



Choctaw

2500 N. Choctaw Rd * PO Box 567 * Choctaw, OK 73020 * Phone (405) 390-8198 * Fax (405) 390-3332

Recommended Amendments to the 2015 International Plumbing Code

Part 5 – BUILDING REGULATIONS AND CODES

International Plumbing Code®, 2015 Edition (IPC®, 2015)

Part 5, Chapter 5 “*International Plumbing Code*”

NOTICES:

Through its rulemaking process, the City of Choctaw has adopted the first printing of the 2015 edition of the International Plumbing Code® (IPC®, 2015). Errata found and corrected by the ICC®, if any, in a printing of the code other than the specific printing listed previously in this notice, has not been reviewed or approved by the City of Choctaw, adopted by the City of Choctaw itself, or promulgated as a permanent rule by the City of Choctaw.

The following sections, paragraphs, and sentences of the *2015 International Plumbing Code* are hereby amended as follows: Standard type is text from the IPC. Underlined type is text inserted. ~~Lined through type is deleted text from IPC.~~

The sections, paragraphs, and sentences are based off the adopting of the State of Oklahoma by the OUBCC (Oklahoma Uniform Building Code Council). **Any text highlighted in YELLOW is a local (City of Choctaw) adoption and reasoning.**

Section 101.1 Title; modifications read as follows:

Section 101.1 Title. These regulations shall be known as the International Plumbing Code of City of Choctaw hereinafter referred to as “this code”.

(Reason: Identify the City of Choctaw as the name of the jurisdiction.)

Section 106.1.1 Annual permit. This section shall read:

Section 106.1.1 Annual permit. . Instead of an individual construction permit for each alteration to an already approved system or equipment or application installation, the code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit. An annual permit is a yearly permit which represents a group of individual permits for each alteration to an already approved electrical, gas, mechanical or plumbing installation. The building official is authorized to issue an

annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

(Reason: This section has been modified to clarify what an annual permit is.)

Section 106.1.2; change to read as follows:

Section 106.1.2 Annual permit records. The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The ~~code-building~~ official shall have access to such detailed records of alterations at all times ~~or such records shall be filed with the code official as designated.~~ At the completion of the entity's annual permit term, the applicant shall file such detailed records of alterations with the building official. Pursuant to the authority of 59 O.S. § 1000.25, the building official shall collect fees for each individual permit which is part of the annual permit once the detailed records are submitted and remit such fees to the OUBCC.

(Reason: This section has been modified to require the building official to collect the OUBCC permit fee for each individual permit that is part of the annual permit at the completion of the annual permit term.)

Section 106.6.2 Fee schedule; change to read as follows:

106.6.2 Fee schedule. The fees for all plumbing work shall be as indicated in the following schedule: (JURISDICTION TO INSERT APPROPRIATE SCHEDULE) adopted by the governing body of the City of Choctaw.

(Reason: This calls to attention of local jurisdictions considering adoption that they need a fee schedule and a refund policy.)

Section 202 General Definitions; Modification to building drain reads as follows:

Section 202 General Definitions

BUILDING DRAIN. That part of the lowest piping of a drainage system that receives the discharge from soil, waste, and other drainage pipes inside and that extends ~~30-inches (762 mm)~~ 5 feet (1524 mm) in developed length of pipe beyond the exterior walls of the building and conveys the drainage to the building sewer.

(Reason: To align with the industry standard where the site sewer (civil) picks up 5 feet outside of the building)

Section 305.3 Pipes through foundation walls; Modification to building drain reads as follows:

Section 305.3 Pipes through foundation walls. Any pipe that passes through a foundation wall shall be provided with a relieving arch or pipe sleeve pipe shall be built into the foundation wall. The relieving arch or pipe sleeve shall conform to one of the materials and standards listed in Table 702.2. The sleeve shall be two pipe sizes greater than the pipe passing through the wall.

(Reason: to require the relieving arch or pipe sleeve pipe to conform with the materials and standards listed in Table 702.2)

Section 305.4.1 Sewer depth. This section has been modified to read:

Section 305.4.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be ~~installed not less than [number] inches (mm)~~ a minimum of 12 inches (305 mm) below finished grade at the point of septic tank connection. Building sewers shall ~~installed not less than [number] inches (mm)~~ be a minimum of 12 inches (305 mm) below grade.

(Reason: This section has been modified to include a depth for the septic tank connection.)

Section 312.2 Drainage and vent water test. This section has been modified to read:

Section 312.2 Drainage and vent water test. A water test shall be applied to the drainage system either in its entirety or in sections. If applied to the entire system, all openings in the piping shall be tightly closed, except the highest opening, and the system shall be filled with water to the point of overflow. If the system is tested in sections, each opening shall be tightly plugged except the highest openings of the section under test, and each section shall be filled with water, but no section shall be tested with less than a ~~10 foot (3048 mm)~~ 5 foot (1524 mm) head of water. In testing successive sections, at least the upper ~~10 foot (3048 mm)~~ 5 foot (1524 mm) of the next preceding section shall be tested so that no joint or pipe in the building, except the uppermost ~~10 foot (3048 mm)~~ 5 foot (1524 mm) of the system, shall have been submitted to a test of less than a ~~10 foot (3048 mm)~~ 5 foot (1524 mm) head of water. This pressure shall be held for at least 15 minutes. The system shall then be tight at all points.

