

Board of County Commissioners

**Shoreline Alteration/Dredge and Fill Permit
Modification Application**

SADF-23-01-000-MOD

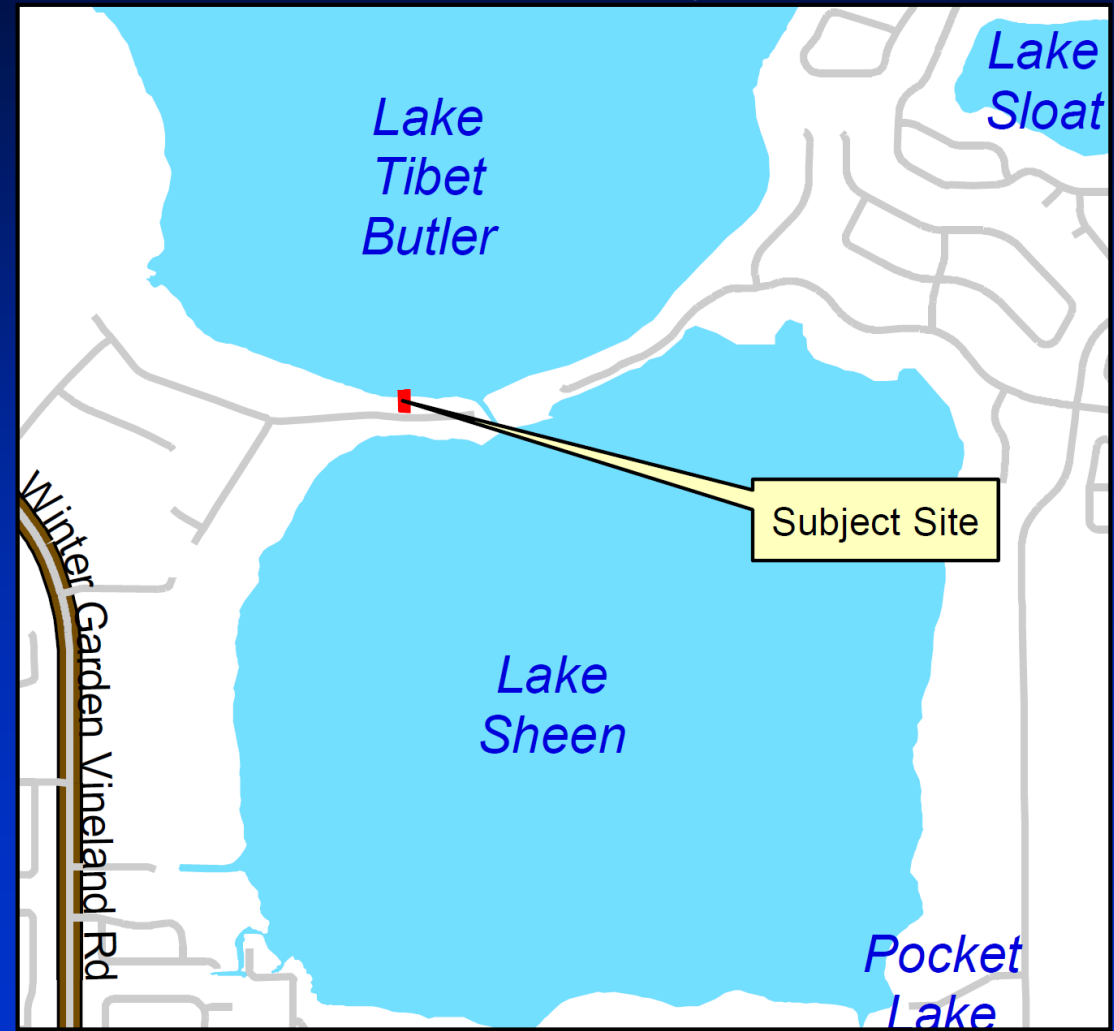
Applicants: Federico and Danielle Hollander

