



# STORMWATER ENGINEERING DESIGN CHECKLIST

LDP # \_\_\_\_\_

Project Name \_\_\_\_\_ Project Location \_\_\_\_\_

Reviewer Osmany Ordonez 678-297-6218 Designer \_\_\_\_\_

Contact \_\_\_\_\_ Phone \_\_\_\_\_ Email \_\_\_\_\_

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1<sup>st</sup> Review \_\_\_\_\_ 2<sup>nd</sup> Review \_\_\_\_\_ Date Approved \_\_\_\_\_

*\* Area above dotted line to be filled out by applicant.*

Provide this completed checklist signed, dated, sealed and certified by a Georgia P.E.

- Denotes no action required
- Or underline denotes action required
- N/A Denotes not applicable to this project

**SUBMITTAL MUST INCLUDE A CHECKLIST THAT HAS BEEN MARKED UP BY THE ENGINEER OF RECORD SHOWING HOW AND WHERE EACH ITEM LISTED IS ADDRESSED. (Fore example, notes should be labeled with plan sheet and note number, other items should be labeled with plan sheet number and location on the sheet, etc.). PLANS WILL NOT BE REVIEWED WITHOUT THIS STEP COMPLETED.**

I, the undersigned, hereby certify that I am a Professional Engineer in the State of Georgia and that each element of this checklist was considered and addressed in accordance with all applicable regulations, codes, standards, guidelines, ordinances, and policies.

\_\_\_\_\_  
**Signature and Seal of Applicant**

Submission of this checklist does not relieve the applicant from his/her responsibility to comply with all applicable regulations, codes, standards, guidelines, ordinances, and policies.

The Department of Engineering / Public Works reserves the right to revise this checklist periodically as the need arises.

## STORMWATER AND DRAINAGE DESIGN REPORT CHECKLIST

### PROPERLY ANNOTATED CHECKLIST SUBMITTAL REQUIRED PRIOR TO REVIEW

- A. \_\_\_\_\_ Ensure Stormwater Management Report/Hydrology Study bears signature and seal of professional engineer.
- B. \_\_\_\_\_ Narrative
  - 1. \_\_\_\_\_ Site location, acreage, and current and proposed land use.
  - 2. \_\_\_\_\_ Off-site area(s) (basis of delineation and incorporation in the site design).
  - 3. \_\_\_\_\_ Natural detention/retention features incorporated in the drainage calculations.
  - 4. \_\_\_\_\_ Compliance with the Quantity Control Criteria including summary table of pre- and post-development peak flows for all storm events.
  - 5. \_\_\_\_\_ Compliance with Runoff Reduction and/or Water Quality Criteria.
  - 6. \_\_\_\_\_ Inspection and maintenance guidelines for the SWM facility proposed. Specify whose responsibility it will be to inspect and perform required maintenance and or repairs of the stormwater management practices.
  - 7. \_\_\_\_\_ Evaluation of downstream impacts per the City of Alpharetta Stormwater Design Manual (latest edition).
- C. \_\_\_\_\_ Pre-Development Drainage Map (Maximum Scale 1"=100')
  - 1. \_\_\_\_\_ Points of analysis.
  - 2. \_\_\_\_\_ Delineation of drainage areas including off-site area(s).
  - 3. \_\_\_\_\_ Tc flow paths with data (flow type, length, slope, and 'n') specified.
  - 4. \_\_\_\_\_ Identification of, in accordance with acceptable computations, area(s) (acres), CN and Tc for all drainage areas.
  - 5. \_\_\_\_\_ Pre-development contours (at 1-foot intervals for ground slopes < 2% and 2-foot intervals for slopes ≥ 2%). Shall extend a minimum of 50' beyond the property line.
- D. \_\_\_\_\_ Post-Development Drainage Map (Maximum Scale 1"=100')
  - 1. \_\_\_\_\_ Points of analysis.
  - 2. \_\_\_\_\_ Delineation of drainage areas including off-site area(s).
  - 3. \_\_\_\_\_ Tc flow paths with data (flow type, length, slope, and 'n') specified.
  - 4. \_\_\_\_\_ Identification of, in accordance with acceptable computations, area(s) (acres), CN and Tc for all drainage areas.
  - 5. \_\_\_\_\_ Proposed development (include finish floor elevations for all buildings).
  - 6. \_\_\_\_\_ Post-Development Contours and spot elevations (1-foot intervals for ground slopes < 2% and 2-foot intervals for slopes ≥ 2%).
  - 7. \_\_\_\_\_ Show how off-site areas are collected and directed through/around the site.
  - 8. \_\_\_\_\_ Show how peripheral areas, not to be collected are drained.
  - 9. \_\_\_\_\_ Label cross sections used for analysis to define limits of flooding.
  - 10. \_\_\_\_\_ Show proposed storm sewer with all inlets, junction boxes, and outlets.
  - 11. \_\_\_\_\_ Show all stormwater management practices.