(Reason: This section has been modified to change the test from a requirement of a 10 foot (3048 mm) head of water to a requirement of a 5 foot (1524 mm) head of water.)

Section 312.3 Drainage and vent air test. This section has been modified to read:

Section 312.3 Drainage and vent air test. Plastic piping shall not be tested using air. An air test shall be made by forcing air into the system until there is a uniform gauge pressure of ~~5 psi (34.5 kPa)~~ 2.5 psi (17.25 kPa) or sufficient to balance a ~~10-inch (254 mm)~~ 5-inch (127 mm) column of mercury. This ~~pressure test~~ shall be held for a ~~test~~ period of not less than 15 minutes. Any adjustments to the test pressure required because of changes in ambient temperatures or the seating of gaskets shall be made prior to the beginning of the test period.

(Reason: This section has been modified to change the equivalent pressure for the inches of mercury to match the feet of water change made for the drainage and vent test.)

Section 312.6 Gravity sewer test. This section has been modified to read:

Section 312.6 Gravity sewer test. Where required, gravity sewer tests shall consist of plugging the end of the building sewer at the point of connection with the public sewer, filling the building sewer with water, testing with not less than a ~~10-foot (3048 mm)~~ 5 foot (1024 mm) head of water and maintaining such pressure for 15 minutes.

(Reason: This section has been modified to allow the authority having jurisdiction to determine if this test is required and change the test from a 10 foot (3048 mm) head of water test to a 5 foot (1024 mm) head of water test.)

Section 314.2.1 Condensate Disposal. This section has been modified to read:

314.2.1 Condensate disposal. Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. ... {text unchanged} ... Condensate shall not discharge into a street, alley, sidewalk, rooftop, or other areas so as to cause a nuisance.

(Reason: Greater specificity in prohibited locations for condensate discharge. It is the intent of this amendment to send condensate discharge into a sanitary sewer drain.)

Section 405.8 Slip joint connections. It has been modified to read:

Section 405.8 Slip joint connections. Slip joints shall be made with an approved elastomeric gasket and shall only be installed ~~on the trap outlet, trap inlet and within the trap seal~~ from fixture outlet to within 18 inches (457 mm) downstream of trap outlet seal. Fixtures with concealed slip-joint connections shall be provided with an access panel or utility space ~~not less than~~ at least 12 inches (305 mm) in its smallest dimension or other approved arrangement so as to provide access to the slip joint connections for inspection and repair.

(Reason: This section has been modified to allow the gasket to be installed from the fixture outlet to within 18 inches (457 mm) downstream of the trap outlet seal.)

Section 412.2.1 Required location for floor drains; Floor drains shall be added as follows:

Section 412.2.1 Required location for floor drains. Public restrooms and Commercial kitchens. In lieu of floor drains in commercial kitchens, the code official may accept floor sinks.

(Reason: To make more compatible with local health code practices.)

Section 504.6 Requirements for discharge piping; Modifications read as follows:

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.

Exception: Multiple relief devices may be installed to a single T & P discharge piping system when *approved* by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

5. Discharge ~~to the floor,~~ to an indirect 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 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.

(Reason: To provide a higher degree of safety.)

Section 604.5 Size of fixture supply. This section has been modified to read:

Section 604.5 Size of fixture supply. 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 distribution lines utilized in gridded or parallel water distribution systems shall be as shown in Table 604.5.

Exception: The fixture supply pipe for domestic dishwashers and drinking fountains shall be permitted to be terminated more than 30 inches (762 mm) from the point of connection to the fixture.

(Reason: This section has been modified to add an exception to allow domestic dishwashers and drinking fountains to terminate more than 30 inches (762 mm) from the point of connection to the fixture.)

Section 614, Lawn Irrigation.

This Section has been newly created and entitled "**Section P2914 Lawn Irrigation.**"

Section 614.1 General. This section has been added to read:

Section 614.1 General. The provisions of this appendix shall control the design and construction of swimming pools, spas and hot tubs installed in or on the lot of a one- or two-family dwelling.

(Reason: This section has been added to clarify the design and construction of swimming pools, spas, and hot tubs installed in or on the lot of a one- or two family dwelling.)

Section 614.2 Definitions. This section heading has been added to clarify the section of text that applies to the definitions. This header has been added to read:

614.2 Definitions.

Section 614.2 Definitions. For the purposes of these requirements, the terms used shall be defined as follows and as set forth in this Section.

1. AIR GAP--A complete physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel.
2. ATMOSPHERIC VACUUM BREAKER--An assembly containing an air inlet valve, a check seat, and an air inlet port. The flow of water into the body causes the air inlet valve to close the air inlet port. When the flow of water stops the air inlet valve falls and forms a check against back-siphonage. At the same time it opens the air inlet port allowing air to enter and satisfy the vacuum. Also known as an Atmospheric Vacuum Breaker Back-Siphonage Prevention Assembly.
3. BACKFLOW PREVENTION--The mechanical prevention of reverse flow, or back-siphonage, of non-potable water from an irrigation system into the potable water source.
4. BACKFLOW PREVENTION ASSEMBLY--Any assembly used to prevent backflow into a potable water system. The type of assembly used is based on the existing or potential degree of health hazard and backflow condition.
5. COMPLETION OF IRRIGATION SYSTEM INSTALLATION--When the landscape irrigation system has been installed, all minimum standards met, all tests performed, and the irrigator is satisfied that the system is operating correctly.

