Development Review checklist

Project Name:

Review Cycle: (1st, 2nd, 3rd, etc.) Date Reviewed:

Status: (Approved or Denied)

**WATER PLANS**

Water service plans are preferred to be shown as separate plans and not combined with sanitary sewer or other utility plans and must be designed by a Georgia Registered Civil Engineer.

4-feet minimum cover for all water mains and 24-inches cover for all service lines.

All water mains shall be DIP. Fittings and appurtenances shall be class 50 DIP.

For 2" service lines, use schedule 80 with brass compression fittings.

All new mains shall be sized to ensure adequate water supply and fire protection. Minimum water main size of 8-inches but may need to be larger to provide fire protection.

**All developments (residential or non-residential)**  In no case shall the distance between fire hydrants exceed 500 feet.

***Non-Residential Developments.*** Fire hydrants shall be installed in all other developments, which are served by a public water supply main. Accessibility for firefighting equipment shall be maintained through all stages of construction. Fire hydrants and water service shall be installed to within 300 feet of all exterior points of buildings. If the units are of wood framing, the fire hydrants shall be installed before framing begins.

Water valves will be installed in subdivisions to effect a minimum cutoff of mains in case of shutdowns.

Stub-out water services will be installed in subdivisions where necessary to avoid cutting of pavement with future development.

Provide an overall project map showing the location of water mains, valves, fire hydrants, thrust blocks, and other water line related appurtenances. Show these in relation to the streets, right-of-way lines, property lines, retaining walls, large drainage structures, and other significant features. Label and identify water line items as to size, class, etc.

Provide standard details of typical road crossings, creek crossing, encasement details, fire hydrant assembly including gate valve, concrete thrust blocking, fire hydrant cul-de-sac detail, service line details, valve boxes, and other common items.

All fire hydrants shall have a gate valve and a valve box.

Dead-end lines must have a fire hydrant installed at the endpoint. It is acceptable to reduce to a 2-inch line to serve lots around a cul-de-sac only where a blow off valve is installed on the end of the line and a meter must be included for the blow off valve.

Show standard water main installation location in relation to the back of curb and/or from right-of-way. Installation to be on the north and west side of streets when possible.

A 20-foot non-encroachable easement is required to be dedicated to the city when the water main is outside the road right-of-way.

Water lines shall not run longitudinally under the road or along any ditch line.

All valves shall be gate type mechanical joint with 2" operating nut with a concrete valve marker.

Valves and valve boxes (cast iron only) shall be set to grade and level. A 2-foot square concrete pad, 4-inches-thick, shall be placed around all valves not located within pavement.

All fittings under pressure shall be blocked with concrete.

Line footage, type of pipe, number of fire hydrants, and number of valves shall be summarized on the water plan in a table.

Water / sewer crossings shall have a vertical separation of at least 2 feet (24-inches) outside of pipe to outside of pipe. At crossings one full length of water line pipe shall be located so that both end joints are as far as possible from the sewer pipe. Structural support for the water and sewer pipes may be necessary.

Provide location and details of any proposed booster pumping station, pressure reducing station, backflow prevention equipment, and/or water storage tanks.

Indicate water meter service line size, meter location and size, back flow preventer or RPZ location and size, if vault – indicate vault size and details.

* Typical residential single water service to be dual connection, utilizing a T-Bar Connection. NL Service Fitting -709T2BW 1" x 6.5" - 22CTS Compression x Meter Swivel Nut with Saddle. 1" NL Ball Style Corporation Stop - 74701BQ AWWA/CC x Q CTS Compression tapping Saddle to be double strap style, Service line to be 1" Copper tube, Type L.
* Dual Meter Box enclosure to be - Carson 1416 MSBC Composite Lid with two AMR Antenna ports or approved Equal.

