



PRE-DEVELOPMENT PLAN REVIEW CHECK LIST

This Checklist is provided as a guide for compliance, but does not exclude items as required by the City Utility Ordinances and the Water, Sewer and Storm Water Master Plans. This checklist shall accompany any request for plan review. Online submittal available at <https://www.eplansolution.com/cumming/index.html>

All sewer and water construction shall comply with the most current editions of the **Manual of Technical Specifications and Construction Details for the City of Cumming Wastewater Collection System** and the **Manual of Technical Specifications and Construction Details for the City of Cumming Water Distribution System**. Available online at <http://www.cummingutilities.com/downloads/>

Project Name _____

Address _____

Description _____

***** Projects within City of Cumming Service Area require as-built survey grade electronic drawing files be submitted for approval. Submittal format is the same as Forsyth County available online:

<http://www.forsythco.com/Departments-Offices/Geographic-Information-Services/Digital-Data-Submission>

As-builts must be approved by the Utilities Department before Water & Sewer Services will be activated. *****

THIS SECTION UTILITY DEPARTMENT ONLY

Reviewer _____ Date Reviewed _____

Sewer Capacity purchased or assigned _____ GPD

Receipt # _____ Date _____ Paid Amt. \$ _____

Inspections: HVAC condensate Grease trap/Interceptor BFP/RPZ

NOTES: _____

GENERAL

1. Plans are sized 24" x 36" signed and sealed by a Georgia State Registered Professional (Architect, Engineer, or Land Surveyor as applicable). Other agency review/stamps have been provided.
2. Plans show existing conditions, utilities and/or stamped survey, and all proposed improvements.
3. Buildings: Complete address on Cover Sheet including city, state, zip. Multiple buildings address number must be shown on building footprint and road frontage indicated when multiple frontages exist. Clearly labeled buildings may use a tabulated form on the cover sheet and referenced building numbers.



4. Marker balls; Table on cover sheet includes locations AND tag number.
5. All jack and bore locations are clearly labeled and identified on the plan including location, size, and type of casing material and spacers used (steel is required).
6. All existing and new permanent easements are shown and clearly labeled on the plans for water lines, sewer lines, storm water lines / drainage ways and structures. Required easements; see page 6 **Easements and Utility Ownership**.
7. Tables for Gravity Sewer and/or Stormwater information shown on cover sheet with data presented as in example below (table data shall be provided at end of project (.xls or .dbf format))

SEWER LINES										
Pipe ID	Upstr ID	Upstr Rim Elev	Upstr Invert	Downstr ID	Downstr Rim Elev	Downstr Invert	Pipe Diameter	Slope %	Pipe Material	Pipe Length
Pipe 1	MH1	1020.65	1014	Pump Station	1015.35		12	2.64	Conc	212.5
Pipe 2	MH2	1027.38	1022	MH1	1020.65	1013.84	12	5.68	PVC	200.2
Pipe 3	MH3	1033.84	1028	MH2	1027.38	1022.35	12	3.87	PVC	195.3

STORM DRAIN CAPACITY (STORM FREQUENCY: 25 YEAR)

PIPE LINE ID		T _c	C	C _f	i	A	Q	SIZE	MATERIAL*	SLOPE(%)		PERCENT OF FLOW DEPTH	VELOCITY	LEGNTH
FROM	TO	(min)			(in/hr)	(Ac)	(cfs)	(in)		MIN.	ACTUAL		(fps)	(LF)
Prop DI-7	Ex STMH-2	10	0.50	1.1	6.92	4.484	17.07	24	RCP CLASS V	0.17	3.59	44	12.90	40

*Manning's "n" value used: 0.013

8. Add the following notes:
 - 8.1 "Notify the City of Cumming Department of Utilities 24-hours prior to any water or sewer line construction at (770) 781-2020"
 - 8.2 "The developer/contractor is responsible for maintenance of all infrastructure for a one year period following approval of Final Plat"

