Form C2

DEPARTMENT OF PUBLIC WORKS
2757 East Point Street,
East Point, GA 30344
East Point, Georgia 30344
(404) 270-7116 FAX (404) 270-7214
www.eastpointcity.gov

LAND DEVELOPMENT PERMIT CHECKLIST

Project Name: _____ Tax ID #: _____

Project Number: _____ Date: _____

Applicant: _____ Signature: _____
Print Name Signature

Firm: _____ Phone: _____

Accepted/Denied for Planning and Zoning: _____

Items below are <u>required</u> at time of submittal. Incomplete applications will not be accepted into the review process.

1. ____ Submittal fee and completed transmittal.

2. ____ Minimum sheet size shall be 24" x 36".

3. ____ Approved Concept Plan-1 copy

4. ____ Public Works Conceptual Plans (Commercial Projects Only)
_____Stormwater _____Traffic _____Water ____

5. ____ Zoning Case (2 copies, if applicable)

6. ____ Hydrology Report (2 copies) or hydrology statement on plans

7. ____ Flood Study (1 copy if applicable)

8. ____ Flood Map shown on plans (1998)

9. ____ Storm Drainage Pipe calculations and profiles

10. ____ Sewer Plan and Profile

11. ____ Water Plan (or joint Utility Plan)

12. ____ Erosion Control Plan

13. ____ Landscape Tree Protection Plan

14. ____ Signed copy of Arborist's site visit

15. ____ Detailed, specific REVISION STATEMENT on plan and or letter attached to each set of plans (for permit revisions only)

Form C2

DEPARTMENT OF PUBLIC WORKS
2757 East Point Street
East Point, Georgia 30344
(404) 270.7116 FAX (404) 270.7214
www.eastpointcity.org

HYDROLOGY REVIEW CHECKLIST

Project Name: _____ Tax ID #: _____

Project Number: _____ Date: _____

Reviewed By: _____ Telephone: _____

Please address all items marked with an "X"
NOTICE: ANY DEVIATIONS FROM THESE CITY STANDARDS SHALL BE PRE-APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.

Minimum Submittal Requirements

1. Provide Department of Public Works (DPW) Storm Water Management Concept Plan Approval

_____A. Submit DPW sign off sheet and Sight Investigation Comments

_____B. Submit DPW attached to above sheets, approved concept plan

2. Provide documentation in report, identifying that the City of East Point Zoning Resolutions have been addressed. Refer to your attached basin delineation maps, flow paths, velocity calculations, ditch/channel, typical sections, downstream topo and photographs as deemed necessary, to fully address in narrative how the proposed project complies with the 9 items required by the EPZR.

Minimum Hydrology Study Contents/Requirements

_____A. Cover Sheet

_____B. Table of Contents

_____C. Narrative Summary

_____D. Numerical Summary

_____E. 10% Point Downstream Analysis (Article 34.4.1.E)

_____F. Hydrograph Printouts

_____G. Stage - Storage/Outflow Relationships

_____H. Hydrograph Routing

_____I. Outlet Control Details

_____J. Basin Delineation Maps (Pre & Post, to flow paths, sub-basin C or CN)

_____K. Channel/Ditch Calculations

_____L. Pipe Chart (show on plans too) III.

MINIMUM ANALYSIS ARAMETERS

A. General

B. Methods

1. Rational

__ a. Maximum C = 0.3 (steep, bare)

__ b. Maximum C = 0.25 (mild, party wooded)

__ c. Maximum C = 0.20 (flat, fully wooded)

2. SCS

3. HEC

4. Other

5. DETENTION FACILITIES
When serving more than three lots, detention ponds shall be located on a separate parcel where no home can be constructed. This parcel will not be required to meet the normal lot standard. The applicants are encouraged to use alternative design standards such as:

___a. The design should follow the natural landforms around the perimeter of the basin. The basin should be shaped to emulate a naturally formed depression.

___b. Side slopes of basins must not exceed one-foot vertical for every four-foot horizontal. Where possible, side slopes should be varied to imitate natural conditions. Associated landforms should have side slopes no greater than one-foot vertical for every three-foot horizontal to accommodate lawn maintenance equipment. Varied slopes will be encouraged.

___c. The applicant should consider the use of plant materials that naturally grow in the area. Trees and shrubs should be grouped in informal patterns to emulate the natural environment. The intent is to soften the views of these basins.

