



AZZOLINA & FEURY ENGINEERING, INC.

Professional Engineers and Land Surveyors

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January 4, 2022

Borough of Alpine
Municipal Building
100 Church Street
Alpine, New Jersey 07620

Attn: Ms. Nancy Wehmann, Secretary Alpine Zoning Board of Adjustment

Re: Proposed Lucacel Residence
79 Miles Street
Block 55, Lot 3.03
A & F File No.: ALP-1414

Dear Ms. Wehmann:

Previously, our office had reviewed the submittal for the septic systems proposed for construction in conjunction improvement of this property. That review letter addressed to the Alpine Board of Health was dated October 25, 2021. Subsequently our office received copies of the following documents which were received by the Borough on November 30, 2021:

- A plan entitled "Site Plan, Proposed Dwelling , No. 79 Miles Street. Block 55, Lot 3.03, Borough of Alpine, Bergen County, New Jersey", prepared by Hubschman Engineering, dated 8-11-21, revised 10-12-21 (Revision No. 1);
- "Application for Soil Moving Permit" and Checklist, for 79 Miles Street, for Florin Lucacel, , Block 55, Lot 3.03, signed, and notarized but undated;
- NJDEP Appendix B Forms, for proposed septic system installations at the site indicated above, signed by Michael J. Hubschman, P.E., P.P., and dated 8-16-21;
- "Soil Moving Report, Proposed Septic System, 79 Miles Street, Lot 3.03, Block 55, Borough of Alpine, Bergen County, New Jersey, prepared by Michael J. Hubschman, P.E., P.P., dated October 12, 2021;
- "Drainage Report, 79 Miles Street, Lot 3.03, Block 55, Borough of Alpine, Bergen County, New Jersey, prepared by Michael J. Hubschman, P.E., P.P., dated August 11, 2021;

Pursuant to your request, we have reviewed these documents and offer the following comments:

I. General / Zoning

Florin Lucacel is the owner of the property known as 79 Miles Street , Lot 3.03 of Block 55 as shown on the Tax Maps of the Borough of Alpine, and the applicant in this matter. The

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applicant has retained Hubschman Engineering to prepare a site plan for a new residence having five (5) bedrooms which will be constructed on the subject property. The property is a sloped lot, dropping in grade approximately 36 feet from the frontage on the Miles Street cul-de-sac to the rear lot line at the southwest corner of the lot, approximately 170 feet from the right-of-way of Miles Street. In the northwesterly corner of the site, an area which is the least sloped portion of the site exist which is suitable for the construction of separate blackwater and greywater 'gravity' septic systems. The proposed dwelling is proposed to be on approximately the same horizontal plane as the proposed septic fields, and the dwelling is proposed to be located to the south of the cul-de-sac. The lot is within the Borough's R-1 Residential Zone, and has a conforming Lot Area of 40,993.73 square feet. The previous 'septic system' submittal is designed to provide adequate treatment capability for a five-bedroom dwelling. The design for the dwelling and the site indicates that the setback from the front lot line to the window wells in the front of the proposed dwelling would be 45 feet, and 50 feet to the front of the dwelling. A minimum front setback of 60 feet is required. The proposed front setback is therefore non-conforming.

II. Soil Moving

The 'Site Plan' depicts tiered retaining walls along the rear (southwesterly) of the site and the westerly property line. The northerly portion of the retaining walls along the westerly lot line are apparently proposed to provide stability for the proposed septic systems. However, the walls along in the side yard encroach into the required ten-foot tree buffer and the lower wall is shown on the Site Plan at the side lot line, whereas a six-foot minimum setback from either a lot line or from the required tree buffer of six-feet is required by Section 185-3D(2)(g) Borough's Soil Fill and Soil Removal Ordinance.

Cross-Sections submitted with the 'Site Plan' indicate proposed fill depths exceeding 10-feet in certain areas of the site. On lots such as the subject property which is less than two acres in total area, Section 185-D(2)(d) prohibits post-construction fill depths above the natural topography of the site in excess of five vertical feet.

The Soil Moving Permit Application with the supporting calculations and cross-sections indicate a total soil moving volume ('Cut' + 'Import') of 4,458 cubic yards> This volume exceeds the 1,000 cubic yard maximum which can be approved administratively. The proposed volume would require a waiver from Section 185-5D(5)(a) of the ordinance.

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III. Septic System Design

A previously stated, Hubschman Engineering has designed two completely new and separate blackwater and greywater septic systems to which the sanitary waste from the proposed dwelling will flow by gravity. No pumps or pre-treatment systems will be utilized. On April 6, 2021, in the presence of representatives of Hubschman Engineering and myself, four (4) test pit excavations were performed in the general locations of the two proposed septic disposal fields. The logs of the findings and field analysis of the exposed subsoils is attached to the Standard Forms For Submission of Soils/Engineering Data and has been submitted in support of this application. The Johnson Soils report attached to the NJDEP standard forms, Appendix B, describes the underlying soils in greater detail. To generalize, all four test pits were advanced to 65 to 72 inches below the existing ground level. The soil material found in the excavation was predominantly sand with some minor percentages of silt and clay. No groundwater, seepage nor evidence of seasonal high groundwater were found. The in-situ soil material is well-suited for septic treatment and disposal. As designed, both the blackwater and greywater systems will meet the standards of both the Borough and the NJDEP. The two systems as designed and depicted on the submitted plans are acceptable. A plumbing permit will be required for the final connection between the first septic tank and the dwelling once the proposed dwelling is constructed.

