

TOWN OF WEDDINGTON CONSTRUCTION PLAN GUIDELINES FOR NEW DEVELOPMENT



**TOWN OF WEDDINGTON
NORTH CAROLINA**

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CONSTRUCTION PLAN GUIDELINES FOR NEW DEVELOPMENT

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PLAN REVIEW

All plans submitted for review shall include a cover letter from the Engineer of Record stating the project name and the purpose of the submittal. Two (2) hardcopy sets and a digital submittal (PDF) of the plans and supporting calculations are required for all construction plan reviews.

After the initial review, the Town will return to the Engineer of Record comments to be incorporated into the designs or to be addressed by the Engineer. For resubmittals, the Engineer shall provide a cover letter stating that all comments have been addressed or provide a specific list of comments not addressed with an explanation/justification as to why a specific comment was not addressed. One (1) hardcopy set and a digital set of plans and calculations are required for all subsequent reviews. Plans that do not address the review comments will be returned to the Engineer and not reviewed by the Town. Plan re-submittals will be required until the Town determines that all comments have been satisfactorily addressed.

Upon final approval, the Town will issue a Construction Plan approval letter. The Engineer shall submit three (3) hard copies and a PDF of the approved, signed and sealed plans to the Town prior to construction. All Contractors, Subcontractors, or other field personnel must complete construction from the approved plans. The Town will not authorize construction projects prior to final plan approval.

CONSTRUCTION PLAN SUBMITTAL CHECKLIST

The applicant shall review the checklist below to ensure that the submitted plans are in accordance with these standards. All sheets required for the project construction, including any off-site improvements, shall be included in the review submittal. Construction plans for water and sewer installation shall be submitted to Union County Department of Public Works for review, with one (1) copy of the plans submitted to the Town for informational purposes only.

General

1. _____ Standard sheets shall be 36" wide x 24" high
2. _____ Each drawing shall have the following information in or near the title block: Street or project title, limits, horizontal and vertical graphic scales, original date, revisions date, drawing number, checked by and drawn by. Recommended placement is lower right-hand corner.
3. _____ The Engineer's seal shall be stamped in the general area of the title block and dated

Title/Cover Sheet

Title/Cover sheet shall include the following.

1. _____ Name, telephone number and address of owner, developer or responsible person
2. _____ Name of firm preparing the plans, address, license number, and phone number
3. _____ Sheet index for plan set

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4. _____ Vicinity/location map with a minimum scale of 1" = 100' that includes the town, town limits, roads, state routes, north arrow, and beginning and end of project
5. _____ Project layout with numbered, superimposed sheets

General Notes, Typical Sections, & Details

1. _____ General Notes provided in the Weddington Roadway Standards and street typical sections shall be shown at least once in the plan set
2. _____ Town of Weddington Standard Street typical sections for each type street proposed.
3. _____ Dimensions shown on pavement, subgrades, stabilization, shoulders, ditches, slopes, centerline, sidewalks, utility strips, curb and gutter, etc.
4. _____ Details are provided as necessary and required. Detail drawing shall be shown on plan for Cul-de-sac if applicable.
5. _____ Include Curb and Gutter detail (Standard or Valley Curb), and detail for transition from valley to standard curb, if applicable

Plan & Profile Sheets

1. _____ Graphic scales shall be shown on each sheet. Scale on plan and profile sheets shall be no greater than 1" = 40'; scale on profile view shall be 1" = 40' horizontally and 1" = 4' vertically
2. _____ Plans must be tied to the State Plane Coordinate System for all horizontal data and NAVD 88 for all vertical data. No assumed elevations may be used
3. _____ Beginning and ending stations are shown on each plan and profile sheet
4. _____ Match lines between sheets shall be shown (Ex: See Sheet 3 of 10)
5. _____ Existing centerline profile shall be shown for a minimum of 300 feet from the end of proposed streets, regardless of on-site or off-site
6. _____ Stations beginning 0+00 or 10+00 shall be labeled every 100' on plan view and profile view. Stations shall be labeled on plan view along surveyed road centerline for existing and proposed alignments
7. _____ Street design shall be in conformance with the *NCDOT Subdivision Roads Minimum Construction Standards*. Complete street alignment data shall be shown on plans and profile. This information shall include, but is not limited to the following.
 - a. _____ Horizontal alignment: tangents with bearing and line length, curve data with centerline radius, delta, tangent length, etc.