Water Distribution System

1. Water meters and service lines shall be accurately sized and installed prior to submitting for Final approval. If a meter size, service line size or location is changed after Final Plat / As-Built plans are approved, revised plans which accurately reflect the change(s) shall be re-submitted. Any upgrades made to water meters and service lines are at the developer/contractor's expense.
2. Water mains, service lines, valves, air release valves, hydrants, meters, and vaults are all clearly labeled and identified including location, line size, length, material (DIP, PVC, etc.). 300 psi curb stops, corps, & wyes. DIP for installs below elev. 960, in rocky terrain, or steep slopes.
 - 2.1 Water lines DIP, 5 ft. back of curb, 3.5 ft. min. cover (4 ft. if along city, county, state road), NOT under paving.
 - 2.2 Service laterals short side 3/4-in. copper, long side 1-in. copper in 2-in. PVC casing and 3/4-in wye at lot corner.



2.3 Meters located back of curb

3. All valves are gate type, and stem extensions provided for those over 5-ft of depth. Concrete valve markers shown except at hydrants.
4. Profiles shall indicate finished grade with depth of cover above top of pipe, and any utility crossings (sewer, water, storm drains, ditches, fiber optic, etc.)
5. Transitions for pipe material (including length of each type material) or line size are clearly identified and labeled.
6. Any line taps are clearly labeled and identify size and location.
7. Table format which includes length of water main, pipe material (DIP, PVC, etc.) and size; GPS coordinate location, quantity, and type of gate / butterfly valves; GPS coordinate location, quantity and type of water meters and fire hydrants for each street shown (table data shall be provided at end of project (.xls or .dbf format).
8. Water system analysis for the development or commercial facility(ies) has been provided from a water modeling software compatible with Water CAD.
9. Fire line(s), fire meter size, double detector check, and model numbers are shown.
10. Fire hydrant(s); type 3-way 5-1/4" AVK Series 27 and shall be clearly labeled and identified indicating calculated flow in gallons per minute (gpm) at 20 psi residual pressure. (As-built fire flow tests will be required). Spacing to allow min. hose-lay 500 ft. residential, 300 ft. commercial.
11. Fire vaults, by-pass meter sizes and model number shall be shown where applicable. Bypass on master meters 3-inches and larger shall be secured (capable of being chained off and locked. Lock shall be obtained from the City)
12. The following notes shall be included on the plans:
 - 12.1 "No sidewalk, driveway, parking pad, street or other pavement shall be installed on top of water lines, water meters, service laterals, fire hydrants, valves, vaults, or other water/sewer infrastructure. The developer/contractor is responsible for resolving these issues and shall obtain approval from the Department of Utilities before relocating any utility that conflicts with these structures."
 - 12.2 "Developers requesting water service above elevation 1280 MSL shall be required to design and install a water booster pump system. The system design and materials of construction shall be as approved by the City of Cumming and the City Engineer. All water booster pump stations must be located on property dedicated in fee and quit-claimed to the City of Cumming."
13. Meter size shall be clearly labeled and identified as Domestic, Irrigation, or Fire meters. Include note on the plans (or tabular format) for meter size, make and model number, meter serial



- number, and radio-read transmitter serial number.
14. Irrigation meters have been noted to include a rain sensor shut off valve
 15. Car wash installations must provide a reuse system (reclaim/recovery) and noted on the plan including design or manufacturer information and a maintenance schedule where applicable.
 16. The following note shall be placed on the plan (if applicable):
 - 16.1 “All pool house meters and irrigation meters must be equipped with an RPZ backflow preventer which shall be maintained at the owner's expense. The owner shall provide an annual inspection and/or repair report to the City. No pool drain or backwash discharge shall be connected into or flows sent to the City's Sanitary Sewer System. Pool drain or backwash discharge shall be placed in a septic tank or gravel pit. Pool discharge(s) are prohibited from draining to the City's Storm Sewer System or natural body of water.”
 17. **Georgia DOT utility permit required for projects inside or near the Georgia DOT ROW.** The City must request these and the permit must be in the name of the City. Submit letter size detailed drawing of all water line work in ROW; Show existing and proposed rights-of-way, distances in both directions to nearest intersections, road names, and pavement widths. Include locations of existing water lines, force mains, sewer lines, and their distance from edge of pavement, indicating all associated work such as bore pits and type of traffic control measures to be used.
 18. For **COMMERCIAL** Developments;
 - 18.1 A dual check valve shall be provided at the meter.
 - 18.2 An above ground air gap type Reduced Pressure Zone (RPZ) assembly has been provided in a heated enclosure just beyond the City's water meter. RPZ assembly is labeled and identified with make, model, and serial number, and labeled “RPZ shall be Owner maintained”.
 - 18.3 The following note shall be on the plans “The City is responsible for maintaining commercial meters and dual check valves. The owner/developer/contractor is responsible for maintaining Reduced Pressure Zone (RPZ) valves and shall provide annual inspection reports to the City.”
 - 18.4 Backflow assembly is clearly labeled and indicates make, model, and serial number. (Testing documents for each BFP will be required).



