

June 14, 2024

Dorothy Hayden, Chairwoman
Zoning Board of Adjustment
Borough of Demarest
118 Serpentine Road
Demarest, NJ 07627

63 Central Avenue
Block 74, Lot 8
Borough of Demarest, Bergen County, NJ
Zoning Board Application Engineering Review #3
Colliers Engineering & Design Project No. DEZ0040

Dear Ms. Hayden:

Pursuant to your request, our office has reviewed the following plans and other documents filed by the Applicant in support of a Variance Application. The Applicant is proposing to construct a keystone retaining wall and other renovations of existing home at the subject property.

- a) Boundary Survey Map consisting of one (1) sheet, prepared and signed by John A. Lock, PLS of Azzolina and Feury, Inc., dated May 2, 2023;
- b) Retaining Wall and Soil Erosion Control Plan consisting of one (1) sheet, prepared, and signed by John A. Loch, PLS, and Perry E. Frenzel, PE, dated August 10, 2023; Last revised February 28, 2023; *(Review 2) Last revised April 30, 2024; Last revised June 6, 2024;*
- c) Variance Application and attachments for the subject property; signed and dated February 9, 2024;
- d) *(Review 2) Stormwater design calculations prepared and signed by Perry Frenzel, PE, dated April 30, 2024;*
- e) **Plan sheet entitled Exhibit "A" depicting existing site conditions consisting of one (1) sheet, prepared by Azzolina & Feury Engineering Inc., dated June 5, 2024;**
- f) **Plan sheet entitled Exhibit "B" depicting proposed conditions consisting of one (1) sheet, prepared by Azzolina & Feury Engineering Inc., dated June 5, 2024;**

The Property Owner/Applicant is:

Austin and Doreen Siboni
63 Central Avenue
Demarest, NJ 07627

The Applicant/Owner shall notify the Borough of Demarest Zoning Board of Adjustment of any changes to the above information. For ease of review, updated commentary is provided in **bold** and prior commentary related to review #2 is shown in *italics*:

Engineering Review

I. Project Description & Location

The Applicant is proposing to remove an existing stone wall in the rear yard and construct a new keystone retaining wall with maximum height of five (5) feet.

The site is located at 63 Central Avenue, on Block 74, Lot 8, and is contained within the Residence D Zoning District. The subject property fronts the southern side of Central Avenue.

(Review 2) The Applicant has submitted revised plans now depicting a two-tiered retaining wall an intermediate "bench" area which ranges in width from 2.5 to 6.5 feet. Each wall has a maximum height of two (2) feet. The Applicant has also relocated the wall to provide additional rear and side yard setbacks from the previous iteration of plans.

The Applicant is now proposing drainage improvements as part of the proposal. The plans indicate two (2) precast concrete drywells are proposed to collect and store stormwater runoff from two (2) surface inlets.

The Applicant has submitted revised plans and exhibits according to the commentary received from the Board at the prior hearings. The primary changes to the plans can be summarized by the following:

- **Site Plans**

- **Front Porch** - The front porch was previously shown as a covered porch with the porch area included in the coverage quantity for building coverage on the plans (refer to prior plans with revision dated 2/28/24). The current plans show an uncovered porch, and the coverage quantity is accounted for separately under existing coverages. Additionally, the size of the front porch has been reduced.
- **Front Walk** - The front walk was previously depicted with a slight angle heading toward Central Ave (refer to prior plans with revision date 4/30/24), it was noted during the prior hearing that the front walk was observed to be a different shape than what was depicted and was actually perpendicular to Central Ave. The Applicant has revised the layout of the front walk accordingly on the current plans.
- **Illicit Pipe Penetration in Central Ave** - It was noted during the prior hearing that a pipe penetration carrying stormwater from roof leaders was established in Central Ave ROW without the proper approvals. The current plans indicate that this pipe is to be removed and re-routed to a drywell in the northwesterly corner of the front yard area.
- **Driveway Runoff** - It was noted during the prior hearing that a portion of the driveway curb was either missing or not full-height and was resulting in detrimental effects related to stormwater runoff on adjacent properties to the east. The current plans indicate that full height curbing will be restored in this location and there is a surface inlet proposed to collect and convey water to two nearby drywells.
- **Grading** - It was noted during the prior hearing that there was not enough information to determine existing and proposed grade changes

due to the installation of the proposed retaining walls. The Applicant has added supplemental information to the plans to clarify. Existing grades (both contours and spot elevations) are shown in light gray and proposed spot elevations are provided in black. It appears minimal changes in elevations are proposed.