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- b. _____ Vertical alignment: tangents and curves with PVI, PVC, PVT station and elevation labeled, vertical curve length, K value, low point/high point station and elevation, etc.
 - c. _____ Intersection curb radius
8. _____ The following are shown on each plan and/or profile sheet
- a. _____ North arrow
 - b. _____ Benchmark elevations and locations
 - c. _____ Property lines with existing property irons clearly labeled
 - d. _____ Right-of-way lines shall be dimensioned and clearly labeled
 - e. _____ All existing and proposed easements shall be shown and dimensioned
 - f. _____ All tax parcel id numbers (pin) numbers, lot numbers, building numbers and property owners on existing property
 - g. _____ Houses, existing driveways, parking lots, fences and type
 - h. _____ Existing and proposed buildings shall be shown as necessary, especially when utility lines run close to these structures
 - i. _____ Street names and state road numbers if applicable
 - j. _____ Existing street widths shall be labeled and type designated: asphalt, concrete, gravel or dirt
 - k. _____ Approved street names, street widths (dimensioned back of curb to back of curb) and right-of-way width shall be labeled
 - l. _____ Existing and proposed curb and gutter, storm drainage pipes, drainage structures, driveway pipes and culverts with size, material, and flow direction shall be labeled and shown in plan and profile view. Existing and proposed drainage structures with elevation data (rim, grate, invert, etc.), structure number, and pipe slopes shall be labeled and shown in plan and profile view
 - m. _____ Existing and proposed channels with bottom width, depth, top width, material, and flow direction
 - n. _____ Existing and proposed riprap type and dimensions shall be shown on plan AND profile view

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- o. _____ Label the following including location and elevation(s) for existing and proposed ponds: dimensions, top of dam (length, width, and height), outlet structure and pipe(s) (rim/inlet elevations), all spillway elevations, and channels, etc.
- p. _____ Show and label drainage easement along the stream as required by Zoning Ordinance Section 58-520 "Setbacks from Streams", including professional engineer's certification statement when drainage areas are greater than 50 acres
- q. _____ Provide flood protection elevations for lots adjacent to streams as required Section 58-520
- r. _____ Provide construction specifications for stormwater management facilities
- s. _____ Existing and proposed sanitary sewer mains shall be labeled with pipe size, material, flow and flow direction in plan and profile view. Existing and proposed sanitary sewer structures with elevation data (rim, invert, etc.), structure number, and pipe slopes shall be labeled and shown in plan and profile view, or provided in a separate plan set.
- t. _____ Existing and proposed water mains, fire hydrants, and valves shall be shown in plan view, or provided in a separate plan set
- u. _____ Roadway grading plans shall show and label proposed storm drainage design on the same plan sheets
- v. _____ A 100-year flood plain elevation shall be shown on all plans and profiles where applicable. Overall site plan shall show base flood protection elevation on affected lots and limits of base flood.
- w. _____ Flood lines as shown on the FIRM shall be field located and shown on the plans.

