

StorageMax Zebulon NC

Response to Wake County Comments

- 1 - I.7 – incorrect watershed listed I.14 – Provide zone I.15 – incorrect map number listed I.16 – incorrect effective date

Response: Corrected.

- 3 - B.1 – Legal name should be listed as shown on the NC Secretary of State website. B.2.a – complete this section with a Wake County designated E. Allen Massey is not listed as a member manager on the NCSoS website; provide documentation that he has authorization to sign as Financial Responsible Person,

Response: Due to the creation of the Shepard School LLC was formed by the inclusion of other LLCs. Included with the submittal is documentation noting Allen Massey is a member manager within the corporate structure of the Shepard School LLC.

- 4- Engineering Approval: Copy of approval notification for projects in a municipality's zoning jurisdiction Provide Town of Zebulon approval.

Response: Noted

- b. 401/404 Documentation (Buffer determination letters, PCN application, comments, and approval) Documentation of wetland delineations. Provide buffer determination letter

Response: Noted

- c. NCDOT Approval (Temporary Construction Entrances, Encroachment Agreements, etc.) Provide NCDOT approval d. Encroachment agreement(s) completed, signed and notarized for all off-site construction.

Response: Noted

- 9- Provide Stormwater Tool in excel and as pdf. The input information should match.

Response: Tool included with resubmittal.

- 10- Drainage Area Maps with stormwater discharge points and Tc flow paths (existing/post construction/post BMP) Provide Tc flow paths for drainage areas. Drainage areas should include offsite drainage to site. Also, so drainage areas that are not going to SCM. Drainage area information should match Stormwater Design Tool.

Response: Drainage maps modified.

- 11- Drainage Area Map showing drainage areas to erosion control devices (can delineate on plan sheets) Include the drainage area to silt fence.

Response: Additional basins added to the EC plans.

- 12- Sediment basin design (See website for Wake County Design Criteria) Must meet Wake County Design Criteria. Skimmer basin should be sized based on drainage area, not disturbed area. Dewatering time does not meet the 3-5 days requirement.

Response: Basins adjusted and size are based on drainage are and disturbed area.

- b. Ditches, swales, and channels: Q10/V10. Tractive force (shear stress), capacity and geometry Is the DA for TD2 accounting for the drainage from TD1? Provide the tractive force for diversion ditches to confirm correct liner is selected. How are the diversion ditches transitioning into the basin; with slope drains, riprap, etc?

Response: Channel design noted allows for Q10 frequency.

- Show on plans. Is the drainage ditch along Shepard School Rd being regraded? Provide calculations for swale near A2

Response: Swale noted for Shepard School and swale at A2 removed.

- c. Dissipaters: Q10 velocities, stone size and dimensions Provide for all dissipaters and ensure labels match plans.

Response: Adjusted.

- d. Velocity calculations for stormwater runoff at points of discharge resulting from a 10-year storm after development were not provided or do not comply Provide for B3.

Response: Calculations for the pipe discharge noted in the stormwater report.

- e. Support data for all stormwater practice designs, such as inflow/outflow rates, stage/storage data, hydrographs, outlet designs, infiltration rates, water elevations, design output, summary, etc.

Response: Included in the report.

- Provide calculations (HGL) for drainage pipes, will need to confirm to table on C7. Provide calcs for the 1", 1-yr, 10-yr and 100-yr storm events. The elevations should match SCM details sheet. Ensure calculations match what is shown on construction plans and meet MDC for bioretention cell. Provide anti-float calculations for riser.

Response: Hydraflow and HGL calculations noted

- 14- Table with impervious calculations - existing and proposed impervious surfaces: roads, well lots, recreation sites, single family residences, etc. (consistent with the Municipal Stormwater Design Tool inputs) Ensure when the Stormwater Tool is provided the impervious surface information matches.

Response: Noted

- Utilities: community water and sewer, plan/profiles, easements and sediment controls Should confirm with utility company about impacts to easement. There may be a concern with the retaining wall, grading and location of outlet pipes.

Response: Determing who owns the noted easement.

- Ensure the required setbacks and separations have been met between stormwater, and septic and water.

Response: Noted.

- stormwater Network: inlets, culverts, swales, ditches, channels and drainage easements Confirm elevation of stormwater structures. Recommend avoiding having inlets at the corner of parking spaces; typically have issues over time. Label swales and ditches.

Response: Modified.

- TEMPORARY SEDIMENT CONTROLS: locations and dimensions of gravel entrances, diversion ditches, silt fence, sediment basins, inlet protection, etc. Ensure silt fence outlets are at a minimum every 200 ft. Drainage to silt fence is ¼ acre per 100 ft. The concrete washout pit should be outside of the ROW.

Response: Modified.