II. Zoning Requirements & List of Variances / Waivers Requested

A. Bulk Zoning Requirements:

Zone: D

Use: Residential – Accessory Use (Retaining Wall)

Description	Required	Existing	Proposed	Complies
Lot area	10,000 sf.	15,488 sf.	15,488 sf.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Lot Frontage (Lot width)	100 ft.	134.25 ft.	134.25 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Lot depth	100 ft.	112.88 ft.	112.88 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Front yard setback (Central Avenue)	25 ft.	30.9 ft.	30.9 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
**Side yard setback	10 ft.	9.6 ft.	9.6 ft.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Rear yard setback	30 ft.	38.6 ft.	38.6 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
*Rear yard setback (Accessory)	10 ft.	22.9 ft.	0.5 ft. 5.0 ft.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
*Side yard setback (Accessory) Eastern Side	10 ft.	3 ft. +/- (To Shed)	0.5 ft. 3.0 ft (To wall)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
*Side yard setback (Accessory) Western Side	10 ft.	10 ft. +/- (To Ex Wall)	6.5 ft. (To Prop Wall)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
*Maximum Fence Height	6 ft.	N/A	8 ft.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Max Building Coverage	20 %	19.6 % 18.9 %	19.6 % 18.9 %	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
*Max. Improved Coverage	30 %	37.1 % 34.8 % 36.9 %	37.3 % 35.4 % 34.6 %	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
**Max. Residential & Parking Coverage	25 %	28.9 % 27.6 %	28.9 % 27.6 %	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

N/A = not applicable

* = variance required

** = pre-existing non-conformance

- (Review 2) The Applicant should provide testimony explaining the difference in existing coverages from the prior application. Specifically, the building coverage has decreased from 19.6% to 18.9%, the improved coverage has decreased from 37.1% to ~~34.8%~~ **34.6%** and the residential and parking coverage has decreased from 28.9% to 27.6%. **Existing improved coverage has increased from 34.8% to 36.9%.***

B. Variances Requested:

1. **Improved Lot Coverage** – There is a pre-existing non-conformance for improved lot coverage of 5,751 SF (37.1%) where a maximum of 30% is permitted. The Applicant proposes to increase the improved lot coverage to 5,781 SF (37.3%), a net increase of 30 SF.

(Review 2) The revised plans indicate that the existing improved lot coverage has decreased from 5,751 SF to 5,386 SF (a decrease of 365 SF). The coverage quantities for Building Coverage, Front Walks, and retaining walls have been altered. The Applicant should provide testimony regarding these changes.

The revised plans indicate that the proposed improved lot coverage has decreased from 5,781 SF to 5,487 SF (a decrease of 294 SF).

Existing improved lot coverage is now indicated as 5,722 SF (36.9%) and proposed lot coverage is now 5,359 SF (34.6%). See exhibits A & B for breakdowns of existing and proposed coverage conditions.

A variance is required for this condition.

2. **Rear yard setback (Accessory Structure)** – The Applicant is proposing a rear yard accessory structure setback of 0.5 feet where a minimum of 10 feet is required.

(Review 2) The revised plans indicate a rear yard setback of five (5) feet to the proposed retaining wall. The maximum height of the first wall segment is now shown as two (2) feet.

No Update.

A variance is required for this condition.

As per the definitions in §175-27 of Borough Ordinance, a retaining wall that is two feet or greater in height is considered an accessory structure and is subject to accessory structure setbacks. The proposed wall is a maximum height of five (5) feet.

3. **Side yard setback (Accessory Structure) Eastern Side** – The Applicant is proposing a side yard setback of 0.5 feet where a minimum of 10 feet is required.

(Review 2) The revised plans indicate a side yard setback of three (3) feet to the proposed retaining wall.

No Update.

A Variance is required for this condition.

It should be noted that there is an existing shed (to remain) that is also encroaching into the side yard accessory structure setback. It is unclear if the shed was installed lawfully. The shed is approximately 3 feet from the side property boundary (an exact dimension is not provided).

4. **Side yard setback (Accessory Structure) Western Side** – The Applicant is proposing a side yard setback of 6.5 feet where a minimum of 10 feet is required.

No Update.

A variance is required for this condition.

5. ~~**Maximum Fence Height**~~—The Applicant is proposing to install a three (3) foot high railing atop the proposed five (5) foot high retaining wall. The maximum fence height permitted is six (6) feet.

A variance is required for this condition.

