

APPENDIX P

<p>All waterlines installed within the Department’s jurisdiction shall be of approved sizes Ductile Iron Pipe (DIP) material (size 6" to 8" lines requires 50 DIP). All existing county or state roads shall be bored and cased with minimum 0.250 inches of wall thickness steel casing. Casing is not required under interior subdivision streets that are under development. Casing shall be installed from ditch line to ditch line, or five (5) feet behind curbing, or as required by the GA DOT, whichever applies. The same casing requirement applies to sewers and sewerage force mains.</p>
<p>Water lines shall be laid on the right-of-way but not in the ditch line or pavement unless otherwise approved by the Water Department. A minimum of three (3) foot of cover on all line is required - to be measured from top of pipe to final grade line. When placed outside streets and rights-of-way, a minimum 20-foot wide permanent easement shall be shown on the plans and dedicated to the City of Fayetteville. Easement shall not be obstructed by any permanent structure, fencing, or other obstructions preventing access for maintenance of the sewer system.</p>
<p>Water lines shall be cased at all creek crossings using steel casing with bituminous wrapping having a minimum wall thickness of 0.250".</p>
<p>Main water line valves, including 2" where needed, to be of gate type mechanical joint with 2" operating nut. Location shall be stenciled on aluminum plate on a concrete valve marker.</p>
<p>All fittings under pressure to be blocked with concrete per the Water & Sewer Department standard details or approved equal.</p>
<p>Valves and valve boxes (cast iron only) set to grade and level. All valve boxes outside the pavement shall have two-foot square concrete pads 4' thick, including fire hydrant valve boxes.</p>
<p>Typical single water service to be no less than a 3/4" tap on short side service. If it is a long side service, use a 1" tap. A 2" PVC service sleeve shall be provided for each lot requiring a long side service to extend 1-6 feet from back of curb depending on the sidewalk and utilities. This shall be installed by the Developer’s contractor. After the curb has been installed, a "W" shall be cut into the gutter using a circular pipe saw and shall be painted blue according to the standardized color; and placing a 2" PVC pipe vertically and adjacent to an iron pin immediately behind the curb or at the edge of the pavement. The meter box shall not extend 1" above final grade. Meter stops shall be placed inside meter boxes at the end of all service lines. Boxes are to be placed on right-of-way. Any double service is to be placed at property line right-of-way.</p>
<p>Before acceptance of water lines, a pressure test consisting of a hydrostatic pressure of two hundred (200) psi must be held for a length of two (2) hours. A representative from the City of Fayetteville Water and Sewer Department must be present during the test procedure.</p> <ul style="list-style-type: none"> a. A Sufficient liquid solution of chlorine shall be added to new water lines to secure a chlorine residual of fifty (50) parts per million for sterilization. The lines will then remain unused for a 24-hour period. The lines will be thoroughly flushed and the City of Fayetteville Water & Sewer Department shall conduct a total coliform analysis. A total coliform colony count of zero colonies per one-hundred (100) milliliters sample is required. If necessary, the developer will repeat the sterilization process until purity is found acceptable. A fee of \$100.00 per test will be assessed.
<p>The developer must accomplish disinfection of water lines and the disposal of heavily chlorinated water (following disinfection) in accordance with the latest edition of AWWA Standard C600. The developer may utilize the sanitary sewer system or onsite impoundment as appropriate for dichlorination and disposal of heavily chlorinated water. Prior to utilizing the sanitary sewer system for disposal, the developer shall notify the Water and Sewer Department. No open flushing of heavily chlorinated water is allowed.</p>
<p>At no time will water be turned on by anyone other than the City of Fayetteville Water & Sewer Department personnel.</p>
<p>No water service to the development nor the one-year warranty will begin until the Department receives all documents required and final approval has been granted in writing by the Department when requested by the Developer/Owner.</p>
<p>The contractor will flag all lines upon completion of services. Cut a "V" and paint valve locations on the curb painted blue.</p>
<p>Crossings. Water mains crossing sewers shall be laid to provide a minimum vertical distance of two (2) feet between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required.</p>
<p>Any 2" service line; use Schedule 80 with brass compression type joints or fittings. Any copper service, no flair fittings or solder fittings allowed. Any pipe, flux, or joint compound used in the installation or repair of water lines must comply with United States</p>

WATER PLAN GENERAL NOTES (CONTINUED)