6. LAKES/RETENTION FACILITIES

DEPARTMENT OF PUBLIC WORKS
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LDP DRAINAGE REVIEW CHECKLIST

Project Name: _____ Tax 10 #: _ _ _ _ _ _ _ _

Project Number: _____ Date: _____

Reviewed By: _____ Telephone: _____

Please address all items marked with an "X"
NOTICE: ANY DEVIATIONS FROM THESE COUNTY STANDARDS SHALL BE PRE-APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.

Minimum Storm Drainage Contents/Requirements

Include step by step calculations with hydrology study and on plans. (pipe chart)

_____1. All drainage plans must be accompanied by a HYDROLOGY STUDY.

_____2. Minimum culvert size shall be 18" and maximum velocity shall be 15 ft./sec.

_____3. Locate catch basins as per Fulton County Drainage Manual dated January, 1983. Catch basins to be with 600 feet maximum spacing, designed for 10-year storm with a maximum gutter spread of 8 feet. Calculate depth of flow or the limit of ponding for all structures located in low points (where applicable). Show double wing catch basins at low points.

_____4. Show nearest existing catch basin along all roads that development connects with.

_____5. Provide design calculations for all storm drainage pipes. Storm drainage pipes shall be designed for 25-year storm frequency.

_____6. Provide all charts and tables used for calculations.

_____7. Culverts shall be designed for a 100-year storm frequency. Culverts beneath roads shall be designed to convey the 50-year storm. Show analysis/effects of 100-year storm analysis/effects.

_____8. Provide design calculations for all ditches and channels. Ditches and channels shall be designed for 25-year storm frequency.

_____9. Provide all calculations for outflow and overflow devices.

_____10. The magnitude of velocity for outlet structure shall not exceed the criteria listed on Page 278 of the Drainage Manual (dated January, 1983} or existing velocity in channel, whichever is least.

_____11. Provide back water effect due to constriction of pipes in ditches or swales. Limit backwater to property line.

_____12. Provide and comply with Public Works Storm Water Site Investigation comments.

_____13. Provide a narrative and show compliance with applicable Zoning Resolutions.

BECAUSE THE MINIMUM REQUIREMENTS AND DESIGN PARAMETERS CHECKED IN PART I WILL AFFECT THE RESULTS OF HYDROLOGIC CALCULATIONS AND DESIGNS, THE STORM DRAINAGE CALCULATIONS MUST BE RE-REVIEWED AFTER THE CHECKED ITEMS OF PART I ARE ADDRESSED. APPLICANT SHALL RESUBMIT FOR A RE-REVIEW AFTER COMPLIANCE.

Storm Drainage Plan

_____1. Show exact boundary lines of the tract indicated by a heavy line giving lengths and bearings. The boundary lines shall include the entire tract to be subdivided eventually and data as required herein shall apply to the entire tract.

_____2. Show existing and proposed contours, clearly distinguishable, minimum interval to be 2 feet, maximum to be 5 feet. Contour line shall be based on mean sea level datum.

_____3. Show the scale or scales of the drawings.

_____4. Identify drainage structures as existing or proposed.

_____5. Show magnetic or grid north indicator.

_____6. Show a project location sketch to a minimum scale of 1" = 2,000', with land lots and street intersections.

_____7. Show drainage easements, drawn with width dimensions specified. East Point will not accept drainage easements along common property lines in order to control private drainage improvements.

_____8. Show sheet numbers, as necessary.

_____9. Show the limits of the intermediate regional flood (the 100-year frequency flood) clearly indicated by a heavy line.

_____10. Label roadway highpoints on the center line of the roadway.

_____11. Provide offsite topographic information 400' from the property boundary.

_____12. Show the limits of proposed construction to be permitted.

_____13. Profile all existing/proposed storm pipes above which land disturbance will occur.

_____14. Provide complete construction details or reference all storm drainage structures (i.e., catch basins, drop inlets, headwalls...etc.) to East Point or any other standard (G.D.O.T., etc.) or provide complete detail(s) if not a public standard.

_____15. The crown elevation of all pipes should be matched within the storm drainage structures.

_____16. Storm drainage structures are not allowed within the radius of a curb.

_____17. Provide outlet velocity at outlet structures. (i.e. storm drainage profile).

_____18. Riprap shall be designed to control velocities and erosion as outlined in the Georgia Erosion and Sedimentation Manual guideline. A minimum of 10 square yards of 40-pound stones shall be placed at all downstream headwalls.

