



Charlotte Storm Water  
600 East Fourth Street  
Charlotte, N C 28202-2844  
OFFC: 704 . 336 . RAIN  
FAX: 704 . 336 . 6586

## *Rezoning Petition Review*

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**To:** Keith MacVean, CMPC

**From:** Doug Lozner / Jeff Hieronymus / Danée McGee

**Date of Review:** May 11, 2007

**Rezoning Petition #:** 07-84

**Existing Zoning:** R-3

**Proposed Zoning:** I-1

**Location of Property:** Approximately 1.90 acres located on the south side of Shopton Road, east of Sandy Porter Road.

**Downstream Complaints and analysis:** Onsite and downstream complaints consist of flooding and erosion. This site drains to a stream listed as impaired by the NC Division of Water Quality.

**Source citation:** A portion of the water quantity and quality comments reference information gained from the "Post-Construction Ordinance Stakeholders' Group Final Report". This report reflects consensus reached during the Council-approved process to include community input on the proposed ordinance language. Other comments, including the environmental permit, stream buffer and some detention requirements reflect existing regulations and ordinances.

### **Recommendations**

**Concerning Storm Water:** **Charlotte Storm Water Services recommends that this petition be revised to a CD development to include the following notes on the petition:**

#### Storm Water Quantity Control

The petitioner shall tie-in to the existing storm water system(s). The petitioner shall have the receiving drainage system(s) analyzed to ensure that it will not be taken out of standard due to the development. If it is found that development will cause the storm drainage system(s) to be taken out of standard, the petitioner shall provide alternate methods to prevent this from occurring.

Storm Water Quality Treatment – Source: *BMP recommendation taken from "Post-Construction Ordinance Stakeholders' Group Final Report"*

For projects with defined watersheds greater than 24% built-upon area, construct water quality best management practices (BMPs) to achieve 85% Total Suspended Solid (TSS) removal for the entire post-development runoff volume for the runoff generated from the first 1-inch of rainfall. BMPs must be designed and constructed in accordance with the N.C. Department of Environment and Natural Resources (NCDENR) Best Management Practices Manual, April 1999, Section 4.0 (Design Standards shall be met according to the City of Charlotte Best Management Practices Manual, when available). Use of Low Impact Development (LID) techniques is optional.

Volume and Peak Control – Source: *Volume Control and Peak Control Downstream Analysis taken from “Post-Construction Ordinance Stakeholders’ Group Final Report”.*

For projects with defined watersheds greater than 24% built-upon area, control the entire volume for the 1-year, 24-hour storm. Runoff volume drawdown time shall be a minimum of 24 hours, but not more than 120 hours.

For residential projects with greater than 24% BUA, control the peak to match the predevelopment runoff rates for the 10-year and 25-year, 6-hour storms or perform a downstream analysis to determine whether peak control is needed, and if so, for what level of storm frequency. “Residential” shall be defined as “A development containing dwelling units with open yards on at least two sides where land is sold with each dwelling unit.”

For commercial projects with greater than 24% BUA, control the peak to match the predevelopment runoff rates for the 10-yr, 6-hr storm and perform a downstream flood analysis to determine whether additional peak control is needed and if so, for what level of storm frequency, or if a downstream analysis is not performed, control the peak for the 10-yr and 25-yr, 6-hour storms.

For commercial projects with less than or equal to 24% BUA, but greater than one acre of disturbed area, control the peak to match the predevelopment runoff rates for the 2 and 10-yr, 6-hr storm.