6. CONSULTING--The act of providing advice, guidance, review or recommendations related to landscape irrigation systems.
7. CROSS-CONNECTION--An actual or potential connection between a potable water source and an irrigation system that may contain contaminants or pollutants or any source of water that has been treated to a lesser degree in the treatment process.
8. DESIGN--The act of determining the various elements of a landscape irrigation system that will include, but not be limited to, elements such as collecting site specific information, defining the scope of the project, defining plant watering needs, selecting and laying out emission devices, locating system components, conducting hydraulics calculations, identifying any local regulatory requirements, or scheduling irrigation work at a site. Completion of the various components will result in an irrigation plan.
9. DESIGN PRESSURE. The pressure that is required for an emission device to operate properly. Design pressure is calculated by adding the operating pressure necessary at an emission device to the total of all pressure losses accumulated from an emission device to the water source.
10. EMISSION DEVICE. Any device that is contained within an irrigation system and that is used to apply water. Common emission devices in an irrigation system include, but are not limited to, spray and rotary sprinkler heads, and drip irrigation emitters.
11. EMPLOYED. Engaged or hired to provide consulting services or perform any activity relating to the sale, design, installation, maintenance, alteration, repair, or service to irrigation systems. A person is employed if that person is in an employer-employee relationship as defined by Internal Revenue Code, 26 United States Code Service, §3212(d) based on the behavioral control, financial control, and the type of relationship involved in performing employment related tasks.
12. HEAD-TO-HEAD SPACING. The spacing of spray or rotary heads equal to the manufacturer's published radius of the head.
13. HEALTH HAZARD. A cross-connection or potential cross-connection with an irrigation system that involves any substance that may, if introduced into the potable water supply, cause death or illness, spread disease, or have a high probability of causing such effects.
14. HYDRAULICS. The science of dynamic and static water; the mathematical computation of determining pressure losses and pressure requirements of an irrigation system.
15. INSPECTOR. A licensed plumbing inspector, water district operator, other governmental entity, or irrigation inspector who inspects irrigation systems and performs other enforcement duties for a municipality or water district as an employee or as a contractor.
16. INSTALLER. A person who actually connects an irrigation system to a private or public raw or potable water supply system or any water supply, who is with the City of Choctaw.
17. IRRIGATION PLAN. A scaled drawing of a landscape irrigation system which lists required information, the scope of the project, and represents the changes made in the installation of the irrigation system.

18. IRRIGATION SERVICES. Selling, designing, installing, maintaining, altering, repairing, servicing, permitting, providing consulting services regarding, or connecting an irrigation system to a water supply.
19. IRRIGATION SYSTEM. An assembly of component parts that is permanently installed for the controlled distribution and conservation of water to irrigate any type of landscape vegetation in any location, and/or to reduce dust or control erosion. This term does not include a system that is used on or by an agricultural operation as defined by Oklahoma Water Resources Board.
20. IRRIGATION TECHNICIAN. A person who works under the supervision of a licensed irrigator to install, maintain, alter, repair, service or supervise installation of an irrigation system, including the connection of such system in or to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed with the City of Choctaw.
21. IRRIGATION ZONE. A subdivision of an irrigation system with a matched precipitation rate based on plant material type (such as turf, shrubs, or trees), microclimate factors (such as sun/shade ratio), topographic features (such as slope) and soil conditions (such as sand, loam, clay, or combination) or for hydrological control.
22. IRRIGATOR. A person who sells, designs, offers consultations regarding, installs, maintains, alters, repairs, services or supervises the installation of an irrigation system, including the connection of such system to a private or public, raw or potable water supply system or any water supply.
23. IRRIGATOR-IN-CHARGE. The irrigator responsible for all irrigation work performed by an exempt business owner, including, but not limited to obtaining permits, developing design plans, supervising the work of other irrigators or irrigation technicians, and installing, selling, maintaining, altering, repairing, or servicing a landscape irrigation system.
24. LANDSCAPE IRRIGATION. The science of applying the necessary amount of water to promote or sustain healthy growth of plant material or turf.
25. LICENSE. An occupational license that is issued by the City of Choctaw to an individual that authorizes the individual to engage in an activity
26. MAINLINE. A pipe within an irrigation system that delivers water from the water source to the individual zone valves.
27. MAINTENANCE CHECKLIST. A document made available to the irrigation system's owner or owner's representative that contains information regarding the operation and maintenance of the irrigation system, including, but not limited to: checking and repairing the irrigation system, setting the automatic controller, checking the rain or moisture sensor, cleaning filters, pruning grass and plants away from irrigation emitters, using and operating the irrigation system, the precipitation rates of each irrigation zone within the system, any water conservation measures currently in effect from the water purveyor, the name of the water purveyor, a suggested seasonal or monthly watering schedule based on current evapotranspiration data for the geographic region, and the minimum water requirements for the plant material in each zone based on the soil type and plant material where the system is installed.