**REQUIRED NOTES ON WATER PLANS:**

**NOTE: No underground work shall be covered or concealed until inspected and approved by a representative of the city water department.**

**NOTE: Any open entrance of water and sewer lines will be closed to prevent foreign materials from entering when no work on that portion of lines is in progress.**

**NOTE: Sufficient dry chlorine will be added to new water lines to cause sterilization when filled with water. The lines will then remain unused for a 24-hour period. The lines will be thoroughly flushed.**

**NOTE: Disinfection of water lines and the disposal of heavily chlorinated water following disinfection must be accomplished in accordance with AWAA Standard C651 (latest revision) and the State of Georgia Water Protection Division.**

**NOTE: All types of installed pipe must be pressure tested and leakage tested in accordance with the latest edition of AWWA Standard C600.**

**NOTE: At no time will the water be turned on by anyone other than authorized city personnel.**

**NOTE: A horizontal separation of at least ten (10) feet must be maintained between the water main and any sewer mains except as otherwise approved.**

**NOTE: When water mains and sewer mains must cross, a minimum vertical separation of two feet (24 inches) is required as measured from outside of pipe to outside of pipe.**

**NOTE: At crossings of water and sewer mains, one full length ductile iron pipe must be used and located so that both joints are as far from the sewer as possible. At crossings, special sewer construction may also be required such as using a ductile iron sewer pipe or encasing the sewer line in concrete.**

**NOTE: Any pipe, solder, flux, or joint compound used in the installation or repair of water lines must comply with US EPA and GA EPD requirement regarding lead and copper content.**

**NOTE: All plans and construction of water and sewer lines and appurtenances will be subject to review and inspection by the city personnel. However, such review/inspection by the city or other personnel shall not relieve the developer/installer of proper surveys, design, engineering, and construction, and the city, its engineer or personnel assume no liability in the performance of reviews, approvals, and inspections.**

A meter pit, valves and a bypass are required on all meters larger than 2-inches in diameter.

All fire lines shall be metered and have a Backflow Preventer or RPZ to prevent contamination of the potable water system.

For a multi-unit commercial buildings, single master meter are not allowed. Each unit must have its own meter and backflow preventer.

All crossing under existing roads shall be jack and bored and the line encased with steel casing having a wall thickness of at least 0.250 inches. Casing is not required under interior subdivision streets that are under development. Casing shall extend from ditch line to ditch line, 5 feet behind the curb or as required by GDOT.

Line casing is required at creek crossings. Additionally, the casing shall be wrapped with bituminous wrapping.

City approved standard water details shall be included in all civil construction plans

**SANITARY SEWER PLAN**

New sewersystems proposed shall be designed by a registered civil engineer.

Sanitary sewer mains shall be laid in the center of streets, where possible, with service connections installed to property lines and connections made to trunk line sewers*.* The sewershall be located as near the center of the street as practical and shall not be located less than four (4) feet from the curb.

Outfall lines shall not be located less than four (4) feet from property lines.

Lines shall be laid and temporarily plugged or capped at the points of service connections to the proposed trunk sewerline.

Minimum size shall be eight (8) inches for gravity mains, two (2) inch min (4- inch preferred) for force mains, unless otherwise approved, and six (6) inch for stub outs.

All sewer pipe shall be PVC, C900 or SDR, including laterals unless the use of ductile iron pipe is indicated.

Ductile iron pipe (DIP) shall be used as follows:

* At all points where the sewercrosses drainage structures or open streams,
* Under Railroad Crossings,
* For the influent joint of pipe at all drop manholes,
* For any sewers at depths less than three feet.
* For all force mains (must be polyurethane lined).
* For any sewers at depths of 14’ or greater

Stub-outs shall be located as close to the edge of the sewer easement or right of way as possible.

All developers are required to extend the sewer main to the farthest property line of the development to ensure that future development and adjacent tracts are able to be served with public sewer.

Minimum depths for sewers located in streets shall normally be seven (7) feet for mains and five (5.5) and one-half feet for stub-outs

Manholes shall be located no further than 400 feet apart; however, manholes shall be constructed at all turns and at all points where a grade change occurs and must have poured inverts.

The minimum slope for sewerpipes shall be 0.40% and maximum grade shall be ten (10%) percent.

A horizontal separation of at least 10' must be maintained between the water main and any sewer line.