Sanitary Sewer

1. Sewer Capacity Purchase Agreement and/or Sewer Capacity Assignment Agreement has been provided. Agreements online at <http://www.cummingutilities.com/downloads/#1473863811327-d39fa266-1315> . No capacity will be sold to a development on a water well. Private sewer systems are prohibited and no water service will be provided to that development.
2. Developer shall be responsible for design of utilities that serve ALL floors of each unit. The City will not provide sewer service to building floors below the receiving gravity sewer line. Units/lots that require a grinder pump (unable to be served by gravity sewer) must be identified on the Final Plat and the individual Lot Plat.
3. Sewer trunk lines, service lines, manholes are all clearly labeled and identified; line size, length, material (DIP, PVC, etc.), location and MH deflection angles shown. Aerial crossings prohibited.
 - 3.1 MH max. 400 ft. and those outside paving 2 ft. above grade with bolted watertight covers. Max. 4 connections per MH.
 - 3.2 Laterals match trunk line material, include 6-in cleanout (1 ft. behind ROW) stubbed up 5 ft. & capped, max. length 125 ft.
 - 3.3 DIP when less than 4 ft. cover, greater than 16 ft. depth, crossing a different utility, located in fill areas (swampy or unstable soils), or slopes exceeding 20% (include concrete collars).
4. Gravity sewer and forcemain profiles indicate elevations for invert in, invert out, top of manhole cover, line size, slopes & lengths, pipe material, existing and finished grades, and minimum cover over top of pipe. All crossings should be shown (sewer, water, storm drains, ditches, fiber optic, etc.).
5. Transitions for pipe material (including length of each type material) and line size(s) clearly labeled.
6. Show tabular format including length of gravity/forcemain sewer line, pipe material (DIP, PVC, etc.), length and type of sewer laterals, quantity of manholes, and quantity and type of valves for each street shown on plat/as-built.
7. Sewer laterals and clean-outs are shown and clearly labeled on the plan. Sewer lateral locations are labeled from stations along the main trunk line indicating distance of the lateral from the nearest down-stream manhole (actual location as field measured).
8. Sanitary sewer deflection angles are shown in plan view at all manholes
9. Grease traps / interceptors and inspection manholes are shown and clearly labeled in plan view including waste line from kitchen area(s) to interceptor and from interceptor to sanitary sewer line. Interceptor and inspection manholes shall be included in profile view.
10. The following notes shall be included on the plans:
 - 10.1 "All sanitary sewer lines shall be air and mandrel tested after all other utilities are installed. The developer/contractor is responsible for contacting the City of Cumming Department of Utilities once all utilities have been installed and the sewer system is ready to be tested. **Certificates of Occupancy (COs) will not be issued until all testing has been performed and approved by the City and corrections made where required.**

- 10.2 “The condition of all sanitary sewer lines shall be recorded by a sewer camera after final paving has been completed.”
 - 10.3 “No sidewalk, driveway, parking pad, street or other pavement shall be installed on top of water lines, water meters, service laterals, fire hydrants, valves, vaults, or other water/sewer infrastructure. The developer/contractor is responsible for resolving these issues and shall obtain approval from the Department of Utilities before relocating any utility that conflicts with these structures.”
 - 10.4 “Pool drain(s), backwash water or chlorinated fountain discharge(s) are prohibited from connection into or flows sent to the City's Sanitary Sewer System, Storm Sewer System or natural body of water. These types of discharges shall be connected or routed to a properly sized septic tank or gravel pit.”
11. All dumpster pads are enclosed and covered, and sufficient grades provided for positive storm drainage away from the dumpster pad and area.
 12. Dumpster pad drains are properly connected to the sewer system or septic tank system (Dumpster pad drains are prohibited from discharging to the storm sewer system or a natural outlet or body of water).