28. MAJOR MAINTENANCE, ALTERATION, REPAIR, OR SERVICE. Any activity that involves opening to the atmosphere the irrigation main line at any point prior to the discharge side of any irrigation zone control valve. This includes, but is not limited to, repairing or connecting into a main supply pipe, replacing a zone control valve, or repairing a zone control valve in a manner that opens the system to the atmosphere.
29. MASTER VALVE. A remote control valve located after the backflow prevention device that controls the flow of water to the irrigation system mainline.
30. MATCHED PRECIPITATION RATE. The condition in which all sprinkler heads within an irrigation zone apply water at the same rate.
31. NEW INSTALLATION. An irrigation system installed at a location where one did not previously exist.
32. PASS-THROUGH CONTRACT. A written contract between a contractor or builder and a licensed irrigator or exempt business owner to perform part or all of the irrigation services relating to an irrigation system.
33. POTABLE WATER. Water that is suitable for human consumption.
34. PRESSURE VACUUM BREAKER. An assembly containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve.
35. RECLAIMED WATER. Domestic or municipal wastewater which has been treated to a quality suitable for beneficial use, such as landscape irrigation.
36. RECORDS OF LANDSCAPE IRRIGATION ACTIVITIES. The irrigation plans, contracts, warranty information, invoices, copies of permits, and other documents that relate to the installation, maintenance, alteration, repair, or service of a landscape irrigation system.
37. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY. An assembly containing two independently acting approved check valves together with a hydraulically operating mechanically independent pressure differential relief valve located between the two check valves and below the first check valve.
38. STATIC WATER PRESSURE. The pressure of water when it is not moving.
39. SUPERVISION. The on-the-job oversight and direction by a licensed irrigator who is fulfilling his or her professional responsibility to the client and/or employer in compliance with local or state requirements.
40. WATER CONSERVATION. The design, installation, service, and operation of an irrigation system in a manner that prevents the waste of water, promotes the most efficient use of water, and applies the least amount of water that is required to maintain healthy individual plant material or turf, reduce dust, and control erosion.

41. ZONE FLOW. A measurement, in gallons per minute or gallons per hour, of the actual flow of water through a zone valve, calculated by individually opening each zone valve and obtaining a valid reading after the pressure has stabilized. For design purposes, the zone flow is the total flow of all nozzles in the zone at a specific pressure.

42. ZONE VALVE. An automatic valve that controls a single zone of a landscape irrigation system.

(Reason: This section has been added to clarify the design and construction of lawn irrigation installed in or on the lot of a one- or two family dwelling.)

Section 614.3 Valid License Required. This section has been added to read:

Section 614.3 Valid License Required. Any person who connects an irrigation system to the water supply within the City of Choctaw or to a private water system, must hold a valid license with the City of Choctaw.

Exemptions: A property owner is not required to be licensed if he or she is performing irrigation work in a building or on a premises owned or occupied by the person as the person's home. Home or property owner's property must have a current homestead exemption.

A home or property owner who installs an irrigation system must meet the standards contained within this section and the adopted codes regarding spacing, water pressure, spraying water over impervious materials, rain or moisture shut-off devices or other technology, backflow prevention and isolation valves.

Section 614.4 Permit Required. This section has been added to read:

Section 614.4 Permit Required. Any person installing an irrigation system within the City of Rockwall is required to obtain a permit from the city. Any plan approved for a permit must be in compliance with the requirements of this chapter.

Exemptions:

1. An irrigation system that is that an on-site sewage disposal system; or
2. An irrigation system used on or by an agricultural operation.

Section 614.5 Backflow Prevention Methods and Devices. This section has been added to read:

Section 614.5.1 Backflow Prevention Methods and Devices. All backflow prevention methods and devices must conform to Section P2902.5.3 "Lawn Irrigation System."

Section 614.5.2 Missing Backflow Prevention Protection. All irrigation systems found to be without backflow prevention protection that are connected to the potable water supply, must be connected to the potable water supply through an approved, properly installed backflow prevention assembly, before any major maintenance, alteration, repair, or service is performed.

Section 614.6 Backflow Testing. This section has been added to read:

Section 614.6 Backflow Testing. The irrigator shall ensure the backflow prevention device is tested by a licensed plumber prior to being placed in service. The test results must be provided to the City of Choctaw and the irrigation system's owner or owner's representative within ten business days of testing of the backflow prevention device. Test results must be submitted on an approved Backflow Prevention Assembly Test and Maintenance Report form.

Section 614.7 Water Conservation. This section has been added to read:

Section 614.7 Water Conservation. All irrigation systems shall be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation

Section 614.8 Irrigation Design. This section has been added to read:

Section 614.8.1 Irrigation Plan Design. An irrigator shall prepare an irrigation plan for each site where a new irrigation system will be installed. A paper or electronic copy of the irrigation plan must be on the job site at all times during the installation of the irrigation system. A drawing showing the actual installation of the system is due to each irrigation system owner after all new irrigation system installations. During the installation of the irrigation system, variances from the original plan may be authorized by the licensed irrigator if the variance from the plan does not:

1. Diminish the operational integrity of the irrigation system; or
2. Violate any requirements of the City of Choctaw or the State of Oklahoma regulations.