When sewermains cross water mains or storm lines, a minimum vertical separation of 24 inches must be provided (measured edge to edge)

All crossing under existing roads shall be jack and bored and the line encased with steel casing having a wall thickness of at least 0.250 inches. Casing is not required under interior subdivision streets that are under development. Casing shall extend from ditch line to ditch line, 5 feet behind the curb or as required by GDOT.

Sewer clean outs shall be installed every 75 feet between the tap and the building with one clean out within 18 inches of the building and shall be traffic rated where installed within pavement.

Where a force main discharges into the gravity system, the initial manhole and two manholes downstream must be lined with a polyurethane elastomer liner or equivalent to prevent manhole deterioration due to gases.

Any access into manholes shall be drilled and not saw-cut and all manhole lids shall be solid, except when raised 3’ above flood plain, 2’ above grade, and 200’ from domiciles then holed lids may be used.

A minimum 1,500-gallon 90 % efficient grease interceptor shall be required for each food service establishment prior to a CO.

City approved standard sewer details shall be included in all civil construction plans.

**REQUIRED NOTES ON SEWER PLANS:**

**NOTE: SEWER TAP INSPECTIONS ARE REQUIRED PRIOR TO FINAL PLAT OR CERTIFICATE OF OCCUPANCY AND ARE CONDUCTED VIA CAMERA WITH 2 GALLONS OF WATER ADDED BEFOREHAND TO ENSURE PROPER GRAVITY FLOW. CONTACT PUBLIC WORKS FOR SEWER TAP INSPECTION PRIOR TO PAVEMENT BEING PLACE IN A PUBLIC OR PRIVATE ROAD OR WITHIN ANY PARKING LOT.**

**NOTE: ALL MAINS MUST BE JETTED AND THEN VACUUMED OUT FROM MANHOLE CLOSEST TO THE LIFT STATION OR PLUGGED LINE PRIOR TO CITY ACCEPTANCE**

**NOTE: ALL SEWER LINES SHALL BE TESTED PRIOR TO CITY ACCEPTANCE OR BEING PLACED INTO SERVICE. TESTING SHALL INCLUDE BOTH VACCUM TESTING (-5 IN FOR 1-3 MINUTES) AND PRESSURE TESTING (5 PSI FOR 15 MINTUES).**

**NOTES: ALL SEWER LINES INCLUDING LATERALS, SHALL BE PVC (C900 OR SDR) UNLESS THE USE OF DUCTILE IRON (DIP) IS REQUIRED DUE TO THE LOCATION, DEPTH, OR OTHER REASON AS NOTED ON THE PLANS.**

**NOTES: FERNCO’S OF ANY TYPE ARE NOT ALLOWED FOR NEW INSTALLATIONS AND MUST BE APPROVED BY PUBLIC WORKS PRIOR TO USE IN ANY REPAIR OF EXISTING FACITLITES.**

**NOTE: ALL NEW LIFT STATIONS MUST COMPLY WITH SECTIONS 70-110 THROUGH SECTION AND 70-112 OF THE CITY’S SEWER USE ORDINANCE. ALL LIFT STATIONS (PUBLIC AND PRIVATE) SHALL REQUIRE SEPARATE PLAN SUBMITTALS, APPROVALS, AND PERMITS. LIFT STATIONS ARE TO BE SHOWN ON THE CIVIL CONSTRUCTION PLANS FOR REFERENCE ONLY.**

**SEPTIC SYSTEM POLICY:**

Individual septic systems shall not be permitted where a public sanitary sewer is accessible to the building lot. Where a public sewer is available in a public right-of-way adjoining the property or in an easement touching upon the property at any point, or within 250 feet of either of the foregoing, access shall be deemed to exist.

Where a public sewer connection can be extended through an easement across adjoining private property to an existing sewer line within 250 feet of the property boundary, it shall be the duty of the property owner to seek such easement and cause a connection to be made and the owner, at its cost, shall exercise its best efforts to secure the necessary easement, to be dedicated to the city for future maintenance. Owners shall coordinate with the city their efforts to obtain easements and for approval of the design and installation of the sewer connection.

All dwellings and structures intended for human occupancy shall be connected to public sewer whenever such service is or becomes accessible, at the property owner's expense. When connecting to public sewers, septic tanks shall be removed or properly filled to prevent future usage or liability.