IV. Tree Removal

Tree removal in conjunction with the installation of septic systems is exempt from the provisions of the Borough's "Trees" ordinance. A total of twenty one (21) trees are scheduled for removal in conjunction with the septic installations. The Hubschman plan shows thirty four (34) additional trees to be removed in conjunction with the construction of the proposed dwelling be removed. Of the total number of trees which are indicated for 'removal' on the 'Site Plan', ten (10) trees are subject to the replacement provisions of the "Trees" ordinance as per Section 205-1E(4). Applicant shall file an application for Tree Removal, which shall include an inventory/condition survey of all trees to be removed, which shall minimally include a plan showing the trees to be removed by individual numbering, and a listing to the trees by individual tree number, species, caliper, condition and an indication of whether or not each tree is subject to replacement requirements. Tree Protection for any tree in close proximity to the construction operations must be installed, inspected by our office and accepted PRIOR to the commencement of any site disturbance. An acceptable tree protection detail shall be provided on the 'Site Plan'.

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V. Storm Drainage

The submitted documents include the 'Drainage Report', dated August 11, 2021. The project neither proposes more than one-quarter acre of new impervious surface nor more than one acre of total disturbance. The project is therefore NOT a 'major' project as defined by the NJDEP and water quality treatment is therefore not required. The runoff from the proposed roof, driveway and other impervious areas will be collected and piped to four seepage pits behind the proposed dwelling. Collected storm runoff will be recharged from the seepage pits into the subsurface groundwater table. The design for the proposed drainage system as related to the proposed improvements to the site is acceptable.

A secondary 'drainage. Issue involves the flow of storm runoff onto Miles Street into the collection system on the adjoining property of the Alpine Country Club. The current means of conveyance from the catch basin within the pavement at the low end of Miles Street, which happens to be in front of the subject property, is via a short section of pipe from the catch basin to the down-sloping natural ground surface between the cul-de-sac and the Country Club. Storm runoff continues to flow overland to the upper end of a piped collection system near the southwest corner of the Applicant's property. In order to develop the site, and more specifically to construct the septic systems as proposed, the 'Site Plan' depicts a new piped connection between the catch basin at the low end of Miles Street and the piped collection system on the Country Club property. From a storm water management perspective, this is acceptable since the proposed piped connection would not increase the runoff onto the Country Club's property, and would effectively eliminate a possible source of erosion, or scouring in extreme storm events on the Applicant's property. However, before the 'Site Plan' can be finally accepted by the Borough, the Applicant must provide an acceptable agreement/letter of acceptance from the Alpine Country Club approving the construction of the proposed connection as depicted on the current 'Site Plan', stating that the Applicant/Applicant's contractor has the permission of the Country Club to enter on the property thereof to construct the subject improvement, and grants an approval to the Borough of Alpine to continue to discharge the storm drainage from the lower end of Miles Street into the storm water collection system on the property of the Alpine Country Club. A copy of this letter/agreement shall be submitted to the Alpine Borough Attorney and the Alpine Zoning Board Attorney for review. No construction of the drainage improvement can commence until this agreement is accepted since it involves parties other than the Applicant and the Zoning Board of Adjustment.

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VI. Summary and Conditions

Based upon our review the documents that have been provided and reviewed, we find the submitted 'Site Plan' and Application for Soil Movement complete and request that the Applicant be advised of the first available meeting of the Zoning Board of Adjustment at which this matter can be heard. Should the Board move to act favorably on this application, we ask that said approval be subject to the following conditions, and any other appropriate conditions that arise from the Board's deliberations:

1. No construction activities may commence until the applicant has filed for and obtained Soil Erosion and Sediment Control Plan Certification from the Bergen County Soil Conservation District. A copy of that approval must be filed with the Borough.
2. The Borough must be notified at least 48 hours in advance of any scheduled construction activities or site disturbance.
3. The applicant and applicant's contractor(s) are responsible for any damage to the Borough rights-of-way or any component thereof by vehicles and equipment accessing and leaving the site.
4. The applicant and applicant's contractor shall be required to clean and maintain the surface of the Borough's roadways of any dirt or debris resulting from the delivery and export of soil materials from the site, or from general construction traffic. Roadways shall be inspected and cleaned by the end of each working day.
5. Applicant's engineer shall prepare and submit acceptable stability calculations for the proposed retaining walls.
6. Applicant's engineer shall modify the Site Plan and related documents as necessary and submit same for our review and acceptance before any permits can be issued for the proposed improvements.
7. Applicant shall submit a Tree Removal Application with the appropriate supporting documents as required herein and as required by the Borough's 'Trees' ordinance.
8. Applicant shall provide an acceptable agreement/letter from the Alpine Country Club for the construction of drainage improvements on property thereof, which shall address the need of the Borough to continue to discharge storm runoff from Miles Street into the collection system on the property of Alpine Country Club.

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As always, please do not hesitate to contact us if you have any questions regarding this matter.

Very truly yours,

AZZOLINA & FEURY ENGINEERING, INC.

Perry E. Frenzel, P.E., P.P.

cc: Florin Lucacel, Owner/Applicant
Matthew G. Capizzi, Esq.
Brian Frugis, Construction Official/Zoning Officer
Hubschman Engineering
Alpine Environmental Commission