Section 614.8.2 Irrigation Plan Drawing. All irrigation plans used for construction must be drawn to scale. The plan must include, at a minimum, the following information:

1. All major physical features and the boundaries of the areas to be watered;
2. North arrow;
3. A legend;
4. The zone flow measurement for each zone;
5. Location and type of each:
 - (i.) Controller;
 - (ii.) Sensor (for example, but not limited to, rain, moisture, wind, flow, or freeze).
6. Location, type, and size of each:
 - (i.) Water source, such as, but not limited to a water meter and point(s) of connection;
 - (ii.) Backflow prevention device;
 - (iii.) Water emission device, including, but not limited to, spray heads, rotary sprinkler heads, quick-couplers, bubblers, drip, or micro-sprays;
 - (iv.) Valve, including but not limited to, zone valves, master valves, and isolation valves;
 - (v.) Pressure regulation component; and
 - (vi.) Main line and lateral piping.
7. The scale used; and
8. The design pressure.

Section 614.9 Irrigation Minimum Requirements. This section has been added to read:

Section 614.9 Irrigation Minimum Requirements. All irrigation design and installation must be constructed to the minimum requirement listed below:

Section P614.9.1 Manufacturer's limitations. No irrigation design or installation shall require the use of any component, including the water meter, in a way which exceeds the manufacturer's published performance limitations for the component.

Section 614.9.2 Spacing. The irrigation system shall have the proper spacing that are listed below:

1. The maximum spacing between emission devices must not exceed the manufacturer's published radius or spacing of the device(s). The radius or spacing is determined by referring to the manufacturer's published specifications for a specific emission device at a specific operating pressure.
2. New irrigation systems shall not utilize above-ground spray emission devices in landscapes that are less than 48 inches not including the impervious surfaces in either length or width and which contain impervious pedestrian or vehicular traffic surfaces along two or more perimeters. If pop-up sprays or rotary sprinkler heads are used in a new irrigation system, the sprinkler heads must direct flow away from any adjacent surface and shall not be installed closer than four inches from a hardscape, such as, but not limited to, a building foundation, fence, concrete, asphalt, pavers, or stones set with mortar.
3. Narrow paved walkways, jogging paths, golf cart paths or other small areas located in cemeteries, parks, golf courses or other public areas may be exempted from this requirement if the runoff drains into a landscaped area

Section 614.9.3 Water Pressure. Emission devices must be installed to operate at the minimum and not above the maximum sprinkler head pressure as published by the manufacturer for the nozzle and head spacing that is used. Methods to achieve the water pressure requirements include, but are not limited to, flow control valves, a pressure regulator, or pressure compensating spray heads

Section 614.9.4 Irrigation Zones. Irrigation Zones - Irrigation systems shall have separate zones based on plant material type, microclimate factors, topographic features, soil conditions, and hydrological requirements.

Section 614.9.5 Matched Precipitation Rate. Zones must be designed and installed so that all of the emission devices in that zone irrigate at the same precipitation rate.

Section 614.9.6 Impervious Surface. Irrigation systems shall not spray water over surfaces made of concrete, asphalt, brick, wood, stones set with mortar, or any other impervious material, such as, but not limited to, walls, fences, sidewalks, streets, etc.

Section 614.9.7 Master Valve. When provided, a master valve shall be installed on the discharge side of the backflow prevention device on all new installations.

Section 614.9.1.8 Pipe Primer and Solvent. All new irrigation systems that are installed using PVC pipe and fittings shall be primed with a purple colored primer prior to applying the PVC cement in accordance with the City of Choctaw adopted International Plumbing Code.

Section 614.9.1.9 Moisture Shut-Off. All new automatically controlled irrigation systems must include sensors or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture. Moisture shut-off technology must be installed according to the manufacturer's published recommendations. Repairs to existing automatic irrigation systems that require replacement of an existing controller must include a sensor or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall.

All new automatically controlled irrigation systems must include sensors or other technology designed to inhibit or interrupt operation of the irrigation system during periods of freezing weather.

Section 614.9.1.10 Isolation Valve. All new irrigation systems must include an isolation valve between the water meter and the backflow prevention device. The isolation valve must be a ball valve and be equipped with a stainless steel handle. The ball valve must be installed within a plastic valve or meter box large enough as not to hamper operation or repair.

Section 614.9.1.11 Location of Irrigation System. Access shall be provided to backflow preventers, controllers, valves, lines, wire, etc.

Section 614.9.1.11.1 Backflow Preventers. The location of the backflow preventers shall follow the regulations within this Section and the codes adopted in the International Plumbing Code.

Section 614.9.1.11.1.1 Location of Backflow Preventers.

Placement of the Backflow Preventer must meet all manufacture's requirements.

Section 614.9.1.11.1.2 Outdoor Enclosures for Backflow Prevention Device. Outdoor enclosures for backflow prevention devices shall comply with ASSE 1060. This includes any area outside of the building envelope.

Section 614.9.1.11.1.3 Protection of backflow preventers. Backflow preventers shall not be located in areas subject to freezing except where they can be removed by means of unions or are protected by heat, insulation or both.

Section 614.9.1.11.1.4 Relief port. The relief port or air gap fitting of the backflow preventer shall discharge to an approved indirect waste receptor or to the outdoor where it will not cause damage or create a nuisance.

