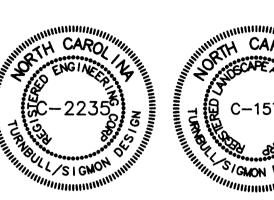


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### Quail Valley

APPROVED BY CITY COUNCIL. OCT 1 7 2007

CITY OF CHARLOTTE NORTH CAROLINA

# Rezoning Site Plan Petition #2007-114 For Public Hearing

PROJECT NUMBER: 06-025

DRAWN BY: SFC, AKK

DESIGNED BY: SRT

ISSUE DATE: 6/20/07

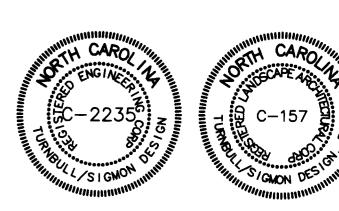
10-15-07 AKK Revisions as per Staff comments
2 9-21-07 AKK Revisions as per Staff comments
3 8-20-07 AKK Revisions as per Staff comments
NO. DATE: BY: REVISIONS:

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CITY OF CHARLOTTE NORTH CAROLINA

### Stormwater Management Plan

# Petition #2007-114 For Public Hearing

| PROJECT NU   | MBER: 06-025 |
|--------------|--------------|
| DRAWN BY:    | ВСМ          |
| DESIGNED BY: | ВСМ          |
| ISSUE DATE:  | 10/2/07      |
|              |              |

ISSUE DATE: 10/2/07

NO. DATE: BY: REVISIONS:

Proprietary BMP Fringe Area: Proprietary BMP Proposed Treatment Area 3: 5.5 Acres Proposed Treatment Proprietary BMP Area 1: 8.1 Acres Proposed Treatment Area 2: 6.1 Acres Underground Storage **Underground Storage** 

### Storm Water Quantity Control

he petitioner shall tie-in to the existing storm water system(s). The petitioner hall have the receiving drainage system(s) analyzed, to and including Quail ollow Road, to ensure that it will not be taken out of standard due to the evelopment. If it is found that development will cause the storm drainage ystem(s) to be taken out of standard, the petitioner shall provide alternate ethods to prevent this from occurring.

### Storm Water Quality Control

- A. 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 Mecklenburg County BMP Design Manual, July 2007 or North Carolina Division of Water Quality Storm Water Best Management Practices Manual, July 2007. (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. Unapproved methods shall follow the requirements indicated in "B" below.
- B. As available, the use of pre-manufactured devices to be used shall be approved by the City of Charlotte Storm Water Services (CSWS) prior to being incorporated in to the project design and must be incorporated into the CSWS test pilot BMP study program. The petitioner agrees to purchase, operate and maintain the devices approved by CSWS, and enter a monitoring agreement with CSWS. Some of the study program criteria are, but not limited to:

- devices (BMPs) will be utilized to meet the storm water quality requirements within the project, the design of the project shall utilize no more than one (1) proprietary device of a particular brand name within the project and shall instead utilize different devices of other brand names (i.e. one of Brand Name X, one of Brand Name Y, one of Brand Name Z, etc.) The selection of various brand names of BMPs must be reviewed and approved by CSWS.
- 2) Pre-manufactured storm water treatment devices (BMPs) in treatment areas #1 and #2 shall utilize filter technology as approved by CSWS. The BMPs must be appropriately designed and sized to treat the entire post-development runoff volume for the runoff generated from the first 1-inch of rainfall for each respective treatment area. Runoff volume drawdown time shall be 24 hours.
- Pre-manufactured storm water treatment devices (BMPs) in treatment area #3 shall utilize a hydrodynamic separation chamber as approved by CSWS. The BMP must be appropriately designed and sized to treat the water quality runoff peak flow rate generated from treatment area #3 from the 1-year, 6-hour storm for Charlotte, NC. The runoff flow rate for this design storm shall be derived utilizing a TR-55 based modeling program to create a type II center weighted storm with the appropriate local rainfall intensities.

- All pre-manufactured storm water treatment devices (BMPs) shall be designed to include monitoring access manholes and sampling conduits within the storm drainage system and project design that are located independently and immediately upstream and downstream of each BMP. Access manhole and sampling conduit locations shall be reviewed and approved by CSWS.
- 4. The Petitioner shall grant a temporary monitoring and maintenance easement to the City of Charlotte to allow for access to the treatment devices (BMPs) by the City.
- The Petitioner shall provide proper operation and maintenance (O&M) of all storm water treatment devices within the project in perpetuity, and the O&M agreement for the devices shall be tied to the deed of the land in case of a future land sale.

#### **Additional Notes:**

The following agencies must be contacted prior to construction regarding wetland and water quality permits:

Section 401 Permit NCDEHNIR - Raleigh Office (919) 733-1786 Section 404 Permit US Army Corps of Engineers (704) 271-4854

### **Development Data**

Site Area:

Existing Impervious Area:

Proposed Impervious Area:

Net Impervious Incease:

33.7 ac.

12.1 ac (35.9%)

15.7 ac (46.5%)

3.6 ac (increase)

### **Water Quality Summary**

| Proposed Treatment Area (Total):     | 19.7 ac.<br>48.5% |
|--------------------------------------|-------------------|
| Proposed Treatment Area Impervious % |                   |
| Proposed Impervious Area Treated     | 9.6 ac            |