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Supporting Calculations

1. _____ Supporting calculations for street and site stormwater drainage shall be in conformance with the *NCDOT Subdivision Roads Minimum Construction Standards* and the *NCDOT Guidelines for Drainage Studies and Hydraulic Design*.
2. _____ Stormwater management facilities shall be designed in conformance with all requirements of the *Town of Weddington Zoning Ordinance Section 58, Article XIII, Division 6 - "Drainage, Stormwater Management, and Wetland Protection"*.
3. _____ Supporting calculations shall be included with all plan submittals unless previously approved. Any plan revisions will require re-submittal of supporting calculations. Calculations shall include but are not limited to drainage area delineation maps, pipe sizing, culvert headwater depths, inlet capacity and spread; hydrologic and hydraulic analysis, stage-discharge or outlet rating curves and inflow and outflow hydrographs for storage facilities, analysis of potential downstream impact/effects of the project, and other supporting calculations as required.
4. _____ For existing onsite ponds, provide calculations showing that the existing ponds can safely pass the 50 year storm event with a minimum of 0.50 feet of freeboard at the dam. Calculations should assume full build-out of the drainage basin, and include the post-developed area that drains to the pond.

Permit Documentation for Other Reviewing Agencies

Submit plans to the following review agencies, and provide documentation of permits and approval from each.

1. _____ NCDOT for driveway connection to NCDOT maintained road
2. _____ NCDOT for internal roads review (if DOT is to accept maintenance of streets)
3. _____ NCDEQ Erosion Control permit
4. _____ NCDEQ Post Construction Storm Water permit
5. _____ Army Corps of Engineers Wetlands permit, or written verification that there is no disturbance to wetlands
6. _____ Union County Public Works for water and sewer extensions
7. _____ NC Dam Safety for dam classification evaluation (if applicable)
8. _____ Submit evidence of acquisition of all necessary legal agreements (e.g., easements, inspection and maintenance agreements, covenants, land trusts)
9. _____ Submit an Operation and Maintenance Agreement with Maintenance Plan for each proposed stormwater control structure. See Appendix for example Maintenance Agreement.

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AS-BUILT SURVEY AND PLANS

As-built plans for storm water drainage systems and storm water management facilities and practices shall be submitted to the Town prior to final acceptance of any construction project and release of the owner's performance bond.

As-Built Drawing and Calculations Submittal Checklist

As-Built drawings should meet the items listed for detailed design drawings, as well as:

1. _____ Remove or strike through "Proposed" from all manholes, pipes, etc.
2. _____ Verify all distances scale within five (5) feet along corrected stations shown on plan & profile view.
3. _____ Show and label all pipe inverts, sizes, slopes, pipe materials, and pipe locations.
4. _____ Show and label all grate elevations for grated yard inlets and throat opening dimensions and elevations for slab type yard inlets. Provide sufficient spot elevations for finish grade around inlet to confirm the required sump was provided.
5. _____ Provide sufficient spot elevations to confirm as-built pond contours and volumes, riser and inlet/outlet elevations, dam and spillway elevations, etc. in plan and/or profile view.
6. _____ Confirm a minimum of 2 feet of cover over pipe in public rights of way, or provide verification of Class IV reinforced concrete pipe installation.
7. _____ Submit digital as-built surveys of the storm drainage systems and storm water management facilities signed and sealed by a Land Surveyor licensed in North Carolina.
8. _____ Provide ditch/channel cross-sections plotted to scale, 100 foot maximum intervals, minimum of 2 per ditch with adequate spot elevations to verify the ditch section and slope as required by the approved subdivision plan.
9. _____ Submit sealed calculations using as-built survey data demonstrating that all systems and facilities meet NCDOT and Town requirements. The designer of the storm water management plans shall certify, under seal, that the as-built storm water systems, measures, controls, and devices are in compliance with the approved storm water management plans and in compliance with the requirements of the Town storm water ordinance.
10. _____ Show and label required stream buffers (Zoning Ordinance Section 58-520)

APPENDIX

DECLARATION OF COVENANTS
For Maintenance of Water Quality and/or Water Quantity Control Structures
Town of Weddington

THIS DECLARATION OF COVENANTS, made this _____ day of _____, 20____, by _____ hereinafter referred to as the “Developer” to and for the benefit of the Town of Weddington, hereinafter referred to as the “Town” and its successors and assigns.

