

**DALTON UTILITIES
STORMWATER MANAGEMENT
REVIEW CHECKLIST – DEVELOPMENT PLANS**

DEVELOPMENT NAME:

DISTRICT/LANDLOT/PARCEL:

ENGINEER:

FAX NUMBER/EMAIL:

REVIEWER:

DATE:

PERMIT #:

FYI: IT IS THE OWNERS/DEVELOPER'S RESPONSIBILITY TO BE IN COMPLIANCE WITH APPLICABLE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND CLEAN WATER ACT REQUIREMENTS.

- Please contact reviewer at 706-529-1384 with questions about the comments or to make an appointment regarding the comments.
- Re-review can be walked through.
- Re-review shall be dropped off.

SITE/GRADING PLAN

- 1) Number all pipes and structures on plan.
- 2) Show Grading of and number all open channels on plan.
- 3) Provide transition channels from inlet and outlet ends of all pipes to natural drainage swales and show grading of said channels. Specifically, at inlet / outlet of pipe(s) #_____.
- 4) Show topography at a 2' contour interval or less.
- 5) Show grading for roads in residential subdivisions.
- 8) Show regulatory and 100-year floodplain contour, elevation and floodway limits and indicate information source.
- 9) Indicate on plan the regulatory and the 100-year water elevation of the lake.
- 10) Provide storm water note(s) indicated below in a notes section on grading and drainage plan.
 1. Select appropriate Floodplain Note(s). Either select note a or b and select notes c and d as applicable.
 - a. There is no floodplain on this property from a water course with a drainage area exceeding 100 acres or floodplain per FIRM Panel _____ dated _____.
 - b. Floodplain on this property from all water courses with a drainage area exceeding 100 acres is shown.
 - c. Floodplain shown is from FIRM panel _____ dated _____.
 - d. Floodplain shown is from Floodplain study titled _____ by _____ dated _____. Study was done as a part of project number XXX xxxx-xxxxx.

2. Select appropriate wetlands note(s). Select either a or b and if wetlands are being disturbed on the site select note c.
 - a. There are no wetlands being disturbed on this site.
 - b. All wetlands to be disturbed are delineated on this site.
 - c. The wetlands are being disturbed in accordance with permit _____.
3. Select the appropriate SWM note.
 - a. Storm Water Management for this project is provided on-site.
 - b. Storm Water Management for this site is provided off-site in project named _____ with permit number XXX xxxx-xxxxx.
4. Select appropriate state waters note(s). Select either a or b and if a state waters buffer is being disturbed on the site select note c.
 - a. There are no stream buffers on this property.
 - b. A 25-foot undisturbed buffer shall be maintained adjacent to all streams.
 - c. Stream buffer variance number _____ was obtained to work in buffer as shown.
5. Wetland certification: The design professional, whose seal appears hereon, certifies the following: 1) the National Wetland Inventory maps have been consulted; and, 2) the appropriate plan sheet [] does / [] does not (circle appropriate box) indicate areas of united states army corps of engineers jurisdictional wetlands as shown on the maps; and, 3) if wetlands are indicated, the land owner or developer has been advised that land disturbance of protected wetlands shall not occur unless the appropriate federal wetlands alteration (“section 404”) permit has been obtained.
6. Select appropriate easement note.
 - a. Residential – Dalton Utilities assumes no responsibility for overflow or erosion of natural or artificial drains beyond the extent of the street right-of-way, or for the extension of culverts beyond the point shown on the approved and recorded subdivision plat.
 - b. Commercial – Dalton Utilities assumes no responsibility for overflow or erosion of natural or artificial drains beyond the extent of the street right-of-way, or for the extension of culverts beyond the point shown on the approved and recorded plan. Dalton Utilities does not assume the responsibility for the maintenance of pipes in drainage easements beyond the right-of-way.
7. An elevation certificate is required on the following lots.
8. It is the responsibility of the property owners of the storm water management facility to keep the access drive free of obstructions and to maintain the facility free of obstructions, silt and debris, and operational pursuant to Dalton Utilities requirements.
9. Source of topography is _____ and reference datum is (i.e. NGVD 1929, Mean Sea Level, etc.)
10. Maximum slope for cut or fill is 2H: 1V except earthen dam embankments shall be 3H: 1V.
11. Detention pond, detention outlet structures and temporary sediment pond features are to be constructed and fully operational prior to any other construction or grading.
12. Developer is to clean out accumulated silt in detention pond at end of construction when disturbed areas have been stabilized.
13. Provide detention pond post-construction (record) drawings at least two weeks prior to requesting a certificate of occupancy so that the post-construction conditions may be verified and approved. Certified record drawings shall include topography of pond and outlet structure detail using post-construction survey data. Using record drawings provide a certified hydrology report verifying pond volumes and peak outflows from regulated storm events.
14. Access easement to be cleared and grubbed.

