

MEMORANDUM

TO: North Castle Planning Board

CC: Adam Kaufman, AICP
Rick Bohlander, P.E., JMC
Anthony Marino

FROM: John Kellard, P.E. *JK*
Kellard Sessions Consulting
Consulting Town Engineers

DATE: April 22, 2022
Updated June 23, 2022
Updated November 10, 2022

RE: Anthony Marino
26 Chestnut Ridge Road
Section 94.04, Block 1, Lot 39

As requested, Kellard Sessions Consulting has reviewed the site plans submitted in conjunction with the above-referenced project. The applicant has imported 1,550 c.y. of fill placed within the rear yard to level and improve the yard. Most of the fill has already been imported to the site and graded. The application does not clarify the amount imported to date. Improvements would include a new patio and walks within the rear yard, totaling 1,800 s.f. of impervious surface. Work will be limited to the rear and side yard and result in 0.4 acres of disturbance. The 1.7 acre parcel is located in the R-2A Zoning District.

The applicant is proposing a stormwater detention system to mitigate increased runoff from the property. Ten (10) Green Giant Arborvitae are proposed along the easterly property line to mitigate the visual impact of the fill on the neighboring property. The applicant has submitted laboratory data reports from Phoenix Laboratories, Inc., which appear to represent tests performed on fill stockpiles for Thalle Industries. No additional information or verification of the fill was provided.

GENERAL COMMENTS

1. Laboratory data from Phoenix Laboratories, Inc. indicates that certain soil parameters were present within samples taken. Parameters include detectable levels of arsenic, barium, cadmium, copper, mercury, manganese, nickel, lead, trivalent chromium, zinc, volatiles – tetrachloroethene, pesticides – 4,4'-DDT, semivolatiles – anthracene, benz (a) anthracene, benzo (a) pyrene, benzo

(a) fluoranthene, benzo (b) fluoranthene, benzo (ghi) perylene, benzo (k) fluoranthene, chrysene, dibenz (a, h) anthracene, fluoranthene, indeno (1, 2, 3 – cd) pyrene, phenanthrene and pyrene.

No additional information was provided by the applicant explaining the results, their status in relation to acceptable residential use standards or an explanation of who delivered the material, when it was delivered and how these results relate to the fill which is on-site.

The Planning Board may wish to request additional clarification from the applicant and refer the information and laboratory results to HydroEnvironmental Solutions for their review and recommendations.

The applicant has submitted a Technical Report, dated May 9, 2022 regarding the on-site soil testing by Advanced Environmental. The report indicates 12 semi-volatiles which were detected within the samples.

The applicant also provided an October 8, 2014 Beneficial Use submission by the New York City Department of Environmental Protection (NYCDEP) for a project within Mt. Pleasant, New York which generated a significant volume of fill. The report states that the fill was generated from a NYCDEP project and was virgin undisturbed soils.

I would not anticipate finding semi-volatiles within undisturbed farmland soils, as noted within the October 8, 2014 Report. I am sure HydroEnvironmental Solutions will be able to clarify these results for the Board.

In consideration of the imported soils exceedance of the unrestricted use for residential purposes, the applicant is proposing the placement of a two (2) foot cover over the entire fill area. The applicant will need to obtain a Fill Permit for the additional cap material to be imported to the site. The application should be accompanied by an analysis of the material in accordance with NYSDEC Regulations and Standards.

2. The applicant is proposing a stormwater detention system to mitigate the increase in runoff from proposed impervious surfaces. The applicant has provided stormwater calculations for the 100-year stormwater event only. Please provide confirmation that off-site discharge will not increase during less intense events. Calculations should also include the 1, 5, 10 and 25-year rainfall events.

The applicant has provided stormwater calculations for five (5) different storm events. Comment addressed.

3. The applicant is proposing four (4) Stormtech 740 Units. The manufacturer's specifications indicate a total storage volume of 78.47 c.f. per unit with a 9" stone base, which would equate to 313.88 c.f. of total storage. A 6" stone base is proposed which would result in less storage volume. The design also includes an impermeable geotextile surrounding the units and gravel which extends to elevation 666.5. Stormwater calculations indicate a high water elevation of 667 during a 100-year event with 418 c.f. of storage. Approximately 100 c.f. or 33% more volume than the manufacturer indicates is provided. Please clarify.

Comment addressed.

4. The stormwater calculations indicate that a 2.55 inch orifice is used to restrict outflow from the detention system. Stormwater plans do not include the orifice, but rather a 6" diameter inflow pipe and 6" diameter outflow pipe, both set at the bottom of the structures, elevation 662.5. Please clarify.

The applicant states that the proposed outlet controls will be a weir and low flow orifice. Please provide a detail of the weir and orifice on the detail sheet.

Comment addressed.

5. It is understood that the system is not an infiltration system, however, the applicant shall perform deep soil testing at the location of the detention system to verify soil conditions will permit the installation of the system.

Two (2) test pits were dug – TP-1 with rock at Elevation 661 and TP-2 with rock at Elevation 656.50. The system has been relocated to avoid the bedrock, however, the mitigation system bottom is Elevation 659.0, two (2) feet below the bedrock elevation at the upper portion of the treatment system. Perhaps the system should be shifted slightly south to avoid the rock.

Comment addressed.

6. Please redirect the detention system outflow away from the proposed plantings along the neighboring property boundary. The preferred location would be below the proposed fill and embankment. Please provide a level spreader to dissipate the flows.

The outflow discharge point has been relocated below the fill. Please dissipate the discharge with a level spreader.

Comment addressed.

7. Soil stabilization of the slope created by the fill should be stated as mandatory.

Please note the requirement of soil stabilization along the rear slope.

8. It is my recollection that the applicant had previously stated to the Planning Board that the trees along the eastern property line would be re-arranged in a more natural configuration, avoiding the linear arrangement shown.
9. The applicant has color coded the proposed site plan showing the area of fill in yellow, prior grading in red and proposed grading to accommodate the 2-foot cap in blue. The plan does not reflect the proposed contours for installation of the cover material on top of the level fill area between Elevation 660 and 668. The plan also does not reflect the cap along the extreme western and eastern borders of the fill. I assume these areas are difficult to cap due to their location adjacent to the existing septic and eastern property line. If a cap cannot be placed within these areas, then the fill in those areas should be removed.

As additional information becomes available, we will continue our review. It is noted that an itemized response to all comments will facilitate completeness and efficiency of review.

PLANS REVIEWED, PREPARED BY JMC, DATED OCTOBER 26, 2022:

- Cover Sheet (C-000)
- Existing Conditions Map (C-100)
- Site Plan (C-200)
- Construction Details (C-900, C-901)

JK/dc