WITNESSETH:

WHEREAS, the Town is authorized to ensure that properties are not unreasonably burdened with stormwater runoff from development or redevelopment activities within its jurisdiction as set forth in the Town Storm Water Management Ordinance; and

WHEREAS, the Developer is the owner of a certain tract or parcel of land more particularly described as: _____ (Project Name) being all or part of the land which it acquired by deed dated _____ from _____ grantors, and recorded with the Union County Register of Deeds Office, in Book _____ at Page _____ such property being hereinafter referred to as the “the property;” and

WHEREAS, the Developer desires to construct certain improvements on its property regulated by the Town Storm Water Management Ordinance; and

WHEREAS, in order to construct certain improvements on its property, the Developer desires to build and maintain at its expense, water quality and/or quantity control structures (collectively, the Water Control Structures) more particularly described and shown on plans titled _____ (Project Name); and

WHEREAS, the Town or its designee have reviewed and approved the plans associated with the Storm Water Management Plan subject to the execution of this agreement.

NOW THEREFORE, in consideration of the benefits received by the Developer as a result of approval by the Town or its designee of these plans, the Developer, with full authority to execute deeds, mortgages, other covenants, and all rights, title and interest in the property described above, does hereby covenant with the Town of Weddington as follows:

1. The Developer shall develop and attach to this “DECLARATION OF COVENANTS” for recording at the Union County Register of Deeds Office a “MAINTENANCE PLAN” that has been reviewed and approved by the Town or its designee. This Maintenance Plan shall describe the specific maintenance practices to be performed for the above referenced Water Control Structures and include a schedule for implementation of these practices. The Plan shall indicate that the Water Control Structures shall be inspected by a qualified

professional on a regular basis to ensure that they are operating properly. The Plan shall specify the name, mailing address and phone number of the party responsible for the fulfillment of the Maintenance Plan and describe the mechanism by which the funding for the performance of this maintenance shall be secured.

2. The Developer shall perpetually operate, maintain, and repair, at its sole expense, the above-referenced Water Control Structures in strict accordance with the attached Maintenance Plan approved by the Town or its designee.
3. The Developer shall, at its sole expense, make such changes or modifications to the Water Control Structures as may, at the discretion of the Town or its designee, be determined necessary to ensure that the facilities and systems are properly maintained and continue to operate as designed and approved.
4. The Town, its agents, employees and contractors shall have the perpetual right of entry to inspect, monitor, maintain, repair and reconstruct the Water Control Structures.
5. The Developer agrees that should it fail to correct any defects in the above described Water Control Structures within thirty (30) days from the issuance of written notice, or shall fail to operate, maintain, and repair the structures in accordance with the attached Maintenance Plan and with all applicable laws, regulations and rules or, in the event of an emergency as determined by the Town or its designee in its reasonable discretion, the Town or its designee is authorized to enter the property to make all repairs, and to perform all maintenance, construction and reconstruction as the Town or its designee deems necessary. The Town or its designee shall then recover from the Developer any and all costs the Town expends to maintain or repair the Water Control Structures or to correct any operational deficiencies. Failure to pay the Town or its designee all of its expended costs, after forty-five days written notice, shall constitute a breach of this agreement and interest will accrue on the amounts due at the rate of eight percent (8%) per annum. The Town shall have a lien against the property for such costs (plus interest, collection costs, and reasonable attorney's fees related thereto) in the nature of a mechanic's and materialman's lien. The Town or its designee shall thereafter be entitled to bring an action against the Developer to pay, or foreclose upon the lien hereby authorized by this agreement against the property, or both.
6. The Developer shall not obligate the Town to maintain or repair any of the Water Control Structures, and the Town shall not be liable to any person for the condition or operation of any of the Water Control Structures.
7. The Developer shall not in any way diminish, limit, or restrict the right of the Town to enforce any of its ordinances as authorized by law.
8. The Developer shall indemnify, save harmless and defend the Town and its Mayor, Councilmembers, employees, agents, contractors, and designees (collectively, the "Town Parties") from and against any and all claims, demands, suits, liabilities, losses, damages

and payments including attorney fees claimed or made by persons not parties to this Declaration against the Town or the Town Parties that are alleged or proven to result or arise from the Developer's construction, operation, or maintenance of the Water Control Structures.