_____19. Storm drainage structures shall discharge into natural draws or drainage channels/swales.

_____

_____20. For all permit revisions, submit a letter stating the proposed changes. These changes should be highlighted on all sheets affected.

_____21. Show a 6' fence and a 10' access easement around the pond, a 20' landscape strip around the pond and show a 20' access easement to the pond. Show the 25 and 100-year storm water surface elevation of the pond. Add Standard Details _9088,_908,_553,_627,_302A,_625,_626,_600,_600A.

Storm Drainage Pipe Design

Reference Fulton County Drainage Manual, January, 1983.

_____1. 30 [11] maximum cross drain pipe draining through Fulton County standard catch basins or drop inlets. When larger diameter is required, provide design and detail of all structures.

_____2. All storm drain pipe systems that are to be county maintained shall have a minimum size of 18" diameter. All areas outside county maintenance shall have a minimum size of 15[11] diameter.

_____3. Storm drain cross section:
A. Shall be drawn to a scale of 1II= 20' max. horizontal and 1II= 10' minimum vertical.
B. Minimum pipe cover
1. Storm drains 18 inches outside roadway, 36 inches within roadway (Fulton County Std. 600).
2. Berming or trenching is not allowed to achieve minimum or maximum cover.
3. Minimum slopes for pipes: concrete storm drain 0.5%, C.M.P storm drain 1.0%

_____4. All storm crossings under roadways shall be reinforced concrete pipe, class per Fulton County Standard 573.

_____5. Storm pipe material types, directional changes, slope changes or type/transitions are permitted only at drainage structure (i.e., junction box, catch basin, etc.). Concrete collars are not acceptable at transitions.

_____6. Show size, material type, class or gauge, percent grade slope and length of all pipes.

_____7. Provide invert elevations and top elevations of drainage structures.

_____8. Anchor collars are required on storm pipes when the slope is greater than 30%.

_____9. Incorporate Fulton County Standard 573 for storm sewer pipes (C.M.P. pipe shall be half coated with a paved invert.)

_____10. Maximum velocity in pipes is 18ft. /sec.

Ditches and Swales

_____1. All proposed swales and ditches shall have cross sections, centerline profiles, flow volumes and velocities shown on plans (existing).

_____2. If velocity in ditch is greater than 3 ft. /sec., ditch shall be paved with a non-erodible material.

Storm Drain Structures

_____1. Show drainage area, 025 and headwater elevation at the inlet of all storm drain structures (include accumulative areas and Q's and longitudinal system).

_____2. Indicate the type and Fulton County standard number (or other) for inlet and outlet structures of all pipes.

_____3. All pre-cast M.H. shall be provided with a minimum of 6 inches clearance on each side of connecting pipe between all cut-outs or penetration.

_____4. Use online catch basins except for cul-de-sac applications in which one foot offset is required.

_____5. When open drainage systems are converted to closed drainage systems that will be county maintained, use 0.1. as per Fulton County Standard 627 and provide a depression around each structure to minimize bypass.

_____6. All drop inlets shall be rowlock brick inverts at all junction boxes and drop inlets (see Fulton County Standard 625).

_____7. Show concrete spillway at the end of curb and gutter (as per G.D.O.T. Standard 9013, type Ill) where applicable.

_____8. Use concrete flared end sections with side drain pipes at driveway crossings within the right-of-way and other applications adjacent to vehicular traffic (Ref. G.D.O.T. Standard 1120).

Non Standard Drainage Structure System

The following information is required for county maintained drainage structures that are not covered under Fulton County Standards.

_____1. State and justify the criteria for the design (any Building Codes).

_____2. Provide step-by-step design calculations and notes for cast in place structures.

_____3. Provide all construction details, specifications and tests required.

_____4. Design calculations must be signed and sealed by a professional engineer.

_____5. The engineer of record shall provide as-builts certification of structures.

_____6. Provide specification and design for precast structures that are not in Fulton County Standards. All silt barriers must be placed as access is obtained during clearing. No grading shall be done until silt barrier installation and detention facilities are constructed.

