



DRAINAGE CHECKLIST FOR LAND DISTURBANCE PERMIT

Project Name: _____ Date: _____

Project Number: _____ Telephone: 678.242.2559

Reviewed by: Abbie Jones Email: Abbie.Jones@cityofmiltonga.us

A. General

- ____ 1. For all permit revisions, submit a letter stating the proposed changes. These changes should be highlighted on all sheets affected.
- ____ C4. Minimum culvert size shall be 18", and maximum velocity shall be 15 ft. /sec.
- ____ C5. Locate catch basins with 600 feet maximum spacing, designed for 10-year storm with a maximum gutter spread of 8 feet.
- ____ C6. Show nearest existing catch basin and/or drop inlets that receive water from this development.
- ____ C7. Provide design calculations for all storm drainage pipes. Storm drainage pipes shall be designed for 25-year storm frequency.
- ____ C8. Culverts beneath roads shall be designed to convey the 100-year storm. Show analysis/effects of 100 year storm.
- ____ D3. Provide design calculations for all ditches and channels. Ditches and channels shall be designed for 25-year storm frequency. Show sod ditch detail if necessary.
- ____ C9. Provide back water effect due to constriction of pipes in ditches or swales. Limit backwater to within the property.

B. Storm Drainage Plan

- ____ 1. Show existing and proposed contours, clearly distinguishable.
- ____ 2. Identify drainage structures as existing or proposed.
- ____ 3. Show drainage easements drawn with width dimensions specified. Typical D.E. width is 20 ft minimum.
- ____ 4. Delineate and label any flood zone within the site.
- ____ 5. Show the limits of proposed construction to be permitted.
- ____ C1. Profile all existing/proposed storm pipes above which land disturbance will occur.
- ____ C2. Reference all storm drainage structures (i.e., catch basins, drop inlets, headwalls, etc.) to Milton or (G.D.O.T.) for all work in the R.O.W. Provide complete detail(s) if an alternate design is used within the site and is not a public standard.
- ____ 6. Storm drainage structures are not allowed within the radius of a curb.
- ____ C3. Provide outlet velocity at outlet structures. (i.e. storm drainage profile).

___ 7. Storm drainage structures shall discharge into natural draws or drainage channels/swales.

C. Storm Drainage Pipe Design

___ 12. 30" maximum cross drain pipe draining through standard catch basins or drop inlets. When larger diameter is required, provide design and detail of all structures.

___ 13. Storm drain cross section:

A. Minimum pipe cover

1. Storm drains: 18 inches outside roadway, 36 inches within roadway (See GDOT specs and details).
2. Berming or trenching is not allowed to achieve minimum or maximum cover.

B. Minimum pipe slopes:

1. Concrete or smooth walled HDPE 0.5%
2. CMP 1.0%

___ 14. All storm crossings under public roadways shall be reinforced concrete pipe, class per GDOT specs and details.

___ 15. Storm pipe material types, directional changes, slope changes or transitions are permitted only at drainage structure with surface access (i.e., junction box with manhole, catch basin, etc.). Concrete collars are not acceptable at transitions.

___ 16. Show size, material type, class or gauge, percent slope, and length of all pipes.

___ 17. Provide invert elevations and top elevations of drainage structures.

___ 18. Anchor collars are required on storm pipes when the slope is greater than 30%.

D. Ditches and Swales

___ 1. All proposed swales and ditches shall have cross sections, centerline profiles, flow rates, and velocities shown on plans.

___ 2. If velocity in ditch is greater than 3 ft. /sec., ditch invert shall have a non-erodible material.

___ 3. Show drainage area, Q25 and headwater elevation at the inlet of all storm drain structures (include accumulative areas and Q's, and longitudinal system).

___ 4. Indicate the type and GDOT standard number for inlet and outlet structures of all pipes.

___ 5. All pre-cast M.H. shall be provided with a minimum of 9 inches clearance on each side of connecting pipe between all cut-outs or penetrations.

___ 6. Use online catch basins except for cul-de-sac applications in which one foot offset is required.

___ 7. Show concrete spillway at the end of curb and gutter (as per G.D.O.T. Standard 9013, type III) where applicable.

___ 8. Use concrete flared end sections at driveway crossings within the right-of-way and other applications adjacent to vehicular traffic (Ref. G.D.O.T. Standard 1120).

___ 9. Engineer's seal and signature required on all plans and reports.

E. Hydrology Report (Separate Checklist)

F. Drainage and Earthwork Notes

- ___ 1. GDOT structures must be used within the ROW.
- ___ 2. GDOT specifications, standards and details on projects in the City of Milton.
- ___ 3. All areas to receive structural fill shall be cleared, stripped and free of topsoil, roots, stumps and all other deleterious material. Structural fill shall be clean from organics and all other deleterious material. Fill shall be placed in maximum 8" lifts and compacted to at least 95% standard proctor maximum density and to within +/- 3% of the optimum moisture content, unless otherwise specified in the project geotechnical report or by the project geotechnical engineer. All fill soils are to be placed under the observation of the project geotechnical engineer. Documentation of compaction testing shall be provided to the Land Disturbance Activity Inspector for all roadway construction in the right-of-way (including deceleration lane). Contact Land Disturbance Activity Inspector prior to construction for further testing requirements.
- ___ 4. Failure of the contractor to perform the prescribed erosion control practices shall result in the immediate issuance of a stop work order for the project site, pursuant to Section 5-103(B) of the City code.
- ___ 5. Maintenance of all soil erosion and sedimentation control practices, whether temporary or permanent, shall be the responsibility of the contractor.
- ___ 6. All disturbed areas must be vegetated within 14 days of final grade.
- ___ 7. All fill slopes shall have silt fence at the toe of slope.
- ___ 8. The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land-disturbing activities.
- ___ 9. Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat sediment source.
- ___ 10. The contractor shall remove the sediment once it has accumulated to one-half the original height of the silt fence used for erosion control.
- ___ 11. Maximum cut or fill slopes are 2 (horizontal) and 1 (vertical).
- ___ 12. Any disturbed area left exposed for 14 days shall be temporarily stabilized with seed or mulch.
- ___ 13. All silt fence shall be Type C.
- ___ 14. The construction exit shall be maintained in a condition, which will prevent tracking or flow of mud onto public right-of-way. This may require periodic top-dressing with stone, as conditions demand. (All materials spilled, drop washed, or tracked from vehicle or site onto roadway or into storm drain system must be removed immediately by sweeping).
- ___ 15. All storm drains and drop inlets will have 4" permanent pollution prevention markers installed prior to inspection. Markers are available at City of Milton Engineering/Public Works Department 678-242.2500.
- ___ 16. The contractor shall maintain storm water runoff controls at all times. Additional controls will be installed if deemed necessary by City Inspection.
- ___ 17. Erosion control matting shall be installed on all slopes steeper than 3:1.
- ___ 18. This site does not contain any state waters or wetlands.
- ___ 19. On site burial is not allowed.
- ___ 20. Mulch storage must comply with the following section of the standard fire prevention code section 502.3.1: No Person shall store in any building or upon any premises in excess of 2,500 cu ft gross volume of

combustible empty packing cases, boxes, barrels, or similar containers, or rubber tires, rubber or cork or similarly combustible materials without a permit.

- ___21. Two copies of the NPDES Notice of Intent must be provided to the Land Disturbance Inspector prior to initiating construction for sites with over 1 acre disturbed area.
- ___22. Irrigation systems are not allowed within the public right-of-way.

The City of Milton reserves the right to change this checklist and/or
Any review criteria deemed necessary at any time. Checklist updated 3/29/2007