

Town of

P.O. Drawer 519

Town Engineer

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East Lyme

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To: Gary Goeschel II, Director of Planning & Wetlands Enforcement Officer

From: Alex Klose P.E., Town Engineer

Date: September 23, 2021

Re: Nottingham Hills Subdivision Phase V
121 Upper Pattagansett Road
Planning Commission Application
Wetlands Application for Permit

Information submitted by the Applicant which was considered in this review:

- Planning Commission Application for Subdivision / Re-Subdivision, Subdivision Modification, POCD and Subdivision Regulation Amendment
- Design Report, Nottingham Hills Subdivision Phase 5, 121 Upper Pattagansett Road, East Lyme, Connecticut, August 4, 2021
- Application for Permit East Lyme Inland Wetlands Agency
- Wetland Report, 121 Upper Pattagansett Road, East Lyme, Connecticut, Prepared by: New England Environmental Services
- Drainage Report, Stormwater Mitigation Plan, Property Located at: 121 Upper Pattagansett Road, East Lyme, Connecticut, September 8, 2021, Prepared by: May Engineering, LLC
- Pattagansett Preserve at Nottingham Hills (Also Known as Nottingham Hills Subdivision Phase 5) Plan Set, August 3, 2021, Prepared by: Gerwick – Merren L.L.C.

This office has reviewed the above referenced information and provides the following comments:

1. Site lines should be provided to ensure visibility at the proposed drives.
2. Per the Town of East Lyme Subdivision Regulations Section 6-8-2 calculations should be provided for the 2, 5, 10, 25, 50 & 100-year storms. The applicant has only provided an analysis of the 2, 10, 25 & 100-year storms.
3. The Drainage Report, Stormwater Mitigation Plan is missing hydrograph information for some nodes. Each node including subcatchment and pond nodes should be provided to conduct a thorough review of the information presented in the summary tables.
4. The Time of Concentration calculations used for the TR-20 modeling in the Drainage Report, Stormwater Mitigation Plan should be provided.

5. Per the Town of East Lyme Subdivision Regulations Section 6-8-2 (B) a volume comparison from existing to proposed conditions should be provided. The applicant has only provided a comparison summary for the reduction in peak flow rate. I note that it appears that the proposed volume at the outfall from drainage area A is greater in the proposed condition. The applicant should clarify this.
6. In the Drainage Report, Stormwater Mitigation Plan the applicant states that an infiltration rate of 0.5 ft/hr was used in the analysis for the proposed stormwater Best Management Practices (BMPs). The 2004 Connecticut Stormwater Quality Manual, Volume II, Chapter 8, Table 8-3 states that a maximum infiltration rate of 5.0 in/hr should be used, and pretreatment is required for infiltration practices designed with rates greater than 3.0 in/hr. The applicant also states that a percolation test verifies the infiltration rate used, this is not an acceptable testing measure to evaluate stormwater BMP infiltration rates. Acceptable infiltration testing parameters are described in the Town of East Lyme Subdivision Regulations Section 6-8-5.
7. Test pit 7-2 was referenced in the design of the proposed storm water biofilter detention pond, however this test pit was performed just upgradient to the BMP and, from the data provided, appears to only reach a depth of elevation ± 79.5 , where the bottom of the pond is proposed at elevation ± 80 . Testing to at least 3 feet below the proposed bottom of pond to understand seasonal high groundwater characteristics or ledge (if any) should be conducting in the immediate vicinity of the BMP.
8. The primary stormwater BMP pond is referred to as different things throughout the report and plans, including both a biofilter detention pond and retention pond. The intended function of the pond should be clarified and uniform throughout. A detail of how the BMP will be landscaped should be provided.
9. Sizing calculations for the driveway treatment swale BMPs should be provided.
10. I note that the reserve septic leaching areas are upgradient of the driveway swale BMPs. I recommend Ledge Light Health District reviewer provide comment on this proximity.
11. The plans generally are difficult to read. Proposed and additional existing contour labels should be provided, more callouts to prominent site features should be provided and text height in plans and profiles should be revised and uniform.
12. The scale on the Bioretention Pond Rain Garden Layout plan in the Stormwater Mitigation Plan does not appear to be correct, please clarify.
13. A detail should be provided for the proposed outlet control structure for the biofilter BMP.
14. Calculations for the sizing of the rip-rap scour protection from the biofilter BMP outlet should be provided.
15. Additional detail on the construction of the berm on the outlet (southwestern) side of the biofilter BMP should be provided. If this berm is to be constructed with fill, an impervious core may need to be considered.