July 15, 2025



Location Map

10017 Lone Tree Lane, Orlando

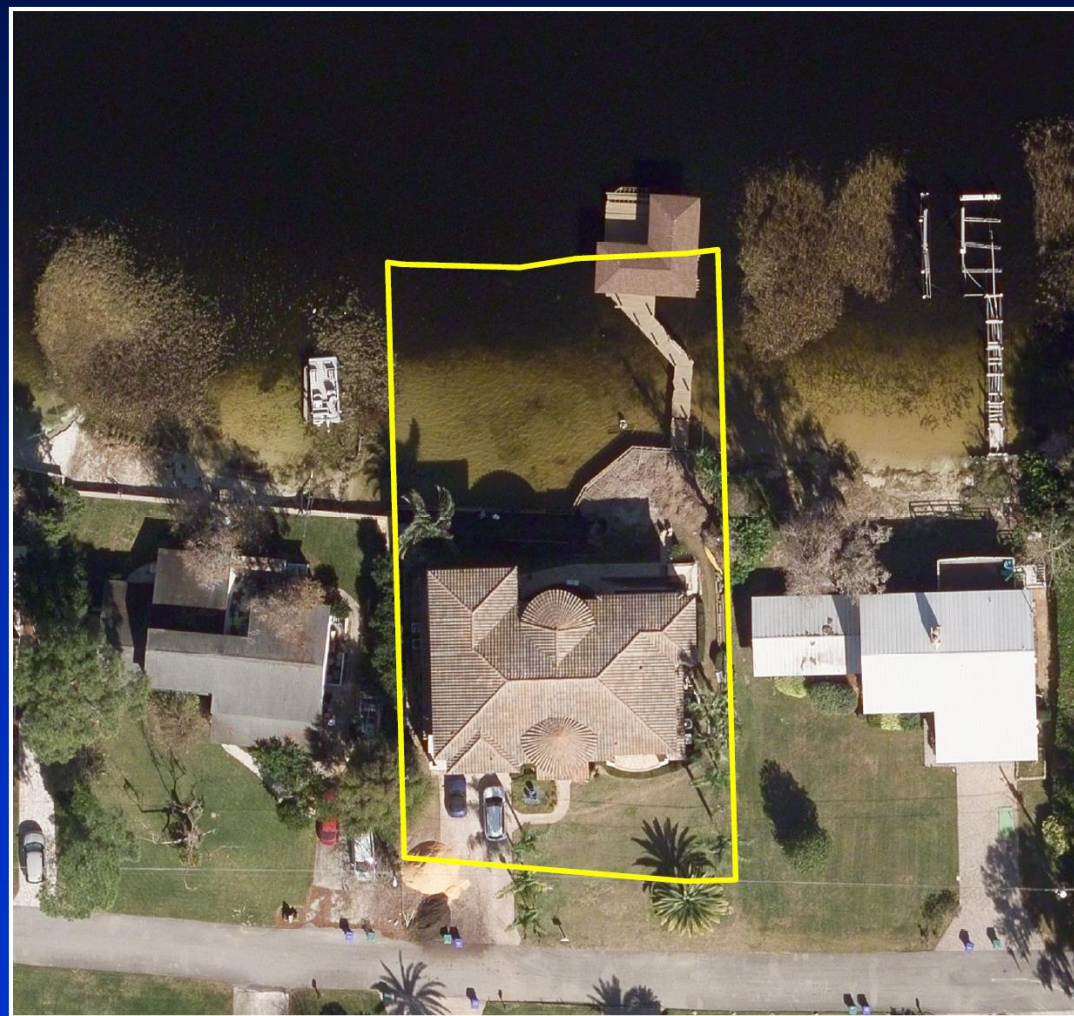


Parcel ID No.: 32-23-28-1874-00-090



Aerial Photo

10017 Lone Tree Lane, Orlando

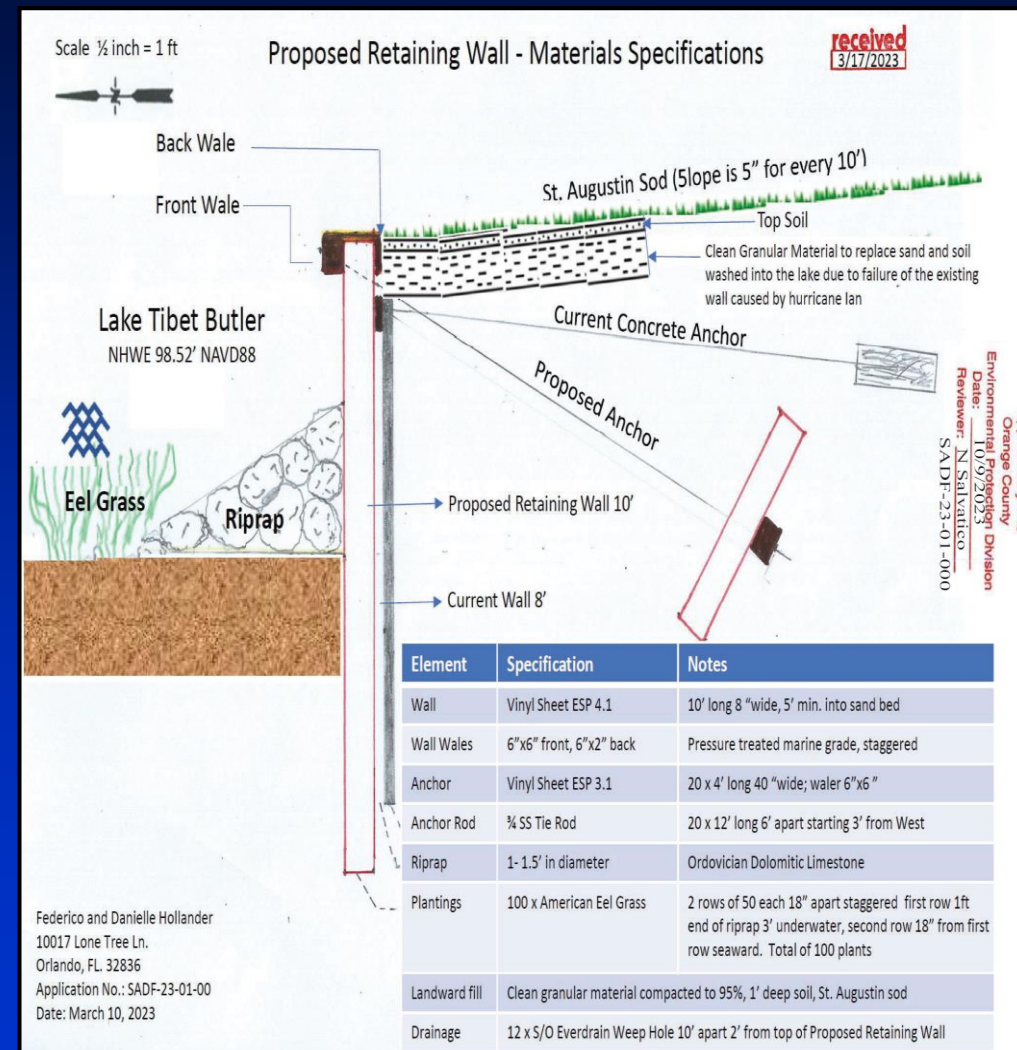


Parcel ID No.: 32-23-28-1874-00-090



Background

- January 11, 2023:** EPD received a Shoreline Alteration/Dredge and Fill (SADF) permit application to replace a failing seawall on the subject property along the shoreline of Lake Tibet-Butler. EPD sent 3 Requests for Additional Information. The application was deemed complete on July 31, 2023.
- September 26, 2023,** the SADF permit application and proposed plans, which included riprap and plantings, were presented to the Board at a public hearing and were unanimously approved.
- October 18, 2023:** Permit SADF-23-01-000 was issued for the reconstruction of a 110-foot seawall with riprap and plantings.



Approved Plan



Background

- **July and August 2024:** EPD performed a compliance inspection and observed that the new seawall was constructed, but without the required riprap or plantings.
- **September 11, 2024:** EPD issued a Notice of Non-Compliance to the applicants, citing Condition Nos. 5 and 6 in the Permit.
 - Condition No. 5 states in part, *“The installation of riprap must commence within 30 days and be completed within 60 days from the date of completion of construction of the seawall.”*
 - Condition No. 6 states in part, *“Installation of plantings must be initiated within 30 days and be completed within 60 days of installation of the riprap...”*



Current Request

- **November 5, 2024:** The applicants submitted an SADF permit application to modify the Permit to remove the requirement to install riprap.
- **November 27, 2024:** EPD inquired about the installation of plants, and the applicants confirmed that they agree to install plants (which are depicted on the currently proposed site plans).
- **March 3, 2025:** EPD issued a Notice of Intent to Recommend Denial of Permit Modification Application to the applicants.
- **March 6, 2025:** The applicants confirmed their intent to move forward with the public hearing.



