



March 21, 2025

Ref: 20578.01

Patrick J. Hines, Principal  
Michael W. Weeks, P.E., Principal  
MHE Engineering  
33 Airport Center Drive  
Suite 202  
New Windsor, NY 12553

Re:	PROJECT:	Orchards On Hudson Residential Development (Dock Side)
	PROJECT No.:	24-3
	PROJECT LOCATION:	Section 109.1, Block 3, Lot 13, 14, 14.200, 15 & 29.100
	REVIEW DATE:	13 December 2024
	MEETING DATE:	16 December 2024
	REVIEW DATE:	30 October 2024
	MEETING DATE:	4 November 2024
	PROJECT REPRESENTATIVE:	VHB ENGINEERS

Dear Messer's. Hines and Week:

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C. is in receipt of your correspondence dated December 13, 2024, November 13, 2024 and October 30, 2024. The response to each item below is accompanied by your direct comment for convenience.

**Town of Marlborough – Planning Board Technical Review Comments (Review Date 13 December 2024)**

Comment No. 1: *Comments from the November 2024 Planning Board Meeting remain outstanding.*

**Response: Comments from the November 2024 Planning Board Meeting are addressed in this letter below.**

Comment No. 2: *Attached under cover of this memo are comments regarding the SWPPP.*

**Response: Responses to comments regarding the SWPPP are included below.**

Comment No. 3: *As identified in previous comments several of the structures are proposed to be located in close proximity to the Towns existing wastewater treatment facility. Comment was also raised by the Town Sewer Engineer, Brinnier & Larios regarding proximity to the Town sewer plant.*

**Response: VHB has responded to the issue regarding the proximity to the wastewater treatment facility under a separate cover.**



Comment No. 4: Ten states standards for Sewer Section 11.28D Site Evaluations.

1. Compatibility of the treatment process with the present and future land use, including noise, potential odors, air quality and anticipated sludge processing and disposal techniques shall be considered. Wastewater treatment facilities should be separate from habitation or any area likely to be built-up within a reasonable future period shall be separated in accordance with state and local requirements.

**Response: VHB has responded to the issue regarding the proximity to the wastewater treatment facility under a separate cover.**

Comment No. 5: Status of the NYSDOT review of the access drive and Traffic Report should be provided to the Planning Board. All information submitted to outside agencies should be submitted to the Planning Board as Lead Agency to complete their files.

**Response: Preliminary approval was provided by NYSDOT and the formal application is in the process of being made.**

Town of Marlborough – Planning Board SWPPP Review Comments (Review Date 13 November 2024)

Comment No. 1: Revise the TC path calculation so that the maximum sheet flow is 300 ft. for existing conditions and a maximum of 100 ft. for proposed conditions.

**Response: The maximum sheet flow was revised so that 300 ft for existing conditions and 100 ft for proposed conditions was used in the time of concentration (Tc) calculations. If the Tc calculations yield a time less than 6 minutes, a Tc of 6 minutes was used as a minimum and no calculations are shown.**

Comment No. 2: All infiltration tests must be performed in accordance with the NYSDEC Stormwater Design Manual and must be witnessed by a representative of the Town.

**Response: Based on our experience with projects that utilize below grade infiltration structures as a means of recharge, the representative infiltration rate used to model the stormwater system would be consistent at the base of the structures and therefore it is not typical to provide that many infiltration tests.**

Comment No. 3: Revise the SWPPP so all proposed pipe outlets leaving the site are design points showing existing and proposed conditions.

**Response: Although there are no proposed pipe outlets that discharge directly outside the property lines, all outfalls from the proposed drainage systems are shown as design points in both the existing and proposed HydroCAD models.**

Comment No. 4: Given that the proposed pipe outlet for area SPC is across the road, this must be a design point for existing and proposed conditions to show that the project is not increasing the flow onto neighboring properties.



**Response: The parcel that proposed subcatchments 'A-1' and 'A-2' discharge to, that is across from Dock Road, is part of the subject property. That parcel is a design point 'SP2' for both existing and proposed conditions and shows no increase of flow.**

*Comment No. 5: There appears to be a high point in the road from Dock Road that should be the drainage divide for proposed area B. Applicant's engineer to discuss.*

**Response: Proposed subcatchment area B does not have any frontage or area that includes Dock Road. All proposed subcatchment areas that include Dock Road use the crown of the right of way as the drainage divide.**

*Comment No. 6: Proposed areas C, D and B all drain to different locations which then drain directly to an existing road. Those locations should be design points for existing and proposed conditions to show that the road and neighboring properties are not being negatively affected by the project.*

**Response: The proposed subcatchment nomenclature has been revised since the initial submission. However, all outfalls have been revised to be design points in both the existing and proposed conditions.**

