DiPrete Engineering

September 12, 2023

Mark Conboy, P.E.
South Kingstown Dept. of Public Services
509 Commodore Perry Highway
Wakefield, RI 02879

RE: Fieldstone Farms
Old North Road & Stony Fort Road
Project #: 0161-184

Dear Mr. Conboy:

DiPrete Engineering has received your comments dated November 10, 2022. We have reviewed these comments and offer the following in response. The original comments are provided in italics with responses in bold.

1. *SMR Page 3 – Soil types ScA and SdB were listed within the report as Hydrologic Group B. These soils should be analyzed and modeled as Hydrologic Group C.*

   The stormwater report and model have been updated to report ScA and SdB as HSG C.

2. *SMR Page 68 – Drainage Pipe Analysis is incomplete. A watershed subcatchment map and Q values are needed for review.*

   A watershed subcatchment map has been added to the stormwater report. The pipe analysis has been updated to include Q captured values and have been added to the stormwater report.

3. *The locations of the proposed culverts along Stony Fort Road should be moved further away from the edge of pavement and must be sized accordingly.*

   The proposed culverts along Stony Fort Road are proposed to be in line with the existing swale. The sizes of the proposed culverts have been verified in HydroCAD and reported in the Drainage Network Hydraulic Calculations Section of the Stormwater Report. All pipes safely convey the 25-year storm event. During the 100-year storm event, only the culvert passing under Paisley Way will overtop the road and flow overland to the downstream side of the swale. The location of the existing roadside swale is dictating the location for the proposed culverts.

4. *The construction of subdrains within the proposed right-of-way area of Paisley Way are not acceptable. Subdrains may be installed outside of the proposed roadway right-of-way area. The construction of Paisley Way should include replacing any unsuitable sub-base material within the proposed pavement area as a measure to help prevent frost heaving from occurring.*

   Subdrains along Paisley Way have been removed. The roadway has been raised at the entrance to ensure separation is maintained between the groundwater table and the bottom

of the roadway subbase material. Due to the elevation of the existing roadway and the slope requirements at the entrance, separation between the groundwater table and the bottom of the roadway subbase material has been maintained at the entrance to the maximum extent practicable. Groundwater subsidence is expected to occur where underground utilities are installed. A note has been added to the Road A Construction Cross Section Detail regarding replacing any unsuitable subbase material.

5. *The Double Catch basin Grate detail on Sheet 16 shows a 4" high frame. 8" high frames are required.*

   The double catch basin detail with a 4" high frame has been replaced with the RIDOT Standard (6.3.2) detail, which has an 8" high frame.

6. *Detention Basin Overflow Weir #3 should contain a concrete curb weir structure.*

   Detention Basin Overflow weir has been modified to have a concrete curb weir structure. Since the soils have been updated to be HSG C, it no longer functions solely as an emergency overflow weir.

7. *The proposed basement elevations of several dwellings are very close to the seasonal high water table elevation. Potential wet basements are of concern.*

   All basement elevations have been checked with the groundwater table elevation and have been modified accordingly so there is at least 1' of separation. A table has been added to Sheet 13 for reference.

8. *The proposed house lots along Old North Road are designed with bioretention / infiltration areas near the proposed dwellings. This may contribute to wet basement concerns.*

   All bioretention/infiltration areas are at least 15 feet away from the proposed foundations. These separations meet the RISDISM requirements and have been approved by RIDEM.

9. *The proposed grading of Lots 21 to 26 creates a swale across the back yards of said lots, thereby directing concentrated runoff towards the proposed homes and OWTS components. The yard grading should be modified so that runoff sheets away from houses and adjacent properties.*

   The proposed grading behind Lot 21 through Lot 26 has been modified so that the water is directed away from the back yards and the OWTS components.

10. *Lots 15 and 16 should also have BMP designs for the treatment of runoff from the proposed driveway areas.*

    Lots 15 and 16 now have BMP designs for the treatment of runoff from the driveway areas. Lot 15 has a QPA provided at the front of the house. Lot 16 has been provided a stone trench along the length of the driveway.

11. *The Bioretention soil mix specifications should be shown on the site plans. The Bioretention Area – Cross Section on Sheet 15 simply states "See Engineering Plans for Soil Characteristics".*

    The Bioretention detail on sheet 15 has been updated to include the soil specifications.

12. *The Stormwater System Owner / Party Responsible for O&M section of the Stormwater System O&M Plan relies on the current property owner to provide the new owner with a copy of the O&M Plan. How does this get enforced? The O&M Plan should also be recorded in South Kingstown Land Evidence records, along with an updated and signed copy of the Stormwater Facility Maintenance Agreement.*

    The project attorney will work with the Town Solicitor to develop language and/or acceptable methods to ensure proper management of the long-term drainage O&M. The subdivision will be consistent with other projects within the Town of South Kingstown relating to enforcement of O&M of drainage systems.

Please, feel free to contact me if you have any further questions regarding this matter.

Sincerely,
DiPrete Engineering Associates, Inc.

Eric Prive, PE
Project Manager
eprive@diprete-eng.com