12. \_\_\_\_\_ Demonstrate that the 100 year storm event can be conveyed to the SWM facility or site without impacting structures and within all easements.
- E. \_\_\_\_\_ Calculations
1. \_\_\_\_\_ Estimations of CN for Pre- and Post- Development conditions
  2. \_\_\_\_\_ Tc Calculations for Pre- and Post- Development conditions
  3. \_\_\_\_\_ Peak discharge calculations for Pre- and Post- Development conditions for design storms (1, 2, 5, 10, 25, 50, and 100, yr storm frequencies). Include model diagram, input file and summary sheet for final results.
  4. \_\_\_\_\_ Compliance with the Runoff Reduction and/or Water Quality Criteria
    - a. \_\_\_\_\_ Provide copy/cd of TSS Stormwater Site Design Tool (Excel spreadsheet). Note that undisturbed areas and stream buffers cannot be considered Natural Conservation Areas unless it is a properly recorded conservation easement.
    - b. \_\_\_\_\_ Provide TSS Area Map including bypass area analysis.
    - c. \_\_\_\_\_ Runoff volume generated by the first 1.0” of rainfall shall be retained onsite through the use of green infrastructure practices.
    - d. \_\_\_\_\_ If Runoff Reduction Standard cannot be achieved, must demonstrate that one or more of the criteria listed in the Alpharetta SWMM have been met.
  5. \_\_\_\_\_ Location of soil borings and descriptive bore log.
  6. \_\_\_\_\_ Water surface profiles for establishing limits of flooding.
    - a. \_\_\_\_\_ Calculations for peak discharge (provide and justify all input data).
    - b. \_\_\_\_\_ Cross sectional data locations.
    - c. \_\_\_\_\_ Water surface elevations (by a method approved by the department).
- F. \_\_\_\_\_ Additional comments

**STORMWATER AND DRAINAGE DESIGN  
ADDITIONAL STRUCTURAL CONTROLS CHECKLIST**

**DESIGN REPORT REQUIREMENT**

**NARRATIVE**

- A. \_\_\_\_\_ Justification of use for the proposed structural control.
- B. \_\_\_\_\_ Description of all design features and how the structural control will function within the specific parameters
- C. \_\_\_\_\_ Runoff Reduction and/or Water quality Standards
- D. \_\_\_\_\_ Methods used to calculate design requirements.
- E. \_\_\_\_\_ Summary of Results.

**CALCULATIONS**

- A. \_\_\_\_\_ All calculations necessary to justify and meet all runoff reduction, water quality and/or quantity standards.
- B. \_\_\_\_\_ Show contributing drainages areas with all information as previously discussed in other sections.
- C. \_\_\_\_\_ Design calculations.
- D. \_\_\_\_\_ Final details

**PLAN REQUIREMENTS**

- A. \_\_\_\_\_ Specify type of structural control, location, width, depth, size, and length
- B. \_\_\_\_\_ Details of all outlet structures with elevations and dimensions
- C. \_\_\_\_\_ Cross-sectional details
- D. \_\_\_\_\_ Verify the seasonal high ground water table (some structural controls require the presence or absence of groundwater)
- E. \_\_\_\_\_ Location of soil borings and descriptive bore log.
- F. \_\_\_\_\_ Infiltration test results.
- G. \_\_\_\_\_ Include slopes, vegetative lining, or plant materials necessary.
- H. \_\_\_\_\_ Inlet and outlet protection with details
- I. \_\_\_\_\_ Locations and details for underdrains, if applicable
- J. \_\_\_\_\_ All necessary details and applicable information to clearly demonstrate what is proposed and constructability.