Previous Conditions





Existing Conditions

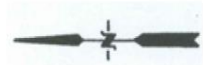




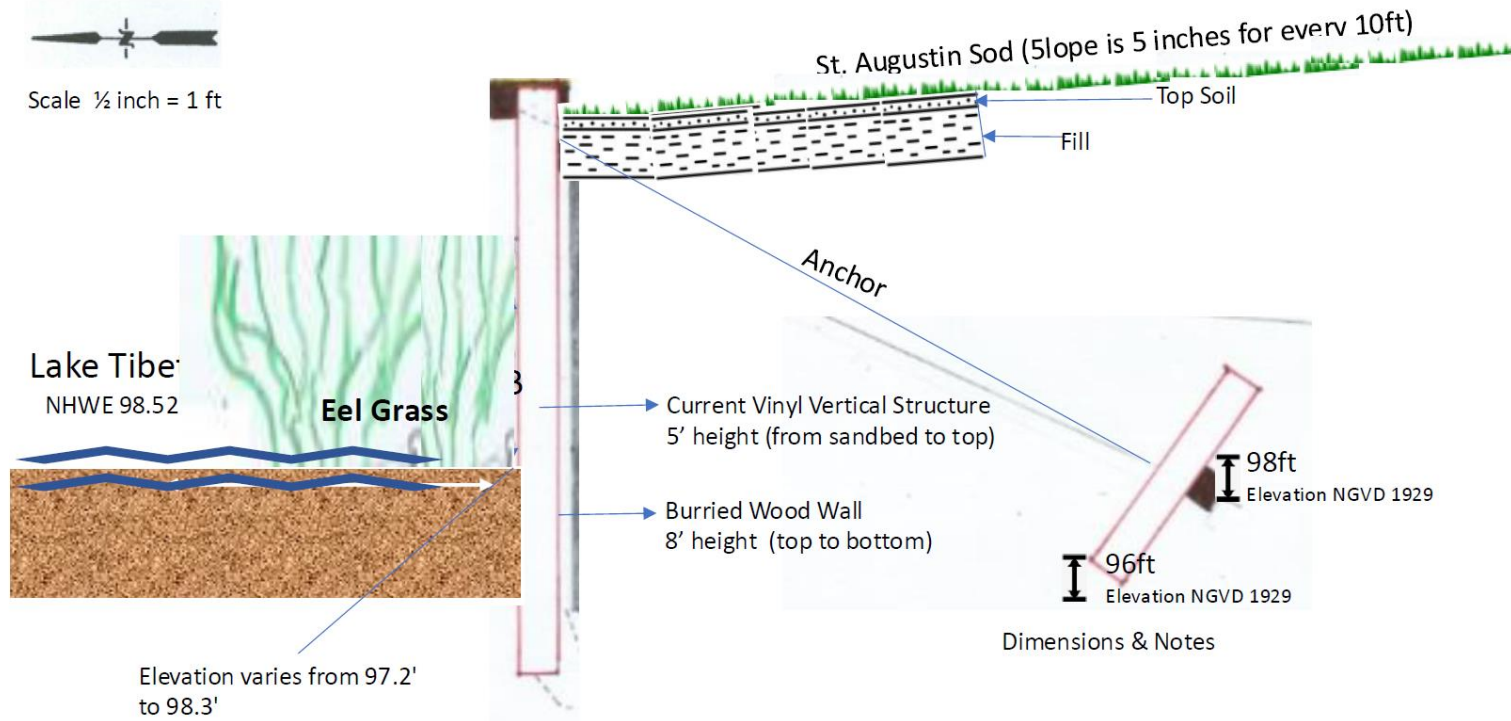
Modified Site Plan

Energy Wave Dissipation – Side View

received
1/23/2025



Scale 1/2 inch = 1 ft



Lake Tibe
NHWE 98.52

Eel Grass

Elevation varies from 97.2'
to 98.3'