DEPARTMENT OF PUBLIC WORKS
2757 East Point Street
East Point, Georgia 30344
(404) 270.7116 FAX(404) 270.7214
www.eastpointcity.org

FLOOD PLAIN CHECKLIST

Project Name: _____ Tax ID#: _ _ _ _ _ _ _

Project Number: _____ Date: _____

Reviewed By: _____ Telephone: _____

Please address all items marked with an "X"

____1. General (all projects)

A. Provide F.E.M.A Flood Insurance Rate Map (F.I.R.M.) excerpt on the cover sheet for the subject site development plans on which the site is delineated.

B. Provide statement below F.E.M.A. F.I.R.M. excerpt on cover sheet of plans:
"This site [is/is not] located within a zone [A, AE, shaded zone X] as defined by F.I.R.M Community Panel Number(s) 135160 for East Point, Georgia. (Use June 22, 1998 map)."

____2. Flood Zone AE within site:

A. Cleary delineate flood zone extents and both the existing and proposed 100 year flood elevations on plans.

B. Provide project benchmark, with elevation, tied to East Point G.I.S. monument. Use N.G.V.D. or Mean Sea Level Datum.

C. If the proposed work encroaches within Zone AE. The following is required:

1. Professional Engineer's certification that the proposed work will not:
   a) raise the base flood elevation outside of the property limits;
   b) reduce the flood storage capacity in the flood plain (fill placed within flood plain must be compensated and all cut areas must gravity drain to watercourse);
   c) impede the movement of flood waters;
   d) change the flow characteristics of the flood waters; and
   e) create hazardous or erosion-producing velocities.

2. Flood study, prepared by Professional Engineer, substantiating the certification.

3. Application to F.E.M.A. for a conditional F.I.R.M. revision to be submitted to F.E.M.A. through City of East Point.

D. Provide a RECORDED copy of the City of East Point Flood Plain Indemnification

Agreement.

____3. If Flood Zone A and /or shaded Zone X exists within site:

A. Clearly delineate flood zone extents and both the existing and proposed 100 year flood elevations on plans.

B. Provide project benchmark, with elevation, tied to F.E.M.A. monument. Use N.G.V.D. or Mean Seal Level Datum.

C. Provide flood study, prepared by a Professional Engineer, that determines both the existing and proposed extents and elevations of the flood zone.

D. Locate all flood study sections on the plans and state the existing and proposed flood elevations at each section.

E. If the proposed work encroaches within Zone A or shaded Zone X. The following is required:

1. Professional Engineer's Certification that the proposed work will not:
   a) raise the base flood elevation outside of the property limits;
   b) reduce the flood storage capacity in the flood plain (fill placed within flood plain must be compensated and all cut areas must gravity drain to watercourse);
   c) impede the movement of flood waters;
   d) change the flow characteristics of the flood waters; and e) create hazardous or erosion-producing velocities.

2. At County's request, application to F.E.M.A .for a conditional F.I.R.M. revision to be submitted to F.E.M.A. through City of East Point.

F. Provide a RECORDED copy of the City of East Point Flood Plain Indemnification Agreement.

____4. State the "lowest floor elevation," including basement and attached garage, for each lot affected by the flood plain.

____5, Per article 4.24.9.G, certify and submit calculated areas to demonstrate that no lot area has less than 50% of the minimum lot area (as established by the applicable zoning district regulations) above the level of the intermediate regional flood contour elevation, as well as no less than 70% of the buildable land area of any lot that lies above the base flood elevation by a minimum of one foot.

____6. Show the following **NOTES** on the construction plans:

A. The flood zone(s) shown hereon are based on the F.I.R.M. Panels [Numbers/Numbers] 135160 _____

B. The base flood (I.R.F.) elevations shown heron are based on the flood elevation study by , etc.

OR

The base flood (I.R.F.) elevations shown hereon are based on the flood insurance studies for City of East Point.

C. All construction including grading and filling within the flood plain shown hereon shall be in conformance with the City of East Point Planning and Zoning Resolution.

D. All cut and fill within the flood plain shall be field verified and certified by a Professional Engineer.

E. All intermediate regional flood plain shall be field located and staked prior to encroachment within them. Such location shall be maintained clear and visible throughout construction and final approval.

F. When utility (storm drains, sewers, etc.) construction is within a flood plain:

1. The contractor shall restore the flood plain to the original condition and grade immediately upon completion.

2. Upon completion of restoration, a Professional Engineer shall certify in writing to the Department of Government Operations that all work is complete and the flood plain restored.