Section 614.9.1.11.2 Location of Irrigation lines and Water emission. The location of the irrigation piping and water emissions from the irrigation system shall follow the regulations within this Section and the codes adopted in the International Plumbing Code.

Section 614.9.1.11.2.1 Public Right of Way and Roadway Easement.

Any part or portion of the irrigation piping is encourage to not be installed or located within the public right of way or public roadway easement.

Section 614.9.1.11.2.2 Un-curbed Public Street. Any part or portion of the irrigation piping shall not be located within the public right of way or public roadway easement.

Section 614.9.1.11.2.3 Curbed Public Street. The irrigation system is permitted to be placed within the public right of way or public roadway easement, but any water emitter must be a minimum of twelve inches (12") from the back of the concrete or asphalt curb.

Section 614.9.1.11.2.4 Property Owner. If any portion of an irrigation system is located within a public right of way or public roadway easement must be noted on the irrigation plan and discussed with the irrigation system owner or owner's representative to address any safety or maintenance issues.

Section 614.9.1.12 Depth Coverage of Piping. Piping in all irrigation systems must be installed according to this Section.

Section 614.9.1.12.1 Depth of Main Irrigation Line. The piping must be installed to provide minimum depth coverage of eighteen inches (18") of select backfill, between the top of the pipe and the natural grade of the topsoil.

Section 614.9.1.12.2 Depth of Secondary Irrigation Line. The piping must be installed to provide minimum depth coverage of twelve inches (12") of select backfill, between the top of the pipe and the natural grade of the topsoil.

Section 614.9.1.12.2.1 Secondary in Bedrock. If the area being irrigated has rock at a depth of twelve inches (12") or less, select backfill may be mounded over the pipe. Mounding must be noted on the irrigation plan and discussed with the irrigation system owner or owner's representative to address any safety issues.

Section 614.9.1.12.3. Obstruction of a Utility. If a utility, man-made structure, or roots create an unavoidable obstacle, which makes the required depth coverage requirement impractical, the piping shall be installed to provide a minimum of twelve inches (12") for a main irrigation line and eight inches (8") for a secondary irrigation line of select backfill between the top of the pipe and the natural grade of the topsoil. All trenches and holes created during installation of an irrigation system must be backfilled and compacted to the original grade.

Section 614.9.1.13 Wiring Irrigation System. Underground electrical wiring used to connect an automatic controller to any electrical component of the irrigation system must be listed by Underwriters Laboratories as acceptable for burial underground.

Electrical wiring that connects any electrical components of an irrigation system must be sized according to the manufacturer's recommendation. Electrical wire splices which may be exposed to moisture must be waterproof.

Underground electrical wiring that connects an automatic controller to any electrical component of the irrigation system must be buried with a minimum of twelve inches (12") of select backfill.

Section 614.10 Non-Potable Water. This section shall be added to read:

Section 614.10.1 Non-Potable Water. Water contained within the piping of an irrigation system is deemed to be non-potable. No drinking or domestic water usage, such as, but not limited to, filling swimming pools or decorative fountains, shall be connected to an irrigation system.

A hose bib (an outdoor water faucet that has hose threads on the spout) is not permitted to be connected to an irrigation system for the purpose of providing supplemental water to an area.

Section 614.10.2 Labeling and Marking Non-Potable Water. Non potable distribution piping shall be purple in color and shall be embossed or integrally stamped or marked with words: “CAUTION: NONPOTABLE WATER – DO NOT DRINK” or the piping shall be installed with a purple identification tape or wrap. Pipe identification shall be repeated at intervals not exceeding twenty-five (25) feet and at each point where the piping passed through a wall, floor or roof. Lettering shall be readily observable with the space where the piping is located.

Section 614.10.2.1 Color. The color of the pipe identification shall be discernable and consistent throughout the area. The color purple shall be used to identify the non-potable water.

Section 614.10.2.2 Identification Tape. Where used, identification tape shall be not less than three inches (3”) wide and have white or black lettering on a purple field stating “CAUTION: NONPOTABLE WATER – DO NOT DRINK.” Identification tape shall be installed on top of non-potable pipes and run continuously the entire length of the pipe.

Section 614.11 Irrigator On-Site. This section has been added to read:

Section 614.11 Irrigator On-Site. An irrigation technician shall be on-site at all times while the landscape irrigation system is being installed. When an irrigator is not onsite, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.

Section 614.12 Completion of Irrigation System. This section has been added to read:

Section 614.12 Completion of Irrigation System Installation. Upon completion of the irrigation system, the irrigator or irrigation technician who provided supervision for the on-site installation shall be required to complete four items:

1. A final "walk through" with the irrigation system's owner or the owner's representative to explain the operation of the system;
2. The maintenance checklist on which the irrigator or irrigation technician shall obtain the signature of the irrigation system's owner or owner's representative and shall sign, date, and seal the checklist. If the irrigation system's owner or owner's representative is unwilling or unable to sign the maintenance checklist, the irrigator shall note the time and date of the refusal on the irrigation system's owner or owner's representative's signature line. The irrigation system owner or owner's representative will be given the original maintenance checklist and a duplicate copy of the maintenance checklist shall be maintained by the irrigator. The items on the maintenance checklist shall include but are not limited to:
 - (i) the manufacturer's manual for the automatic controller, if the system is automatic;
 - (ii) A seasonal (spring, summer, fall, winter) watering schedule based on either current/real time evapotranspiration or monthly historical reference evapotranspiration (historical ET) data, monthly effective rainfall estimates, plant landscape coefficient factors, and site factors;
 - (iii) A list of components, such as the nozzle, or pump filters, and other such components; that require maintenance and the recommended frequency for the service; and

(iv.) The statement, "This irrigation system has been installed in accordance with all applicable state and local laws, ordinances, rules, regulations or orders. I have tested the system and determined that it has been installed according to the Irrigation Plan and is properly adjusted for the most efficient application of water at this time."