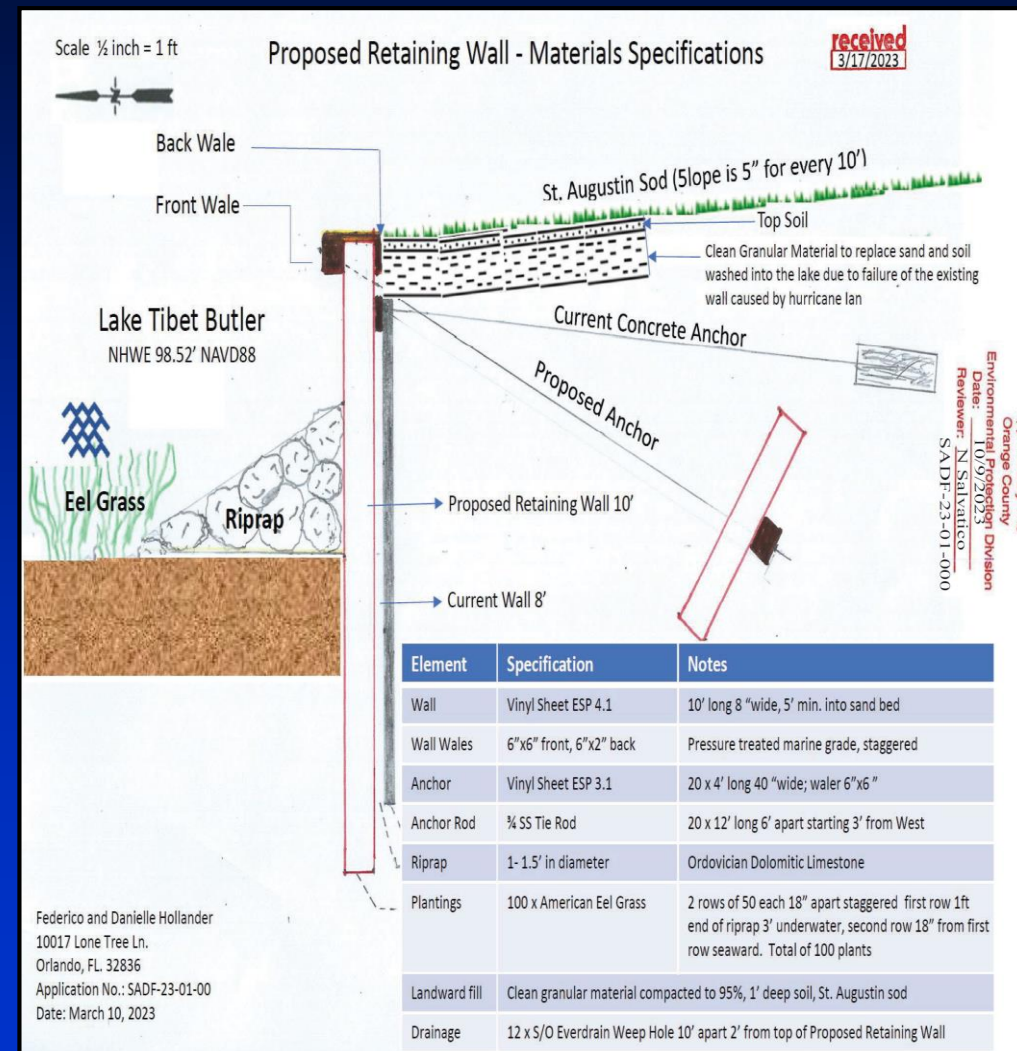
Plantings	100 x American Eel Grass	2 rows of 50 each 18" apart staggered first row 1ft end of vertical structure, second row 18" from first row seaward. Total of 100 plants
-----------	--------------------------	---

Federico and Danielle Hollander
 10017 Lone Tree Ln.
 Orlando, FL. 32836
 Application No.: SADF-23-01-00Mod
 Date: January 23, 2025
 Page



Background

- January 11, 2023:** EPD received a Shoreline Alteration/Dredge and Fill (SADF) permit application to replace a failing seawall on the subject property along the shoreline of Lake Tibet-Butler. EPD sent 3 Requests for Additional Information. The application was deemed complete on July 31, 2023.
- September 26, 2023,** the SADF permit application and proposed plans, which included riprap and plantings, were presented to the Board at a public hearing and were unanimously approved.
- October 18, 2023:** Permit SADF-23-01-000 was issued for the reconstruction of a 110-foot seawall with riprap and plantings.