G. When any construction borders a flood plain:

1 The contractor shall restore the flood plain to the original condition and grade immediately upon completion.

2. Upon completion of restoration, a Professional Engineer shall certify in writing to the Department of Government Operations that all work is complete and the flood plain restored.

H. The lowest floor elevation includes basement and attached garage.

_____7 Show the limits of construction and the quantities of cuUfill proposed within the flood plain on the construction plans. Show a grading plan with quantities and proposed contours for the area where the compensating cut is to be made. When fill or cut is proposed within a flood plain, a plan and profile based on field run cross sections shall be submitted as part of the land disturbance permit. The horizontal and vertical scales shall be such that the contractor can clearly determine the extent and amount of work and such as to facilitate the engineer in submitting the required certification.

____8. Please include the following statement on the construction documents according to City Subdivision Ordinance, Sec. 10-3005. Disposal of surface water:

Sec.10-3005.Disposalof surface water

No plat of a subdivision of land into building lots shall be approved which provides for or allows storm or surface water drains or sewers to empty surface waters on land of the applicant or on land of any other person, firm, or corporation, except when it is emptied directly into a publicly maintained sewer or drain, or into a drain or sewer approved in writing for such purpose by the city engineer. Anyone violating this section shall upon conviction thereof in the city court of the city be punished as prescribed in section 1-1006, and, in addition thereto, the person or persons adjudged guilty of such offense shall abate the condition as a nuisance in case it is determined to be such, and in default thereof such condition shall be abated by the city at the expense of the person or persons who shall have created or maintained it.

(Code 1959, §24-233.1; Ord. No. 692-78,§ 2,11-2-78)

Department of Public Works
2777 East Point Street
East Point, Georgia 30344
(404) 765-2745 FAX (404) 209-5183
www.eastpointcity.gov

PERFORMANCE BOND

Amount:$_____

Bond Number:

KNOW ALL MEN BY THESE PRESENTS, that we_____(hereinafter referred to as "Principal"), and_____(hereinafter referred to as "Surety"), of the City and State of _____and duly licensed to transact business in the State of Georgia, are held and firmly bound unto East Point, Georgia Department of Public Works (hereinafter called the "Obligee"), for the penal sum of _____and no/100 U.S. Dollars ($_____.00) for the payment of which are well and truly to be made, we the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these represents.

WHEREAS, Principal has agreed to construct in _____(project name) located in Land Lot(s) _____,District _____, Section _____, Fulton County, Georgia, the following improvements:_____

NOW THERFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall construct, or have constructed, the improvements herein described and shall save the Obligee harmless from any loss, cost of damage by reason of its failure to complete said work, then this obligation shall be null and void; otherwise to remain in full force and effect.

It is understood and agreed that the total liability of the Surety under this bond shall in no event exceed the aforementioned sum of _____and no 100/U.S. Dollars ($_____.00).

Note that this Bond will not be released until such time that Surety Is notified in writing by the East Point Department of Public Works that the work has been properly done in accordance with the City of East Point Department of Public Works specifications.

No right of action shall accrue upon or by reason on this obligation, to or for the benefit of any person, firm or corporation, other than the Obligee herein named.

Signed, sealed and dated this _____day of _____, 20____.

_____

_____

_____

Principal Name, Address & Phone Number

_____
(Witness)

By:

_____

Officer Signature & Title

_____

_____

_____
Surety Name, Address & Phone Numb

By: _____
Attorney-in-Fact Name & Signature

DATE:_____

Department of Public Works
2777 East Point Street
East Point, Georgia 30344
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BOND CALCULATION FORM

DATE _____

LINEAR FOOTAGE AMOUNTS REQUIRED BELOW MUST BE PROVIDED AND VERIFIED BY THE DESIGN PROFESSIONAL AND/OR INSPECTOR OF RECORD

(Please Print)

PROJECT NAME: _____

PERMIT #: _____ LAND LOT(S): _____

DIST./SECT.: _____

OWNER: _____

DESIGN PROFESSIONAL:: _____

BONDS: Prior to the final approval of the project by the City of East Point, a bond is required for the improvements completed under the Land Disturbance Permit. This bond is required for a period of 48 months from the date of project approval, with unlimited 1-year extensions without notice. The amount of the maintenance bond is as follows:

CURB & GUTTER: $8.00/lin. ft. x _____ lin. ft. x 30% =
$_____

PAVING $27.00/sq. yds. x _____ sq. - yd. X 30% =
$_____

SANITARY SEWER $24.00/lin. ft. x _____ lin. ft x 15% =
$_____

SANITARY SEWER STR. $2500.00/each x _____ each x 15% =
$_____

STORM DRAINAGE PIPE $22.00/lin. ft. x _____ lin. ft x 15% =
$_____

STORM DRAINAGE STR. $2500.00 each x _____ each x 15%=
$_____

WATER LINE $18.00/lin. ft x _____ lin. ft. x 15% =
$_____

DETENTION POND $2,500.00 each x _____ =
$ _____

SIDEWALK $5.001sq.ft x sq. ft. x 30% =
$_____

DECEL LANE $25.00/sq. yds.x sq. yd. X 30% =
$_____

LANDSCAPING _____ =
$_____

_____
$_____

_____=
$_____

_____=
$_____

SUBTOTAL =
$_____

ADMINISTRATIVE COSTS @ 25% of Sub-Total =
$_____

TOTAL: =
$_____

BOND AMOUNT: =
(Total Rounded to the next $500.00-$3,000 minimum)

ACCEPTABLE FORMS OF BONDS:
Surety Bonds from a Surety company licensed to transact business in the State of Georgia.

A cash assurance in the form of a Cashier's Check, which would be held without escrow until all required items are accepted by the City of East Point.

INSPECTOR CERTIFICATION & SIGNATURE
I hereby certify that the amounts calculated are in accordance with all applicable fees associated with the requirements of the City of East Point.

Signature: _____

Date: _____
(Design Professional)

DEPARTMENT OF PUBLIC WORKS
2757 East Point Street
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(404) 270-7096 FAX (404) 209-5183
www.eastpointcity.gov

AS-BUILT CHECKLIST

Project Name: _____ Tax ID #: _____

Project Number: _____ Date: _____

Reviewed By: _____ Telephone: _____

Please address all items marked with an "X"

Please submit four (4) sets with red-line comments to this office

____ 1. List project name including a.k.a., City of East Point Land Disturbance Permit (L.D.P.) number.

____ 2. Include address and Building Permit number on all non-subdivision projects.

____ 3. Indicate engineer's name, address, and phone number. Dates of revision shall be included and plans shall be signed and sealed by a Professional Engineer.

____ 4. Depict Land Lot, Districts, Section, City, and County.

____ 5. List owner's name, address, and telephone number.

____ 6. Scale shall be 1" = 20'. The As-Built submittal shall be on 24" x 36" sheets and include a location map.

____ 7. Street names shall match that of the final plat and be reserved through the Department of Planning and Zoning.

____ 8. Show all adjacent property lines, subdivisions, and existing buildings.

____ 9. Show location of all burn pits with distance from lot lines. (Bury pits not allowed)

____10. Show all pipe crossings (storm drainage, sanitary sewer, water, and sewer laterals) on plan and profile views.

____11. Indicate type of pipe, size, slope, and length of sanitary, storm sewers, and water.

____12. All manholes indicated with identification, station number, top elevation, invert elevations (in and out). Manhole inverts shall have a minimum 2/10 of a foot (0.20") drop across the

manhole.

____13. Shade ALL easements (sanitary and storm) dedicated to City of East Point. All public easements must be recorded.

____14. Concrete collars on wastewater and storm pipes lines are required when the slope is greater than 20% of conditions.

____15. Provide calculations verifying pipe slopes in excess of 30% will not cause flooding Conditions within downstream.

____16. Provide roadway compaction reports, as required by inspector on all pipe installation and Utility crossings not bored.

____17. All internal angles in the direction of flow shall be shown on sewer lines. Show all bearings and indicate direction of flow on sewer lines.

____18. Plan and profile of all existing and proposed wastewater pipes with storm and water crossings, on a scale of not more than 1"=100 ft. horizontally and 1"=10 ft. vertically.

____19. Show all sewer laterals and their location indicated by stationing from immediate downstream manhole. Show "Fulton County Standard 909", Clean-out at laterals. Specify heavy duty clean-outs in paved areas.