9. The covenants contained herein shall run with the land and the Developer further agrees that whenever the property shall be held, sold and conveyed, it shall be subject to the covenants, stipulations, agreements and provisions of this Declaration, which shall apply to, bind and be obligatory upon the Developer hereto, its heirs, successors and assigns and shall bind all present and subsequent Developers of the property served by the Water Control Structures. Upon the sale and conveyance by the Developer of the Property (or any portion thereof) of its entire interest therein (including, without limitation, all developer and declarant rights with respect to this agreement and the development of the Property and all of Developer's obligations under this agreement), such Developer shall automatically be deemed to be released of all future obligations thereafter arising under this Declaration; and as to any future Developer or Owner of the Property, or any portion thereof, such future Developer shall automatically be subject and bound by the terms and provisions of this Declaration upon its acquisition of fee simple title to the Property (or portion thereof) in the same manner as the Developer of the Property as of the date hereof is presently bound under this Declaration.
10. The provisions of this Declaration shall be severable and if any phrase, clause, sentence or provisions is declared unconstitutional, or the applicability thereof to the Developer is held invalid, the remainder of this Declaration shall not be affected thereby.
11. In the event that the Town or its designee shall determine at its sole discretion at future time that the Water Control Structures are no longer required, then the Town or its designee shall at the request of the Developer execute a release of this Declaration of Covenants which the Developer shall record at its expenses.

IN WITNESS WHEREOF, the Developer has executed this Declaration of Covenants as of this _____ day of _____, 20_____.

FOR THE DEVELOPER(S)

(Signature)

(Printed Name and Title)

STATE OF _____:

COUNTY OF _____:

On this _____ day of _____, 20_____, before me, the undersigned officer, a Notary Public in and for the State and County aforesaid, personally appeared _____, who acknowledged himself to be _____, of _____, and he as such authorized to do so, executed the foregoing instrument for the purposes therein contained by signing his name as _____ for said _____.

WITNESS my hand and Notarial Seal

My commission expires _____

Notary Public

Seen and approved:

(Weddington Zoning Administrator)

Water Control Structure Maintenance Plan

(Project Name)

Town of Weddington

Date: _____, 20__

[This document must be recorded as an Addendum to the Operation & Maintenance Agreement]

- I. General Information** [Complete this table with each Water Control Structure that is planned within the development. Use the same naming system used on the approved plans, ie. Birkdale Phase I Bioretention 1]

BMP ID Name	Street with Block Number	Parcel Tax ID

- II. Site Location Map** (attached) [Attach a small site plan map coinciding with the table above to show the general location of each facility within the development.]

- III. Maintenance Annual Budget** [Provide a simple annual budget for maintenance and inspection and list the source of funding, ie. Developer, trust, HOA, etc. Edit chart below as necessary]

Budget for Maintenance / Inspections		
Expenses	Estimated Costs	Source
[Other]		
Total	\$	

- IV. Escrow Account Activity**

Provide documentation of maintenance escrow account activity. This may be provided in the form of a bank statement which includes the current balance, deposits and withdraws for the previous 12 months.

V. Maintenance Inspection Reports

Annual maintenance inspection reports shall be submitted to the Town Administrator. The first report shall be submitted one year following the final approval date of the Water Control Structure and each year thereafter on or before the approval anniversary date. Annual maintenance inspection reports shall be sealed by a registered North Carolina professional engineer or landscape architect. All maintenance activities and inspection reports shall be kept on file by the Developer or subsequent Home Owners Association and made available to the Town if so requested. These inspections shall be discontinued only if the Water Control Structures are accepted for maintenance by the applicable jurisdiction.

VI. Routine Maintenance Tasks and Schedule

Provide documentation of specific maintenance tasks and frequency for each type of Water Control Structure.

Maintenance / Inspection Schedule	
Expenses	