


MEMORANDUM

TO: Seamus O'Rourke, Chair

CC: Village of Mamaroneck Planning Board
Carolina Fonseca, Building Inspector

FROM: John Kellard, P.E. 
Consulting Village Engineer

DATE: January 21, 2022
Updated January 6, 2023
Updated February 3, 2023
Updated March 17, 2023

RE: D'Arcangelo
921 Soundview Avenue
Section 154.60, Block 1, Lot 21

PROJECT DESCRIPTION

At the request of the Village of Mamaroneck Planning Board, Kellard Sessions Consulting has reviewed the site plan and supporting documents submitted in conjunction with the above-referenced application. The applicant is proposing to construct a new residence, driveway and rear deck with suspended pool. The property is 22,999 s.f. in size and is located in the R-10 Residential Zoning District. The project site includes wetlands which was delineated by Beth Evans on December 20, 2010. FEMA Flood Zone AE is also present across the rear of the property. Improvements are proposed within the 100-foot regulated wetland buffer. No improvements are proposed within the flood zone. The property is bordered by lands of the Town of Rye, Nature Conservancy and Westchester Land Trust. Our review was focused on general site engineering design and the associated Village Code requirements.

The swimming pool has been revised from a suspended pool to an inground installation. The stormwater mitigation system has been relocated east of the pool deck within an area consisting of gentler grade and deeper soils. The applicant has addressed our comments and, with the exception of two (2) comments requesting modification to the stormwater piping system, we have no further comments.

The applicant has addressed all previous comments from our office. One new comment (#14) is provided herein.

GENERAL COMMENTS

1. The project will result in 12,700 s.f. of disturbance. The applicant is required to provide erosion and sediment controls, stormwater quantity controls and stormwater quality controls. This includes attenuation of the post-development 25-year, 24-hour storm event.

The applicant has submitted a Stormwater Pollution Prevention Plan/Stormwater Management Report for the project. The report addresses erosion and sediment controls, stormwater quantity controls through the 100-year storm event and water quality controls.

Our office is performing a detailed review of the report, which is not yet completed. Our initial comments follow:

- The Introduction of the SWPPP notes that the project site will contain 4,346 s.f. of impervious surfaces upon completion. However, Table I – Water Quality Volume Calculations only includes 3,416 s.f. of impervious surface. The applicant's Design Professional should clarify this difference.

Comment addressed.

- The project plans and SWPPP Report do not appear to include deep test hole or percolation test results at the location of the stormwater infiltration system. The applicant has used a very conservative infiltration rate within his calculations, which I assume was due to the fact that infiltration tests were not performed.

It is indicated within the Report that the stormwater infiltration system is located within the soil group Urban Land – Charlton – Chatfield Complex. Charlton Soils are typically well-drained with a bedrock restricted depth of more than 80" while the Chatfield Group has a restricted depth of between 20-40 inches below grade. The property survey also illustrates exposed bedrock within the rear yard.

The proposed stormwater system is located on a hillside with three (3) feet of elevation across the system. Considering the proposed bottom of the system is at the proposed elevation of 13.71 feet and a NYSDEC requirement is a minimum separation to impervious layer of three (3) feet, the soils must have a minimum depth of eight (8) feet to impervious layer within the northern corner of the system. Soil tests within the area of the proposed infiltration system are necessary to confirm the design's conformance with New York State Department of Environmental Conservation (NYSDEC) Stormwater Regulations.

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The proposed stormwater mitigation system has been revised, combining the two (2) treatment systems into a single system located immediately east of the pool deck. The revised location provides a gentler grade and deeper soil condition, which will provide three (3) feet of vertical separation between the infiltration system and bedrock. Comment addressed.

- The SWPPP states that the pipe table on Sheet C-102 confirms pipe capacity during a 25-year storm event. Pipe segment flow and pipe capacity results are not included within the chart. Please provide such data.

Comment addressed. The storm pipe table was updated to include peak design flow and pipe capacity.

- The pipe chart on Sheet C-102 includes a few structures where insufficient cover is provided over the drainage pipe. In particular, TD-1 under the front walkway, Key 6, Key 5 and RDL-5. Please re-examine the pipe inverts.

The drainage pipe which carries runoff from the north side of the proposed residence, between Structures PT-1 and CB L-1 will be above grade in the vicinity of the northeast corner of the pool. Grading within this area will need to be modified to provide adequate cover or the pipe will need to be redirected along the western side of the pool.

Drainage piping within the rear of the proposed residence has been modified, relocating the pipe between the north and south side of the residence above the proposed pool where proposed grades will be at a higher elevation and sufficient cover can be provided over the pipes. Comment addressed.

- The stormwater design and SWPPP should address water quality pre-treatment requirements.

The applicant proposes to address pre-treatment of stormwater runoff with a hydrodynamic separator. The separator would provide more benefit by treating all impervious surface runoff if it were located in the vicinity of CBL-1 and a single pipe connection was used to enter the separator and CBL-1.

The proposed hydrodynamic separator has been relocated immediately upgradient of the infiltration system. Runoff from all proposed impervious surfaces directed to the infiltration system will now be pre-treated within the separator. Comment addressed.

- The applicant should detail the method proposed for collecting runoff from the rear deck.

Comment addressed.