3. A permanent sticker which contains the irrigator's name, license number, company name, telephone number and the dates of the warranty period shall be affixed to each automatic controller installed by the irrigator or irrigation technician. If the irrigation system is manual, the sticker shall be affixed to the original maintenance checklist. The information contained on the sticker must be printed with waterproof ink.

4. The irrigation plan indicating the actual installation of the system must be provided to the irrigation system's owner or owner representative.

Section 614.13 Completion of Irrigation System. This section has been added to read:

Section 614.13 Duties and Responsibilities of City Irrigation Inspectors. The irrigation inspector shall enforce the ordinance of the city, and shall be responsible for:

1. Verifying that the appropriate permits have been obtained for an irrigation system and that the irrigator and installer or irrigation technician, if applicable, are licensed;

2. Inspecting the irrigation system;

3. Determining that the irrigation system complies with the requirements of this chapter;

4. Determining that the appropriate backflow prevention device was installed, tested, and test results provided to the city;

5. Investigating complaints related to irrigation system installation, maintenance, alteration, repairs, or service of an irrigation system and advertisement of irrigation services; and

6. Maintaining records according to this chapter.

Section 614.14 Completion of Irrigation System. This section has been added to read:

Section P2914.14 Fees. Irrigation and Backflow device permit fees shall be established in the fee schedule approved by the city council.

Section 614.15 Irrigation Systems within the Public Right of Way or Public Roadway Easement. This section has been added to read:

Section 614.15 Irrigation System within the Public Right of Way or Public Roadway Easement. The City of Choctaw or the Choctaw Utilities Authority shall not be held liable for any damage of any system, which results from the installation or repair of, or improvement of any street or utility. Any homeowner or irrigator who installs a lawn sprinkler system between the curb and sidewalk or elsewhere within the public right of way or public roadway easement shall likewise hold the City of Choctaw and Choctaw Utilities Authority harmless against any claim or injury to persons or damage to property that any member

of the public may suffer by reason of installation of said lawn sprinkling system within the public right of way.

Section 705.11.2 Solvent cementing. This section has been modified to read:

Section 705.11.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied to all joint surfaces. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

Exception: A Primer is not required where both of the following conditions apply:

1. The solvent cement used is third party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining PVC drain, waste and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inches (102 mm) in diameter.

(Reason: This section has been modified to delete the exceptions for not using primer under certain conditions.)

Section 708.1.3 Building drain and building sewer junction. This section has been modified to read:

Section 708.1.3 Building drain and building sewer junction. The junction of the building drain and the building sewer shall be served by a cleanout that is located at the junction or within ~~10 feet (3048 mm)~~ 12 feet (3658 mm) of the developed length of piping upstream of the junction. For the requirements of this section, the removal of the water closet shall not be required to provide cleanout access.

(Reason: This section has been modified to change the requirement for the cleanout to be located at the junction or from within 10 feet to within 12 feet of the developed length of piping upstream of the junction.)

Section 804.2 Special waste pipe, fittings, and components; added to read as follows:

804.2 Special waste pipe, fittings, and components. Pipes, fittings, and components receiving or intended to receive the discharge of any fixture into which acid or corrosive chemicals are placed shall be constructed of CPVC, high silicone iron, PP, PVDF, chemical resistant glass, or glazed ceramic materials.

(Reason): To clarify the allowable materials which are specifically listed for chemical drainage applications.

Section 903.1 Roof extension. This section has been modified to read:

Section 903.1 Roof extension. Open vent pipes that extend through a roof shall be terminated not less than ~~[number] inches (mm)~~ 10 inches (254 mm) above the roof. Where a roof is to be used for assembly or as a promenade, observation deck, sunbathing deck or similar purposes, open vent pipes shall terminate not less than 7 feet (2134 mm) above the ~~roof~~ finished occupiable surface within 10 feet (3048 mm) horizontal distance.

(Reason: This section has been modified to specify the number of inches where the open vent pipes that extend through the roof shall be terminated.)

Section 903.1 Roof Extension; change to read as follows:

Section 903.1 Roof extension. Open vent pipes that extend through a roof shall terminate not less than six (6) inches (152 mm) above the roof. Where a roof is to be used for assembly or as a promenade, observation deck, sunbathing deck or similar purposes, open vent pipes shall terminate not less than 7 feet (2134 mm) above the roof.

(Reason: To provide regional guideline on standard installation method for this area and address reference number correction.)

Section 1003.4 Oil separators required. This section has been modified to read:

Section 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 oil-bearing, grease-bearing or flammable wastes shall be discharged before emptying into the building drainage system or other point of disposal.

