a structure or premises which convey water from the water distribution pipe to the plumbing fixtures or other outlets.

- ~~[WATER SERVICE PIPE. The pipe from the water main or other source of potable water supply, or from the meter when the meter is at the public right of way, to the water distribution system of the building served.~~

- ~~WATER DISTRIBUTION PIPE. A pipe within the structure or on the premises that conveys water from the water service pipe, or from the meter when the meter is at the structure, to the points of utilization.~~

- ~~WATER SUPPLY SYSTEM. The water service pipe, the water distribution pipes, and the necessary connecting pipes, fittings, control valves and all appurtenances in or adjacent to the structure or premises.]~~

  These definitions were modified to be consistent with current water system definitions.