*Comment No. 7: Revise the HydroCAD model so the minimum TC path is 6 minutes not 10. Any TC path over 6 minutes must be shown on the plan and the calculation for the TC path shown within the HydroCAD model.*

**Response: All time of concentration (Tc) calculations were completed in HydroCAD and if the result yields a Tc of less than 6 minutes, a direct input of 6 minutes was used.**

*Comment No. 8: Revise the curve number calculations to use all cover types in good condition or provide evidence to show why they should be in fair condition.*

**Response: The curve number calculations have been adjusted to use all cover types in good condition.**

*Comment No. 9: The woods/grass curve number is only applicable for tree farms, which do not appear to be present on the site. Revise the curve number calculations to show the areas of woods and grass separately.*

**Response: For the relevant subcatchment areas, the curve number calculations to show areas of woods and grass separately. The woods/grass curve number is no longer proposed.**

*Comment No. 10: The double trap stormwater systems appear to only have a few openings for infiltration, therefore, the entire surface area should not be used for the exfiltration rate.*

**Response: Comment No. 10 is a common question that StormTrap receives. VHB reached out to a StormTrap representative and received the following response:**



***According to Darcy's Law: the flow through the ¾" stone base underneath the concrete pad's infiltration openings or through the DoubleTrap's 24" infiltration openings, is much faster than the flow through the subsoil. The buildup of water above the subsoils will move laterally and saturate the ¾" stone base between the holes in the bottom of the StormTrap, therefore all the water will infiltrate into the ground at the same rate as a completely open footprint. That said, any backup that may occur will not be a derivative of the openings in the StormTrap or ¾" rock, but will occur because of the soil underneath (especially once saturated).***

Comment No. 11: *The available volume calculations for the storm traps do not appear to be correct. Without any openings on the side of the stormwater system, stone located along the side of the structure cannot be considered as available storage. Applicant's engineer to discuss the 6.66' border around the storm traps?*

**Response: The 6.66' border around the StormTrap structures in HydroCAD are the border units, not stone. The border StormTrap units have a different dimension than the interior StormTrap units so HydroCAD automatically add the 6.66' border around the interior units. The volume calculations are accurate.**

Comment No. 12: *Show a manhole structure for A9 and A10 (area drains) as there is a change in direction of the drainage pipes in that location.*

**Response: Structures A9 and A10 have been revised to be drainage manhole structures with inlets.**

Comment No. 13: *The plans show Storm Trap A1 flowing into Storm Trap A2, yet the model only shows one Storm Trap with two different volumes. Revise the model to show the drainage area to each Storm Trap. Show within the HydroCAD model that Storm Trap A1 flows into Storm Trap A2.*

**Response: The proposed HydroCAD model has been revised to show that StormTrap A-1 flows into StormTrap A-2, each with their own subcatchment area.**

Comment No. 14: *Revise the SWPPP so all proposed pipe outlets leaving the site are design points showing existing and proposed conditions.*

**Response: All proposed outfalls are shown as design points on both the existing and proposed conditions in HydroCAD models.**

Comment No. 15: *Show how the proposed stormwater basins meet the NYSDEC's pretreatment requirements.*

**Response: Proposed pretreatment structures sized to treat WQv are proposed to be installed prior to entering the stormwater basin structures.**

Comment No. 16: *Provide level spreaders at the proposed pipe outlets that meet the NYS Standards and Specifications for Erosion and Sediment Control.*



**Response: Level spreaders are shown at the proposed outfalls. A level spreader detail has been added to the plans.**

Comment No. 17: *Call out the total amount of disturbance on the plans.*

**Response: Callouts for the total area of disturbance has been included in the plans.**

Comment No. 18: *Show the limit of disturbance on the plans and call out the total amount of proposed disturbance. If the proposed disturbance is greater than 5 acres, provide a phasing plan showing the amount of area to be disturbed is less than 5 acres at any one time.*

**Response: Due to the size of the subject property and the need to move soil from each end of the site, the limit of disturbance at any one time will be greater than 5 acres. Per the SPDES General Permit (GP-0-25-001), the owner will submit under separate cover a written Request to Disturb Greater than Five Acres to the Traditional Land Use Control MS4 Operator.**

Comment No. 19: *Once the SWPPP has been revised further comments may be required*

**Response: Noted.**

Town of Marlborough – Planning Board Technical Review Comments (Review Date 4 November 2024)

Comment No. 1: *The project proposes to utilize a portion of Tax Lot Section 109.1, Block 3, Lot 17.200 for the roadway and sidewalk areas. It is requested the applicants identify easements or lot line changes are proposed to make that portion of the lot part of the project. Zoning variances may be required based on final determination of the use of this lot.*