Storm Water (Developments Inside City Limits)

1. Storm drainage systems including storm lines, drainage ways, swales, detention, underground detention, water quality or management features are all clearly labeled and identified (line size, length, material (DIP, PVC, etc.), location, type, slopes). Also, refer item **7 -General** above.
2. Signed and sealed statement on plans by a GSWCC certified Professional Engineer, Registered Land Surveyor or Registered Landscape Architect: **“As-built conditions of the storm drainage system will function as designed and engineered in the approved construction drawings”**
3. Note provided on plans “The Developer, Contractor, or Owner is responsible for maintenance of any storm pipes, ditches detention ponds or other storm structures within any easements beyond Forsyth County right-of-way”
4. Positive drainage has been provided for all building, dumpster pads or equipment pads. Dumpster pad drains or contaminated runoff should NOT drain to storm water system.
5. Condensation water from air conditioning units, freezers, coolers, cooling towers, boilers are shown connected to the storm drainage system.
6. All drainage features are shown with proper easement(s) for access and maintenance, including a twenty (20) foot drainage easement around the detention/water quality pond(s).
7. 100-year high water elevation shown and labeled for all detention/water quality ponds, and 100 -year upstream headwater elevation at inlet pipes. The 100-yr elevation contour shall be identified as part of the 20-foot drainage easement, when the headwater elevation falls outside



- of the 20-foot easement.
8. 100-year, 500-yr and/or future flood has been delineated with elevations. Flood plain note has been provided on plans (FIRM Panel Number and date) and base flood elevation given where applicable.
 9. Detail provided for the outlet control structure on the plans and matches the Hydrology Report.
 10. Note on plans a signed/sealed statement by a Professional Engineer **“The detention/water quality facility provides the storage volumes and outflow rates as required by the approved construction plans and hydrology report.”**
 11. A Hydrology report stamped by a Professional Engineer has been submitted with the plans and approved by Cumming Utilities. Note on plans **“A revised hydrology study using As-built conditions shall be submitted before final acceptance of the project.”**
 12. Note on the plans **“A Post Construction Stormwater Inspection is required before final acceptance of the project.”** As-builts per item 11 must be approved prior to scheduling this inspection.
 13. Storm Water Facility Maintenance and Repair Agreement has been provided and fully executed.

Easements and Utility Ownership

1. A utility easement agreement dedicated to the City of Cumming shall be executed and recorded for each water and sanitary sewer line located outside the right-of-way of streets, roads, or highways, and for those lines located in a driveway, parking lot, or easement belonging to another entity. City approved utility easement documents are available on the Cumming Utilities Website www.cummingutilities.com . **No easements shall be recorded on behalf of the City. All easement documents MUST be approved prior to submittal for final plat.**
2. Easements must be drivable and free from obstructions.
 - 2.1 Access easement(s) must be provided in areas inaccessible to the utility line due to landscaping, guardrails, fences, or other obstructions (the City must be able to easily access each utility line segment).
 - 2.2 Maximum slopes; paved access roads shall be 15%, gravel access roads shall be 11%.
 - 2.3 Maximum slope for easements in general is 25% parallel to easements and 10% perpendicular to easements. Adequate benching shall be created in areas where a sewer line is in the slope of a bank. The design of all sewer line easements and slopes shall be approved by the City prior to installation.
3. Right-of-way for all roads fronting the property have been shown. Note on plans indicating **“Right-of-way shall be deeded to Forsyth County, and applicable document(s) submitted”**