- 15) If using HDPE pipe, add following note to plans:
 HDPE pipe shall conform to the requirements of AASHTO M-294 and AASHTO MP7, Type S & D. Connections shall use a rubber gasket, which conforms to ASTM F-477. Installation shall be in accordance with ASTM Recommended Practice D-2321, AASHTO Section 30, or with Section 550 of the Georgia DOT Standard Specifications, Construction of Roads and Bridges.
- 16) If using RCP pipe, add following note to plans:
 All RCP pipe joints shall be bell & spigot types with a rubber gasket conforming to ASTM C-443. The pipe shall be manufactured in accordance with AASHTO M-170 and/or ASTM C-76. Class of pipe and wall thickness shall be in accordance with 1030-D, Georgia DOT specification, Table No. 1. Installation shall be in accordance with Section 550 of the Georgia DOT Standard Specifications, Construction of Roads and Bridges.
- 11) Indicate minimum finished floor elevation of building on plan for lots.
- 12) For residential subdivisions, the detention pond must be located on a storm water management facility lot and be owned by a property owner's association.
- 13) Provide a drainage easement located a minimum of 10-feet outside the 100-year ponding limits of the detention pond.
- 14) Provide a cleared access easement a minimum 12' wide to the detention pond.
- 15) Within the access easement, a 12-foot wide road shall be graded at a maximum 20% grade to provide access to the facility. Show grading on plans. The road shall be grassed or paved. The road shall extend to the bottom of the pond when the pond is greater than 10 feet deep or 50 feet wide.
- 16) Discuss location of pond(s) # _____ outlet with this office.
- 17) Show the detention pond 100-year ponding contour and elevation on plan.
- 18) When depth of normal pool or water quality ponding is over four feet, a 10' wide bench shall be provided.
- 19) Bottom of dry facility shall have positive drainage.
- 20) Discharge pipe must be no closer to the project site's property line than the greater of the distance necessary to construct any velocity protection or a flow distance equal to six (6) pipe diameters.
- 21) Show locations for temporary detention ponds if permanent ponds will not be constructed in this phase. Provide design data in storm water management report.
- 22) Minimum top width of detention pond, earthen dam to be 8'-0".
- 23) Provide a flume and riprap at end of the widened collector road or deceleration lane section. Provide flume detail on detail sheet.

PIPE & OPEN CHANNEL PROFILE SHEET

- 24) Only Reinforced Concrete Pipe may be used under non-local roads. Specifically, _____.
- 25) Specify which pipe material type (Smooth lined corrugated Polyethylene pipe, or reinforced concrete pipe) is to be used.
- 26) All pipes carrying a live stream shall have paved inverts. Note which pipes need paved inverts in the pipe chart.
- 27) Provide pipe profiles. Show existing and proposed ground surface profiles, pipe lengths, slopes, inverts, and 25-year hydraulic grade lines.
- 28) Provide channel profiles. Show existing and proposed ground surface profiles, channel lengths, 25-year normal flow depth and slopes. Minimum freeboard to be 20% of the flow depth.

