APPENDIX B

EXAMPLE STORMWATER MANAGEMENT STATEMENT

Stormwater Management Statement:

Project Name:	Autumn Ridge Subdivision
Project Address:	1432 Autumn Way Clayton, NC 27528
Developer:	Autumn Ridge, LLC
Mailing Address:	163 Ridgeway Road Clayton, NC 27528
Telephone:	(919) 555-1212
Facsimile:	(919) 555-1300
Email:	autumnridgellc@gmail.com

Existing Site:

The site is an existing 25 acre farm land that is currently being farmed with soybeans. The site is bordered along Hwy. 70 and is located within the Town of Clayton ETJ. The following are additional site information:

Watershed:	Part of Swift Creek watershed. Site is not located in a protected watershed district.
Flood:	Not in a flood zone per FEMA map 378002 3870 J, dated January 4, 2004.
Soils:	Contains sandy loam to loamy clay type soils.
Land Use:	The current land use is farming with cultivated rows, an open field and woods. Woods – 5 acres Open field – 10 acres Cultivated field – 10 acres

Proposed Development:

Autumn Ridge Subdivision is a proposed 30-lot single family subdivision with the following development improvements:

Houses:	Anticipated to range from 1,800 sf to max of 3,200 sf
Roads:	2,500 LF of 27′ back to back road with 2′ wide curb and gutter
Sidewalks:	2,425 LF of 5′ wide sidewalk throughout subdivision
Utilities:	Water and sewer to connect to existing Town utilities.
Open Space:	5 acres of open space provided as the recreational field and playground

The proposed subdivision is being developed with all utilities tying into the Town of Clayton's public utilities. The roads will also be turned over to the Town.

Impervious Area Calculations – Existing

The existing site has no impervious area.

Impervious Area Calculations – Proposed

The following are the proposed impervious areas:

Houses (Roof):	3,200 sf x 30 lots = 96,000 sf
Sidewalks:	2,425 ft x 5 ft = 12,125 sf
Roads:	2,500 ft x 27 ft = 67,500 sf
Total Impervious Area:	175,625 sf or 4.03 ac.
% Impervious:	16.12%

Stormwater Impacts from Proposed Development (Pre BMP)

The proposed site is located downstream of an existing subdivision containing 50 homes and is currently fully developed. A stormwater pond is in existence within the existing subdivision that controls the flow to pre development levels for the subdivision.

There are no current developments directly downstream of the proposed subdivision. As the site is greater than 15% impervious, we are required to provide both peak flow attenuation and nutrient management. The peak flow will be required to meet the Q25 storm levels per the Town of Clayton Stormwater Manual. The nitrogen loading will be required to be below 3.6 lbs/ac/yr. Flood levels will not be impacted downstream of the subject property based on the calculations provided for the 100 year storm.

Proposed Stormwater Management Facility

The proposed stormwater facility consists of a stormwater retention pond, a level spreader and vegetative filter at the outlet, all designed in accordance with NCDENR DWQ Stormwater BMP Design Manual. The proposed system will perform the following:

- Reduce the overall TSS from the site by approximately 85% (per design). In addition, the pond will also provide water quality by reducing nitrogen between the inflow and outflow water by upwards of 25%.
- The pond is designed to the 25 year, 24 hour storm with the check of the 100 year, 24 hour storm. This keeps the stormwater runoffs equal to predevelopment for up to the 25 year storm with little increase for the 100 year storm. The level spreader and vegetative filters will provide diffuse flow from the BMP system.
- The stormwater pond is located on the project to receive the water in a convenient location for the entire subdivision as well as the lowest elevation to help contain and help treat the majority of stormwater flow from the subdivision. All other areas will be graded as such to sheet flow back into the natural, undisturbed areas.
- There are only two main drainage ways within the parcel of land. Both are left undisturbed except for the connection from the BMP system.
- The capacity of the existing drainage ways have been checked and are within the operating parameters with no potential flooding occurring at the 100 year storm.

- The BMP system is designed as such that if the dam breaks, the water flow from the system will flow to the natural drainage systems within the parcel. No homes or development is between the BMP and the ditch. The existing drainage ways have been checked and will handle the flow from the BMP system even during failure.
- The BMP system and all other drainage points from the subdivision does not encroach onto other properties with new development or grading operations. All work is contained within the proposed subdivision boundary.

Cost for Stormwater Facility

The stormwater pond and the other items as part of the stormwater BMP system along with the proposed maintenance cost of the system is listed below:

Construction Cost:	
BMP System (includes retention pond, level spreader and vegetative filter) – includes labor	**$38,000**
Operation & Maintenance Costs:	
Standard Maintenance (per O&M Plan)	$1,200/yr.
Annual Inspection	$400/yr.
Total Yearly Estimate:	**$1,600**

The above chart shows an estimate for the cost of the BMP system, both for construction and for maintenance and upkeep. The estimate for the BMP construction was generated from a pond constructed of similar size. The operation and maintenance cost is obtained for a BMP system maintenance only and does not include outlying areas, such as drainage pipes and flows upstream and downstream of the system.