____20. Laterals shall be provided for each lot. Laterals may extend a maximum of 125 linear feet, off-site. Laterals must be gravity flow and indicated by station number or numbers. All laterals from street wastewater lines must extend at least ten and one-half (10.5) feet behind back of curb. On commercial projects, show clean-outs at limits of easement.

____21. Minimum slopes for wastewater pipes are as follows:

0.7% on 8" lines
0. 5% on 10" lines
0.4% on 12" lines
0.3% on 15" lines
0.25% on 18" lines
21" and larger sizes, maintain 2 feet/sec. at ¼ capacity

____22. Minimum 2 fps flowing one-half full on pipes, 18" and smaller. Minimum pipe size is 8". Pipes larger than 18" shall be based upon 2 fps flowing two-thirds full.

____23. D.I.P. wastewater required where line:

Has less than 4 feet of cover in unpaved areas.
Has less than 6 feet of cover in paved areas.
Has greater than 20 feet of cover; minimum class 51 D.I.P. will be required.
Crosses over storm sewer.
Crosses within 1 foot of storm sewer.
Is in a fill area.

D.I.P. may be required for other conditions.

____24. For all wastewater pipes above ground, wrapped and coated steel pipe of D.I.P. shall be used.

____25. No more than 4 connections are allowed per manhole.

____26. An outside drop is required at a manhole when the following conditions exist:

PIPE SIZE	DROP
8"	27"
10"	27"
12"	30"
15"	39"
18"	41"

Different size pipes require the crest of each to be aligned.

____27. Where an outside drop exceeds ten (10) feet, provide an intermediate clean out (a tee section).

____28. All manholes outside of roadways and right-of-ways shall be two (2) feet above ground with precast ring and cover. If a manhole is in a flood plain or high water area, they shall have water tight covers and extend above the 100 year flood plain level; clearly indicate and provide details. Manholes flush with the ground may be allowed, on a pre-approved basis.

____29. Provide and show safety platforms within manholes in excess of 16 feet deep. Spacing shall be:

MANHOLE DEPTH (feet)	PLATFORM SPACING (feet)
16	8 (1 platform)
17 to 23	One platform spaced in the middle of the manhole
24	8 (2 platforms)

____30. State neoprene couplings with stainless steel bands and shear rings or approved P.V..C. coupler are required for joining different types of sanitary pipes.

____31. TV required on all sanitary sewer lines 8 inches or greater. Provide copy to inspector with written format.

____32. Show all storm drainage, including profile of detention pond and all offsite drainage easements. Show Storm Pipe Chart that includes “Line ID” “Inlet Type” Pipe Size” “ Pipe Material” & “Pipe Length”

____33. Show the following on detention ponds:

6 ft. fence, 10 ft. inside access easement, 20 ft. landscape strip around pond, and a 20 ft. access easement leading to pond.

Outlet structure with dimensions Indicate 25-yr. and 100-yr. storm elevations, volume of pond and how detention is provided if no pond is on site.

____34. Provide City of East Point Pond Certificate form signed and sealed by Professional Engineer.

____35. Show size, length and width of rip-rap at head walls.

____36. Provide water As-Builts.

____37. Show R/W and pavement widths. Show all pavement striping and signage.

____38. Profile of roadway, indicate As-Built slopes.

____39. Show all curb and gutter, sidewalk and concrete apron if applicable.

____40. Provide engineer core reports for roadway asphalt pavement.
____41. Install required traffic signs and markings pursuant to the M.U.T.C.D.

____42. Install street signs.

REQUIREMENTS FOR SUBMITTALS

____1. Signature of the Construction Inspector and field acceptance of As-Builts is required prior to approval of As-Builts

____2. Submittal Form completed

____3. Landscape and Tree protection approval

____4. Police Department, Traffic Division approval

____5. Professional Engineer's seal and signature on As-Built drawings

____6. Water Mylar

____7. Erosion Control inspection approval

____8. Five copies of As-Builts **(NOTE: Quantities of materials [curb and gutter, sewer, water, sidewalks, etc.] should be provided by Engineer and clearly shown on drawings.)**

____9. Digital Photos in JPEG format

____10. All easements, applicable Bonds and Indemnification documents.

Please note the following:

Re-Inspection fees to be paid at time of submittal.

All permit revisions/phasing and/or field changes must be submitted and approved prior to final submittal.

Maintenance Bonds are required prior to final approval of As-Builts.