

Engineering has reviewed the plans for the AAA Carwash project submitted April 9, 2018 and have the following comments:

#### **Stormwater Management Permit Application Form**

1. **This is just a placeholder:** III. Contact Information; Line Item 2: Items 2 and 2a were completed as if AAA Carolinas, Inc. were the property owners. If AAA Carolinas, Inc. is the property owner then the box under 1(b) must be checked and 2 and @a can be left blank.
2. **This is just a placeholder:** VIII. Applicant's Certification: Please fully execute this section of the application. David Parsons with AAA should complete this section and get it notarized.
3. **This is just a placeholder:** Please submit a fully executed hard copy of the application to Engineering.

#### **Stormwater Management Report**

##### **General**

4. *In order to receive 100% pervious credit for the pervious pavement and pervious sidewalks, the permeable pavement design must meet all of the MDCs outlined in the NCDEQ Stormwater Design Manual. Please provide all required information to demonstrate compliance with the MDCs for Permeable Pavement in order to receive credit. I need the calculation in MDC 5 (Aggregate Depth for the Design Storm (Dwq)). Please also provide Equation 2: Drawdown Time under MDC 8. Note the post-construction testing requirement in MDC 13.*
5. *Please refer to the NCDEQ Stormwater Design Manual for compliance with the MDCs associated with the Infiltration System as well. A drawdown time calculation needs to be provided.*
6. **This is just a placeholder:** Provide an O&M Agreement for the Permeable Pavement.

##### **IV. Underground Detention Design and Results**

7. The Pre-development analysis used the entirety of the site for determination of the pre-development runoff rates. The post-development analysis does not. Areas 1 and 2 were not used to determine the post-development runoff rates. It would appear that the pre/post requirements for the 10 and 25-year design storm events would not be met if Areas 1 and 2 were added to the analysis. However, because the runoff during the 10 and 25 year events from these two areas is negligible the pre/post requirements will be considered met.

##### **Supplement**

8. See attachment for revisions.

##### **Plans**

9. Site Plan: Please provide an observation well for the pervious concrete as required by Permeable Pavement MDC 9. Add an observation well detail to the plan set.
10. Site Details (1 of 2): Please specify the type of washed stone in the Pervious Concrete Pavement Section. #57 washed stone is commonly used.
11. SWPP Phase I & 2: The construction sequence should address the installation and protection of the permeable pavement per the construction section found in the NCDEQ Stormwater Design Manual. The construction sequence should provide steps to prevent subgrade compaction and clogging of the pavement surface during construction of the project.

Please submit revised plan sheets, the stormwater report, application, supplement, calculations and any other supporting documentation to Engineering for additional review. Please call or email if there are any questions. Thank you.