- DETAILED COMMENTS REGARDING PERMANENT SEDIMENT CONTROLS: How is drainage being address between retaining wall and building.

Response: Roof drainage routed to nearby stormwater structures the area along the wall will sheet flow away from the building.

- Location and requirements for stockpiles (see website for Stockpile Requirements) Show stockpile and material laydown area if applicable to project r. Wake County Construction Sequence (Provide project specific details as needed) Ensure ESC Construction Sequence coincide to what is shown on the plan sheets. s.

Response: Stockpile area shown.

- Wake County Construction Details Ensure the most current Wake County and Town of Zebulon details are used

Response: Most current details are beilg used based on what was available on the County's web site.

- Show all Riparian Buffers (Neuse: [15A NCAC 2B .0714]) label buffer zones

Response: Buffers shown on the plan set.

- PERMANENT STORMWATER MANAGEMENT STRUCTURES: locations and types of all proposed stormwater management structures (grass swale, wet/dry detention basin, filtering/infiltration basin, bioretention, etc.) Label as bioretention y.

Response: Bioretention labeled.

- DETAILED COMMENTS REGARDING PERMANENT STORMWATER MANAGEMENT: The bioretention cell should meet the MDC. The SHWT should be at least 2 ft from the lowest point of the cell. Recommend having an emergency spillway to protect from larger storm events.

Response: Bioretention modified to meet MDC. The two foot separation is noted and reviewed in the storm water report.

- z. Proposed stormwater easements, access lanes and backwater easements. Provide and label minimum 20 ft. Access easement and 10 ft.

Response: Easements added.

- Maintenance easement from toe of stormwater pond embankment. How is the SCM accessible with the retaining wall and fencing? Is there a gate? Ensure outfall and dissipater are included in the easement. Clearly label the width of the private easement.

Response: There is a gate that can be used for access.

- 19-Downstream Impact Analysis must be completed using the 10% rule. You'll need to complete for each outfall from the site, each junction between the outfalls and the 10% point (the point where the site area = 10% of the total drainage area to that point). Do you know what the overall watershed acreage is? Is drainage to the stream on the property included in the watershed boundary? It may change what is need for the analysis ie the number of junction points. You would be required to provide the 10-year Pre- and Post-Q analysis with a summary table and show each point location on the map

Response: DIA adjusted.

- **General Comments:** Incorrect checklists were submitted. You should be using the Municipal Construction Drawing Submittal Checklist.

Response: I understand I used the Rolesville, Wendell, Zebulon Watershed Management Construction Plan Submittal Checklist with the intitial submittal.

- Is the disturbed acreage on application and FRO form based on the site only or for the whole project?

Response: The 6.57 is total and includes ROW.

- Sheet EC1 has a total of 6.57 ac versus the 5.93 for the site? Correct on documents and pay the difference in fee.

Response: The 6.57 is total and includes ROW.

- Stormwater Management Analysis: Provide the correct watershed name and FEMA effective date. Please review section 151.06 and 151.07 of the Town of Zebulon Code of Ordinance. The most recent edition of the NC Stormwater Design Manual shall be used, and the more restrictive or higher standards applies.

Response: Modified.

- Erosion Control Calculations: Provide the correct watershed name and FEMA effective date. The erosion control measures will have to meet Wake County standards. Provide calculations for all dissipaters.

Response: Dissipater calculations are in the storm water report.

- Construction Plan Comments: Ensure the correct jurisdiction is listed; Town of Zebulon instead of Rolesville.

Response: Revised

- Is there are reason the curb and gutter stop short on Shepard School Rd.? Will need approval from NCDOT for working in the public ROW.

Response: The road tie-in is consistent with the project currently underway with the Town of Zebulon.

- What is the FFE for Building #2?

Response: Noted on the plans

- Correct Environmental Consultant; see contact information listed below.

Response: Corrected

- Erosion Control Plan – General Note #1 – where are the wattles going to be used?

Response: Noted on the plans

- Is the riser and pipe for the bioretention cell shown during EC Phase 2? Also, how is the stormwater from the drainage pipe getting to the skimmer basin during Ph 2?

- **Response: BMP Riser in phase 3 activities. Swale added for discharge from storm pipe to sediment basin.**

- Review the media mix on D3, there appears to be a conflict. Also, the MDC recommends the max % of coarse sand be 85%. To ensure that one cleanout pipe ever 1000 sq ft of surface area is provide, list the number and location of cleanouts. Forebay area shown on detail, but not shown anywhere else in plans or reflected in calculations. Provide elevation of the 1" storm event on bioretention profile. Recommend providing an emergency spillway for larger storm events. It appears that storms great than 10-yr will overtop. Also, the information in plans should match calculations.

Response: Bioretention device modified to reflect comments