**Response: Proposed lot line changes are shown on Sheet C3.01. The revised lot lines encompass all site improvements associated with the proposed development.**

Comment No. 2: *Zoning bulk summary chart should be updated depicting front yard setback one and both side yard requires 10 both 25.*

**Response: Although the subject property is in zoning district Residential "R", which requires the on and both side yard setback to be 10 feet and 25 feet, the proposed use is "Multiple Dwellings" which has its own lot, yard and density regulations. Per Section 155-30-A-(1)-(d), for Multiple dwelling uses, 'Setbacks for front yard shall be 40 feet, each side yard 30 feet and rear yard 30 feet.'. These requirements are shown on the Zoning Bulk Summary Chart on Sheet C3.00 as they are more stringent than the Residential "R" regulations.**

Comment No. 3: *A demolition plan should be added to the plan set to identify structures to be removed on all lots.*



**Response: A Removals Plan has been added to the site plans as Sheet C2.00.**

*Comment No. 4: A density calculation has been provided identifying 4.12 units per acre. The applicant's representative as requested to evaluate the definition of Net Buildable Area – the gross acreage of a proposed development site less the acreage of land is rated as wetlands, slopes in excess of 25% flood plains, water bodies, and lands otherwise restricted from developments such as by utility easements. The Net Density definition states "a measure of the number of allowed dwelling units per unit of area. It shall be expressed in dwelling units per acre the measure is derived at by dividing the number of allowed dwelling units by the net building area". The density calculation should be provided utilizing the above definitions. Slope analysis should be provided to subtract area greater than 25% slope from the density calculation. It is noted that "existing" topography is not original topography on the site and is a result of mining activities historically occurring on the property. The proposed project is within the original mining areas and will serve as the final reclamation for the previously impacted areas.*

**Response: Per the attached letter from the Code Enforcement Officer, Tom Corcoran, the steep slopes that are found on site are man-made and therefore do not affect the calculations for Net Buildable Area or Density. Due to the increased total of 106 units, the density calculation is currently 4.24.**

*Comment No. 5: Comments from the Water Department and the Towns Water System Engineer regarding water system should be received.*

**Response: A submission to the Water Department and the Towns Water System Engineer will be made under separate cover.**

*Comment No. 6: L2.00 identifies irrigation proposed. Coordination with the Towns Water Department regarding irrigation systems back flow prevention and metering should be undertaken.*

**Response: After coordination with the Towns Water Department, a note has been added to Sheet L2.00 stating the requirement of backflow preventers and meters to be in conformance with state and municipal requirements.**

*Comment No. 7: An SWPPP has been provided for the project and is under review by this office.*

**Response: Response to SWPPP comments noted above.**

*Comment No. 8: The applicants have responded that parking in the vicinity of the club house has been provided to the best extent practical on existing topography. It is identified that a majority of the people using the clubhouse are anticipated to walk from their residences.*

**Response: Confirmed.**

*Comment No. 9: Plans should be submitted to the jurisdictional Fire Department for review of hydrant locations and access.*



**Response: Plan will be submitted to the jurisdictional Fire Department under separate cover.**

*Comment No. 10: Sidewalks have been added to the plan at the request of the Planning Board. Sidewalks are located at various locations. Planning Boards comments on locations of sidewalks should be received.*

**Response: All proposed sidewalk locations within the site property are shown on the Layout and Materials Plan (Sheets C3.00 to C3.05).**

*Comment No. 11: This office previously commented regarding several of the structures located in close proximity to Town's existing wastewater treatment facility. Applicant has responded they acknowledge the distance to the wastewater treatment facility. They are in the process of determining if there are any odors that would cause concern to the residents. The Town's sewer engineers raised similar questions regarding proximity to the Town's sanitary sewer plant.*

**Response: VHB has responded to the issue regarding the proximity to the wastewater treatment facility under a separate cover.**

*Comment No. 12: The applicants have identified that electric charging stations maybe provided upon future request.*

**Response: Confirmed.**

*Comment No. 13: The applicants have identified they met with representative of the School District on 17 October 2024. A bus pickup along Route 9W was identified as the preferred method.*

**Response: Confirmed, the bus stop location is called out on Sheet C3.01.**

*Comment No. 14: The Planning Board authorized the circulation of a Notice of Intent for Lead Agency. This notice was circulated on 25 August 2024. No objections have been received. The Planning Board can now declare Lead Agency status for the SEQRA review.*

**Response: Noted.**

Ref: 20578.01  
Patrick J. Hines Principal  
Michael W. Weeks, P.E. Principal  
MHE Engineering  
March 21, 2025  
Page 8



Thank you for your assistance with this project and please contact our office if you have any questions or require additional information.

Very truly yours,

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C.

Angelo Laino, PE  
Project Manager

AL/ba