	Environmental Protection Agency (US EPA) and Georgia Environmental Protection Agency (GA EPD) requirements regarding lead and copper content.
	When roadways and streets are proposed to be constructed over existing water lines, the Developer will be required to install nestable corrugated steel casing pipe around the existing water main as required by the Water and Sewer Department.
	The developer shall be required to ensure that none of the water mains, service lines, and the structures that are going to be connected to these water lines are being found on or in close proximity of an abandoned landfill site or any other site used for waste disposal.
	All dead-end lines must have a fire hydrant installed at the endpoint. For any future development, a concrete marker must be placed at the dead-end.
	Show all possible water connections (water lines may need to be extended).
	<p>On water plan sheets, show the following:</p> <ul style="list-style-type: none"> a. Original stamp & signature of state-approved engineer b. Location map c. List owner/developer - address & phone no. d. 24-hour contact e. Legend, if needed f. Scale g. Size of lines and type of pipes h. North arrow i. Contours or pertinent elevations j. Right-of-way k. Overall layout of subdivision or development l. Easements m. Line footage/type pipe/no. Of fire hydrants n. Gate valve location o. .250" w.t. Steel casing p. Stream buffer q. No. Of lots or development units r. Separate sheet for water s. Fire hydrant spacing (500') t. Service conduits u. Detail sheet (a) street crossing (b) creek crossing © fire hydrant (d) concrete blocking (e) fire hydrant cul-de-sac detail (f) service conduit detail v. Fire flow evaluation
	<p>Projects requiring Backflow Prevention Installation shall bear the following notes:</p> <p>"Prior to backflow preventer installation, contact Backflow Inspector. "Backflow prevention device installation requires a plumbing permit to be obtained from the City of Fayetteville Building Inspections Department by a master plumber".</p>
	As a minimum, commercial, industrial, and institutional establishments and multi-family housing shall install and maintain double check valve assemblies immediately downstream from the City meter in a separate meter box or vault as applicable.
	All water service lines installed for landscaping and/or irrigation purposes shall have a double check valve assembly installed in them immediately downstream from the City's meter.
	Establishments determined to present a high hazard backflow potential, including swimming pools, doctor's offices, car washes and sanitary sewer pump stations shall install and maintain reduced pressure zone (RPZ) backflow preventers in above ground, non-freezing enclosures. Water service lines serving sanitary sewer pump stations shall also install a pressure reducing valve (PRV) prior to the backflow preventer.
	Double detector check valves shall be installed on all fire sprinkler mains. Valves shall be housed in a vault as close to the City main as is possible. A water meter that reads in GPM equipped with touch read/radio read device compatible with City's water meter and billing system shall be required.

WATER PLAN GENERAL NOTES (CONTINUED)

	More detailed information is available from office of Public Works.
	Projects requiring Pre-Treatment shall bear the following note: "Prior to Pre-Treatment device installation, contact The City of Fayetteville Water and Sewer Department
	Sand traps and oil separators with sample station manholes shall be installed in all sanitary sewer service lines from service stations, garages, car washes, and similar operations. Proposed pretreatment devices shall be specifically designed for required pretreatment and details for premanufactured devices shall be pre-approved by the City and included in permitted drawings.
	Grease traps and sample station manholes shall be installed in process waste lines of all sanitary service sewers for commercial, industrial, and institutional establishments with food preparation areas.
	Lint traps and sample station manholes shall be installed in all sanitary sewer service lines from laundry mats.
	Hair traps and sample station manholes shall be installed in all sanitary sewer service lines from veterinary clinic/animal control facilities.
	Domestic sewage shall not pass through pretreatment devices or sample stations.
	If dumpster pad drains are to be tied onto the sanitary sewer, a grease trap and sample station manhole shall be placed between the pad and the City sewer. Domestic wastewater shall be excluded from the trap. Food process waste streams may utilize the same trap if sized appropriately.
	Rainwater shall be prevented from entering the sanitary sewer at all dumpster pad locations. Method must be detailed on drawings.
	Grease trap and oil separator details shall appear on the project drawings and shall be approved prior to installation.
	Oil separators shall be sized to handle two (2) times the expected flow rate.
	Grease traps shall be sized as necessary with the minimum allowable size being 1500 gallons.
	Sample station manholes may be required on all commercial, industrial, and institutional sanitary service sewers. Domestic sewage shall not pass through sample station manholes.
	Commercial car washes will be required to install a water reclamation and recycling system as per the Metro North Georgia Water Planning District's requirements.