- The applicant is proposing a swimming pool which will be suspended from the elevated deck proposed within the rear yard. The applicant should confirm adequate volume is available within the infiltration system to accommodate winterization draw down from the pool. Please show the location of pool equipment and connections between equipment and infiltrators.

Comment addressed. The infiltration system has sufficient capacity to mitigate pool draw down.

2. The proposed stormwater treatment system will have an overflow discharge from the infiltration units during storm events in excess of the one (1) year storm. The applicant is proposing discharge to a 12 foot long level spreader upslope of the wetlands. The concentrated discharge could result in erosion to the hillside above the wetlands. The applicant should improve distribution of the discharge across the width of the rear yard in an effort to mitigate any potential of erosion on the hillside.

Comment addressed. Overflow will be directed to an erosion control mat.

3. The applicant has submitted a Utility and Grading Plan. The property slopes from Soundview Drive to the rear. As proposed, it appears runoff from the roadway will enter the property and the proposed stormwater system. The applicant should examine the proposed grading along the property frontage and modify the grading to assure runoff from Soundview Drive does not enter the property. The applicant proposes a high point within the proposed driveway, however, it is only 0.1 feet higher than the roadway. A more defined high point should be explored.

The applicant should also examine the proposed grading along each side of the proposed residence. A defined swale at least 12 inches deep should be provided to assure runoff will not be directed towards neighboring properties.

Comment addressed.

4. The applicant should provide the location of all utility services to the proposed residence, including the location of valves, cleanouts and inverts. Details of proposed utility trenches and pavement restoration within Soundview Drive should be provided.

Comment addressed.

5. The applicant should show the proposed dwelling's footing drain location and discharge point.

Comment addressed. The footing drain discharge shall be directed to a rip-rap apron where flows will be dissipated.

6. The applicant has provided an Erosion and Sediment Control Plan which includes temporary control measures during construction. Construction is proposed on a hillside which will result in higher velocity runoff and a greater potential of sediment laden runoff leaving the property. The applicant should consider additional measures of controlling erosion and the discharge of sediments. The applicant should consider the installation of a sediment basin immediately below the proposed disturbance. This could be utilized in concert with a sump within the building excavation which could be pumped to the sediment basin and which discharge could be filtered prior to release.

Comment addressed. During construction, runoff will be pumped from the foundation excavation to a dewatering filter bag located within the rear yard.

7. The applicant shows two (2) locations for soil stockpiling during construction. The applicant should provide a cut and fill analysis for the project and confirm that the stockpile locations shown are of adequate size to accommodate the project.

Comment addressed.

8. A portion of the building and the rear deck/pool will be elevated above grade. Portions of the deck will drain to the ground surface below which will be shaded, providing limited opportunity for vegetation to grow. The applicant should examine options available to stabilize the ground surface below the deck in an effort to mitigate the potential of erosion.

Comment addressed. The gravel surface below the deck will receive a four (4) inch thick $\frac{3}{4}$ " crushed rock stabilized cover.

9. The applicant shall include a note on the plans stating "The applicant shall provide an As-Built Plan of the stormwater management system (for all stormwater features including, but not limited to, locations of stormwater infrastructure, invert/rim elevations, pipe locations and sizes, final grading, etc.) certified by the Engineer of Record, prior to the issuance of the Certificate of Occupancy. The As-Built Plan shall also include the final maintenance schedule for the stormwater management features."

Comment addressed.

10. The applicant shall update the SWPPP to include the maintenance schedule and procedures for the proposed stormwater management system. In addition, the corresponding maintenance schedule and procedures for the proposed stormwater management system shall be included on the plans.

Comment addressed.

11. The applicant shall include within the SWPPP the Contractor Certification statement, as per Chapter 294 of the Village of Mamaroneck Code.

Comment addressed.

12. The applicant shall submit a maintenance agreement for the proposed stormwater management features for review by the Village Engineer. The applicant shall submit the executed agreement prior to the issuance of a Certificate of Occupancy.

The maintenance schedule within the agreement should conform with the practices outlined within the SWPPP.

13. **A Curb Cut Permit, new curb installation along the property frontage and a Sanitary Sewer Connection Permit are required from the Village DPW Department. Any utility work within the Village right-of-way will also require a Street Opening Permit from the Village DPW Department. DPW Permits should be obtained prior to Building Permit.**
14. **Review of the proposed Landscape Plan indicates the proposed stormwater pre-treatment structure is located under a proposed Viburnum shrub. The structure should be adjusted accordingly.**

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

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PLANS REVIEWED, PREPARED BY ALP ENGINEERING, DATED MARCH 8, 2023:

- Site Layout Plan (C-101)
- Grading and Utilities Plan (C-102)
- Erosion and Sediment Control Plan (C-103)
- Construction Details (C-111)
- Construction Details (C-112)
- Construction Details (C-113)

PLANS REVIEWED, PREPARED BY NEXUS, DATED JANUARY 24, 2023:

- Site Plan (A-0.2), dated January 24, 2023
- Elevation Diagrams (A-7), dated January 24, 2023
- Tree Replacement (L1), dated September 26, 2022
- Landscape Plan (L2), dated February 13, 2023
- Lighting Plan (E1), dated January 24, 2023

JK/dc