



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

March 12, 2018

Newburyport Planning Board
City Hall
60 Pleasant Street
Newburyport, MA 01950

Attn: Kate Newhall-Smith
City Planner

Subject: Lot 4B Donahue Court
Response to Engineering Review Comments

Dear Kate:

In response to design review comments provided by Christiansen and Sergi, and dated March 1, 2018 we have prepared the following responses. Please note we have included the design review comments and our responses, to assist in the review of the proposed Site Plan project.

1. Subcatchments S100, S101, and S104 should be revised or more detail provided to ensure the runoff is directed as being shown. As shown, a portion of the pool may drain towards the stone drain along with some of the yard area. A portion of the driveway appears to not be directed into basin 1 as calculated and may not be collected at all.

Response: Slope arrows have been added to the pool area showing any runoff flowing towards the pool. See response #3 below regarding subcatchment S104. Slope arrows have been added to the driveway showing that the driveway slopes towards Donahue Lane and into the basin as designed.

2. A large area is allowed to flow overland and flow between the proposed wall and the rear of the house. A foundation drain should be proposed to ensure the runoff is removed from the foundation.

Response: A proposed foundation drain has been added to the south side of the dwelling.

3. The stone drain should be revised. The current grading shows a swale across the stone drain which is covered by topsoil. Runoff will not be able to enter the drain as proposed. The area should be regraded to show a low point over the stone drain to allow water to collect. An area drain should be proposed within the low spot and laterals of perforated pipe should be run within the stone drain to ensure the runoff is entering the drain.

Response: The area around the stone trench has been revised accordingly. The 64 contour has been revised, and a 63.5 spot grade has been added on top of the trench to indicate that it is a low point. We believe making this area a low point eliminates the need for perforated pipe and laterals in the trench. This area is designed to flow to the low point and infiltrate through the topsoil into the stone trench.

4. An infiltration basin detail should be provided now that the applicant has revised basin 1 to infiltrate.

Response: An infiltration basin detail has been added to the plans.



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5. Donahue Court is already installed and the applicant should be working with the as-built grades of the road to ensure the drainage and grades will work. The proposed grades at the end of Donahue Court are a foot higher than the proposed grades on the approved plans.

Response: The proposed grades on Donahue Court have been revised accordingly to match the approved plans. The driveway grades have been revised as well.

6. The applicant is proposing walls over 6ø in height. If the board allows these walls, the applicant will have to have a structural engineer design the walls and provide details.

Response: A note has been added to the plans stating that all walls over 4 feet in height will require a structural design.

7. A test pit was conducted within the footprint of the proposed dwelling. The test pit was located at the low elevation and shows groundwater estimated at 134ø. If groundwater at the high elevation within the dwelling is at 134ø, the basement floor will not be 2ø above the ESHWT which is required by the Board of Health. We recognize that other test pits were performed on site and had a greater depth to groundwater. If the applicant can justify their findings and the Board of Health accepts then we have no further issues.

Response: Test pit #18-2 was performed at elevation 66.0 which is the high elevation of the proposed dwelling. The ESHWT was 170" or elevation 51.8. The majority of the basement floor is at elevation 55.7 which allows for the required 2' separation. Only the slab at the northern extension of the dwelling will need to be raised from 53.5 to 53.8.

We trust this letter, revised plans, and stormwater management report provide the Board with the necessary information for their review. If you have any questions or concerns please feel free to contact our office anytime.

Sincerely,

Millennium Engineering, Inc.

Christopher M. York, P.E.
Project Manager