Exceptions:

- (1) An oil separator is not required in hydraulic elevator pits where an approved alarm system is installed. Such alarm systems shall not terminate the operation of pumps utilized to maintain emergency operation of the elevator by fire fighters.
- (2) Oil separators shall not be required in a non-hydraulic elevator pit.

(Reason: This section has been modified to add a second exception to the requirement for installing an oil separator.)

Section 1101.7 Roof design. This section has been modified to read:

Section 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 secondary drainage means to accommodate the design rainfall rate as required by ~~Section 1106~~ Section 1108.

(Reason: This section has been modified to change the section number for the requirement to accommodate the design rate for secondary roof drainage from Section 1106 to Section 1108.)

Table 1108.1 Size of Secondary Scuppers; Add the table to read:

Table 1108.1 Size of Secondary Scuppers. For a 10.2-inch per hour rate of rainfall. A table has been inserted with two columns, both with four rows beneath. The first column title is "Head in inches" and the second column title is "Horizontally Projected Roof Area (square feet) Length of Weir in inches". The second column should have seven sub-columns labeled 4, 6, 8, 12, 16, 20 and 24.

1. Below is the "Head in inches" column with the corresponding "Length of Weir in inches" for each of the sub-columns:
 - (i) Row 1. Head in inches, sub-column 4 is 112, sub-column 6 is 169, sub-column 8 is 226, subcolumn 12 is 339, sub-column 16 is 452, sub-column 20 is 565, and sub-column 24 is 678.
 - (ii) Row 2. Head in inches, sub-column 4 is 314, sub-column 6 is 471, sub-column 8 is 628, subcolumn 12 is 942, sub-column 16 is 1256, sub-column 20 is 1571, and sub-column 24 is 1885.
 - (iii) Row 3. Head in inches, sub-column 4 is 565, sub-column 6 is 848, sub-column 8 is 1130, subcolumn 12 is 1696, sub-column 16 is 2262, sub-column 20 is 2828, and sub-column 24 is 3393.
 - (iv) Row 4. Head in inches, sub-column 4 is 879, sub-column 6 is 1319, sub-column 8 is 1759, sub-column 12 is 2637, sub-column 16 is 3519, sub-column 20 is 4399, and sub-column 24 is 5279.
2. Beneath the column the following should be added: For SI: 1 inch equals 25.4 mm.

Notes: (i) To adjust this table for other than a 10.2-inch design rain fall rate multiply the square footage on the table by 10.2 then divide by the design rainfall rate.

(ii) This table does not apply to scuppers with a vertical opening height that is less than the head height. Example: For 4 inches of design rainfall rate, a 4-inch long scupper with a 1-inch head would accommodate 286 square feet. (112 times 10.2) divided by 4 equals 286.

HORIZONTALLY PROJECTED ROOF AREA (SQUARE FEET)

Head in Inches	Length of Weir in Inches						
	4	6	8	12	16	20	24
1	112	169	226	339	452	565	678
2	314	471	628	942	1256	1571	1885
3	565	848	1130	1696	2262	2828	3393
4	879	1319	1759	2637	3519	4399	5279

For SI: 1 inch equals 25.4 mm.

Notes:

- (i) To adjust this table for other than a 10.2-inch design rain fall rate multiple the square footage on the table by 10.2 then divided by the design rainfall rate.
- (ii) This table does not apply to scuppers with a vertical opening height that is less than the head height. Example: For 4 inches of design rainfall rate, a 4-inch long scupper with a 1-inch head would accommodate 286 square feet (112 times 10.2) divided by 4 equals 286.

(Reason; To provide sizing for secondary scuppers for a 10-2-inch per hour rate of rainfall)

Section 1108.3 Sizing of secondary drains. This section has been modified to read:

Section 1108.3 Sizing of secondary drains. Secondary (emergency) roof drain systems or scuppers shall be sized in accordance with ~~Section 1106~~ Section 1108 based on ~~a~~ the rainfall rate ~~for which the primary system is sized~~ of 10.2 inches per hour. In sizing secondary roof drain systems using Tables 1106.2, 1106.3 and 1106.6, the Horizontally Projected Roof Area shall be determined by dividing the Horizontally Projected Roof Area for 1-inch rain fall per hour rate by 10.2 inches per hour. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system or scuppers. Scuppers shall be sized in accordance with Table 1108.1 or by other national methods using the head height of water and flow rate of the scupper. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall have an opening dimension of not less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

(Reason: This section has been modified to include the use of scuppers or increase the sizing of secondary drains to accommodate rainfalls of 10.2 inches per hour and includes minimum design loads.)

Section 1301.9.6 Overflow. This section has been modified to read:

Section 1301.9.6 Overflow. The storage tank shall be equipped with an overflow pipe having a diameter not less than that shown in Table 606.5.4. The overflow pipe shall be protected from insects or vermin and shall discharge in a manner consistent with storm water runoff requirements of the jurisdiction. The overflow pipe shall discharge at a sufficient distance from the tank to avoid damaging the tank foundation or the adjacent property. Drainage from overflow pipes shall be directed to prevent freezing on ~~roof~~ walkways. The overflow drain shall not be equipped with a shutoff valve. A cleanout shall be provided on each overflow pipe in accordance with Section 708.

(Reason: This section has been modified to require the section to apply to any walkway not just those on roofs.)