The board should be aware that if the variances are approved, it is recommended to keep the railing for fall protection purposes.

(Review 2) This variance is no longer applicable, according to the details provided on the plans, a fence is no longer proposed.

No Update.

III. Engineering Review

A. There is an existing stone wall which is designated to be removed. It is assumed that the proposed keystone wall is intended to replace it.

(Review 2) This was confirmed in testimony. The existing stone wall is being removed and a tiered keystone wall is proposed in its place.

B. The Applicant should provide testimony describing the need for the non-compliant wall location. It appears feasible to construct the wall within the required setbacks.

(Review 2) This comment remains in effect.

C. The plan indicates an existing stone wall to be removed. It also indicates an “existing keystone wall under construction to be removed.” The Applicant shall clarify in testimony the owner of this wall. It should be noted that if the Applicant is the owner of this wall, it encroaches onto multiple neighboring properties.

(Review 2) Clarification was provided in testimony at the prior hearing.

D. The retaining wall details do not specify any underdrains or weepholes. The Applicant should provide testimony as to how hydrostatic pressure is to be relieved behind the proposed wall. The Applicant should be reminded that directing stormwater toward neighboring properties is prohibited.

E. The Applicant proposes to remove one (1) 38” maple tree on the property. The plan indicates two (2) additional trees to be protected. The Applicant should confirm in testimony if there are any additional trees or other improvements that may be impacted by the proposed construction.

(Review 2) It does appear that several other trees may be impacted by the construction of this wall. This includes the 20” maple and the 18” tree along the rear yard property line shown with tree protection and the row of trees along the western side property boundary. The board should be aware that any construction within the dripline of these trees has the potential to impact the health of or even kill the tree.

This comment remains in effect.

- F. Should the Board be inclined to grant the requested variance, the Applicant shall be aware that prior to issuance of a building permit, a soil moving permit application shall be provided to the Borough in accordance with Chapter 147 (§147-1) of the Borough Ordinance. The Earthwork calculations shown on the plan cannot be confirmed since off-site existing grading is not shown on the plans. It is unclear how much fill will be required to increase grade of the backwall for the compacted reinforced backfill zone.
- G. Should the board act favorably upon this application, the Applicant is hereby made aware that drainage issues may arise during or after the proposed construction. It will be the Applicant's responsibility to remedy any drainage issues caused by the proposed improvements. In addition, water runoff directed to neighboring properties is prohibited. If runoff water does enter neighboring properties as a result of the proposed improvements, the Applicant will be responsible to remedy the situation at no cost to the Borough.
- H. *(Review 2) Based on testimony provided at the prior hearing, it remains unclear whether the addition was constructed lawfully, and which improvements should be considered "existing" and "proposed" in this application. The board had requested clarification on this matter at the prior hearing. It was stated that the building permit application submitted to construct the addition showed existing coverage of 23.3%. The current application shows existing coverage is 34.8%.*

This comment remains in effect. The Applicant should provide testimony to clarify.

- I. *(Review 2) The Applicant is now depicting drainage improvements on the property consisting of two (2) precast concrete drywells and two (2) surface inlets. One surface inlet is proposed in the driveway area, and another is proposed in the southeastern corner of the rear yard adjacent to the proposed walls.*

The Applicant has also added an additional third drywell (Denoted as "Seepage Pit B" on the plans) in the front yard area of the property to collect and store stormwater runoff for a portion of the roof area which was previously being illegally directed into the Central Ave ROW. We offer the following comments related to the drainage design:

- 1. *(Review 2) The Applicant has provided design calculations for the drywells. We have reviewed the calculations and take no exception. The Applicant is collecting approximately 1,437 SF of driveway area and 2,363 SF of lawn area and conveying this stormwater to the drywells.*

The Applicant has not yet provided updated stormwater design calculations. Should the Board look favorably upon this application, it should consider the submission and approval of revised design calculations as a condition of approval.

The tributary drainage area and associated design for the rear-yard drywells appears to remain unchanged. It is suggested that the roof leaders which currently empty on to the lawn area be re-directed to the rear yard drywell system to further reduce adverse drainage impacts to adjacent properties. Should the board act favorably upon this application, they should consider this item as a condition of approval.

2. *(Review 2) The drywell detail indicates a manhole cover buried 6"-12" below grade. We suggest that the manhole cover be set at grade, or an inspection port be provided for future maintenance of the drywell.*

This comment remains in effect. We recommend that the drywell detail be revised to include an at-grade manhole cover or inspection port for future maintenance. Should the board act favorably upon this application, they should consider this item as a condition of approval.

