



February 23, 2021

Town of North Haven
Inland Wetlands Commission
Memorial Town Hall
18 Church St.
North Haven, Conn.06473

RE: Inland Wetlands Application # I20-06
The Slate School-5100 Ridge Road-Revised Plan and Drainage Report

Dear Commission Members:

Loureiro has conducted a review of following documents as they pertain to Inland Wetlands application #I20-06:

1. Drainage report entitled, “Drainage Report, Slate Upper School, 5100 Ridge Road, North Haven, Connecticut,” last revised February 17, 2021, prepared by Milone & MacBroom, Inc.
2. Plan set entitled, “Slate Upper School, 5100 Ridge Road, North Haven, Connecticut, Regulatory Submission,” last revised February 17, 2021, prepared by Milone & MacBroom, Inc.

Based on this review, we understand that proposed stormwater management Best Management Practices (BMPs) include maintaining drainage patterns, catch basins with 2’ sumps, a hydrodynamic separator, an isolator row integrated within an underground stormwater management system, a green roof for a portion of the new building and a surface detention basin with a sediment forebay. The proposed development will have two drainage systems that collect runoff from the site and discharge to a level spreader located approximately 30-40 feet east of the wetland limit.

With respect to the overall impact the stormwater management improvements may have on the wetlands, we offer the following comments and observations:

1. The Town Engineer should conduct a full review of the substantially revised stormwater management improvements and drainage report for consistency between the two documents and compliance with applicable requirements.
2. There are no details or call-outs for the proposed green roof stormwater system referenced in the drainage report.
3. A discrepancy exists in the Milone & MacBroom, Inc. (MMI) report with regard to impervious coverage. Page 75 of the drainage report indicates an existing impervious area

Loureiro Engineering Associates, Inc.

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of 0.401 acres and a proposed impervious area of 0.993 acres. Pages 64 of 91 through 67 of 91 of the report indicate a total existing impervious surface area of 0.62 acres for the existing watershed (EW WS10) and a total proposed impervious surface area of 1.21 ac for proposed watersheds (PR WS10, PR WS11, PR WS12). Also, the Water Quality Volume calculations on sheets 49 of 91 and 51 of 91 indicate a proposed impervious surface area of 1.01 acres for PR WS11 and PR WS12.

4. Inconsistencies appear to exist in the design and modeling of the surface basin. Per the plans, the bottom of the basin elevation should be elevation 153.0 with a low flow orifice invert elevation of 156.2. This would be consistent with the Water Quality Volume calculation on sheet 50 of 91 of the drainage report which indicates a storage capacity of 0.097 ac-ft between the bottom of the basin (elevation 153.0) and the low flow orifice invert elevation of 156.2. However, page 86 of 91 of the drainage report indicates a bottom basin elevation of 156.2 which is supported by page 76 of 91 of the report which indicates the water surface elevation (WSE) of the surface basin at the 1-year storm event is at elevation 157.0. If the intention is to have storage volume below the low-flow orifice for detention of the Water Quality Volume, it should indicate how the water will discharge from the basin and at what rate as it currently does not have any provisions to drain the basin.

Given the proper design and functioning of the stormwater management system is a key pillar in the applicant's representation of no wetland impact, these matters should be fully addressed. We appreciate the opportunity to present the neighbors' concerns to you and trust that you will give them the consideration that they deserve.

Sincerely,

LOUREIRO ENGINEERING ASSOCIATES, INC.



Clinton S. Brown II PE AICP
Director

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Att'y John Parise w/att.
George Logan, REMA