- 29) 25-year hydraulic grade line must be at least 1 foot below the gutter line or top of grate.
- 30) Minimum pipe size shall be 15" diameter for public piped collection systems. Refer to pipe #_____.
- 31) Minimum culvert size shall be 18" diameter.
- 32) Channel velocities for the fully developed 25-year flow shall not exceed the non-erosive velocity as shown in Tables 4.4-2 and 4.4-3 of the *Georgia Stormwater Management Manual*. Refer to open channel #_____.
- 33) Velocity in pipe system culvert(s) # _____ exceed(s) 15 fps maximum.
- 34) Slope of HDPE pipe(s) # _____ exceed(s) 14% maximum. Provide anchors per manufacture's recommendations.
- 35) Slope of RCP pipe(s) # _____ exceed(s) 10% maximum. Provide anchors per manufacture's recommendations.
- 36) Show minimum ground cover of 1'-0" for pipe(s) #_____.
- 37) Show 100-year ponding limits above pipe (culvert) #_____.
- 38) Show 100-year hydraulic grade line in all culverts. Specifically pipe(s) #_____. Use USGS regression equations where applicable to check the magnitude of peak flows when other hydrologic methods recommended in the manual are used
- 39) Provide transition channel profiles from inlet and outlet ends of all pipes to natural drainage swales. Specifically, at inlet / outlet of pipe(s) #_____.
- 40) Maximum spacing of structures that can be used for access shall be 300'. Specifically, pipe(s) #_____.
- 41) Provide complete pipe chart indicating the following:
1. Upstream Structure Type (DWCB, SWCB, DI, etc.)
 2. Pipe numbers/Pipe Structures
 3. Pipe size
 4. Pipe length
 5. Pipe slope
 6. Contributing drainage area
 7. Design discharge (Q_{25} for piped drainage; Q_{100} for culverts)
 8. Design storm frequency (25 year for piped drainage; 100 year for culverts)
 9. Runoff coefficient (per future land use plan and assuming no detention -
 10. Pipe material/coating
 11. Velocity (V_{25} may not exceed non-erosive velocity at outlet headwall, unless energy dissipation is provided.)
- 42) Provide complete channel chart indicating the following:
1. Open channel numbers
 2. Contributing drainage area
 3. Runoff coefficient (per future land use plan and assuming no detention -
 4. Conveyance size
 5. Lining material (riprap, grouted riprap, sod, or erosion control blanket.)
 6. Channel length
 7. Channel slope (for min and max values – see SWDM 5.2.3. Maximum 10 %.)
 8. Velocity (V_{25} may not exceed non-erosive velocity - Max 4 fps for sod.)
 9. Design storm frequency (25 year)
 10. Design discharge (25 year)
 11. Normal flow depth (25 year)
- 43) Stormwater Development plans must be sealed by Professional Engineer.

WETLANDS

- 44) After consulting the National Wetlands Inventory Map, it appears that wetlands exist on the project property. These wetland areas must be indicated on the site plan. National Wetland Inventory Maps are (NWI Maps) are available on the internet at <http://wetlands.fws.gov/nwi.htm>

- 45) Dalton Utilities will not issue a land disturbance permit until we receive documentation from the Corps of Engineers that an Individual Permit or a Letter of Permission authorizes the proposed encroachment in wetland areas. If the encroachment is authorized under a Nationwide Permit, we must receive documentation from the applicant’s engineer about which Nationwide permit is applicable and why the encroachment meets the conditions of that Nationwide permit. We also must receive a copy of the approved PCN letter from the Corps of Engineers, if applicable. The Corps of Engineers can be contacted at the following address:

Alan Miller - Project Manager
US Army Corps of Engineers, Piedmont Branch of the Savannah District
1590 Adamson Parkway, Suite 200
Morrow, Georgia 30260-1777
678-422-2729 (voice)
678-422-2734 (fax)

OTHER COMMENTS

- 46) Show water flow direction line on preliminary plan for each lot.

- 47) Place grouted rip-rap at channel inlets to ponds.

- 48) Provide Water Quality Performance Review Checklist.

- 49) Provide Storm Water Management Report Checklist.

- 50) Provide Flood Study Checklist.

- 51) Provide Water Quality BMP Checklist.
 - 1. Extended Detention Pond Checklist.
 - 2. Constructed Wetlands Checklist.
 - 3. Infiltration Trench Checklist.

- 52) Grassed Swale Checklist.