3. *(Review 2) The Applicant should be required to provide a soil test prior to the installation of any subsurface drainage improvements. Soil testing should include the elevation of the Seasonal High-Water Table and the percolation rate of the soil.*

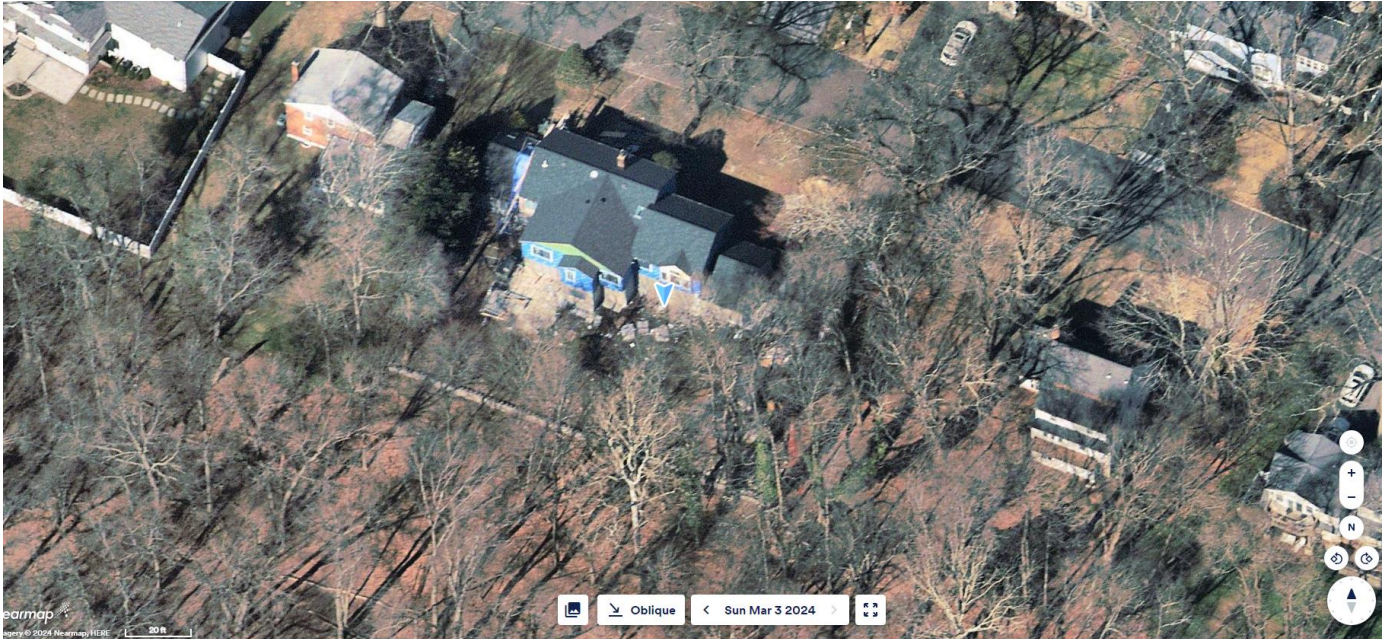
This comment remains in effect. Should the board act favorably upon this application, they should consider this item as a condition of approval.

- J. **The Applicant should consider landscaping the bench area between the two retaining walls. This would lessen the visual impact of the walls and provide increased groundwater absorption in this area. Should the board act favorably upon this application, they should consider this item as a condition of approval.**

Historical Imagery



Aerial 1 - 3/3/24



Aerial 2 - 3/3/24 (Oblique)



Aerial 3 - 3/3/24 (Oblique)



Aerial 4 - 9/6/23



Aerial 5 - 5/28/23





Aerial 6 - 5/12/23





Aerial 7 - 5/12/23 (Oblique)



Aerial 8 - 3/21/23



Aerial 9 - 3/21/23 (Oblique)

Should you have any questions, you may contact me at (201) 775-1283.

Sincerely,

Colliers Engineering & Design

A handwritten signature in blue ink, appearing to read 'Nick Chelius', with a long horizontal flourish extending to the right.

Nick Chelius, P.E.
Zoning Board Engineer

cc: Board Members (via Zoning Board Chairwoman)
Michael Greco, Zoning Board Secretary (mgreco@demarestnj.gov)
Azzolina & Feury Engineering, Applicant's Engineer (via mail)
Paul S. Haberman, Esq, Applicant's Attorney (via mail)