Approved Plan



Applicant's Analysis

- Wave energy reduction factors:
 - Undulating corrugated geometry of the wall panels
 - Flexibility of the vinyl material
- Anticipated effects include deflected and reduced incoming wave energy, similar to riprap.



August 20, 2024

Federico Hollander
10017 Lone 3 Lane
Orlando, FL

RE: Sheet Pile Configuration &
Wave Energy Dissipation

Dear Mr. Hollander:

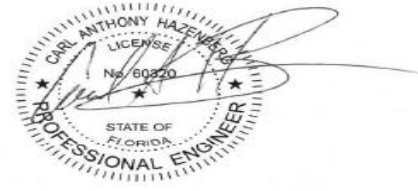
I am writing regarding your question as to synthetic sheet pile's ability to reduce wave energy. In my experience, low level waves see a significant reduction in energy/force because of two factors with the sheet pile: the geometry of the sheeting and its base material.

The Army Corp of Engineers Shore Protection Manual (ACOE SPM) recommends that for flat surfaces i.e. flat concrete faces, that the wave reflection coefficient remain at 1. This basically means that the wave is fully reflected out as it impacts against the vertical structure. If we look at just a small area of a flat concrete bulkhead under wave action, it will appear that the wave in that area is moving in a vertical path, back and forth. The more energy put into this system the better chance of the vertical motion affecting the toe of the wall. The standard configuration for the sheet pile is an undulating corrugation. This geometry acts to redirect a portion of the incoming wave in a transverse direction, side to side. The redirection puts it in conflict with the subsequent incoming waves thereby reducing the energy of the direct hit wave. The ACOE SPM notes that lower values for the reflection coefficient may be used provided there is something to the wall's geometry that disrupts a clean reflection. In our case it would be the angle of the sheet's web. In these cases, the SPM will allow for down to 0.9 for the coefficient, like with rip rap.

In terms of energy dissipation, stiffness is not better. The stiffer a material is the more likely you would be to get a full reflection of the wave. The vinyl and composite sheet pile are considered flexible walls in terms of design where concrete and steel would be fixed. Comparing vinyl to steel and concrete you get an order of magnitude more flexibility out of the vinyl sheeting. What this ultimately means is that the synthetic sheets deflect and reduce the incoming energy of a wave and reflect only a portion of the energy.

Please do not hesitate to contact me if I can be of any further assistance.

Best Regards,



Carl A. Hazenberg, P.E.
President

INGENIUM, INC.
4085 DEVEREUX CHASE
ROSWELL, GA 30075
678.315.1751



Staff Analysis

- **By altering the contour of the lakeshore, vertical seawalls can:**
 - Reduce biodiversity by removing shoreline habitat that provides refuge from predators and foraging area for fish, birds, amphibians, and macroinvertebrates.
 - Affect the natural movement of sand and sediment during storm events, which can lead to erosion in areas not anticipated.
- **Seawalls with riprap and plantings can simulate natural shoreline habitat conditions for foraging and refuge.**
- **Riprap can assist in absorbing wave energy, and plantings assist in nutrient pollutant uptake.**
- **Riprap and planting criteria are summarized in EPD Work Instruction EPD-WI-2000-25, which is used to guide the review of all SADF permit applications involving proposed seawalls or other shoreline hardening projects.**



Staff Analysis

- **On September 30, 2008, EPD presented a Work Session to the Board on the potential negative effects of seawalls and alternative shoreline protection measures. The presentation included information on how applications to construct seawalls are evaluated, and the benefits of riprap and plantings in front of seawalls.**
 - **At that time, the Board supported requiring slope replacement with riprap and plantings for seawalls.**
 - **Based on this direction, native plantings and riprap have generally been required for new and replacement seawalls, with some exceptions (e.g., a shoreline along a canal).**
- **The subject shoreline is not situated along a canal or cove where the placement of riprap might cause a navigational hazard.**



Considerations

- SADF-23-01-000 was unanimously approved by the Board at a public hearing on September 26, 2023. The approved plans include riprap (and plantings).
- Pursuant to prior Board direction and EPD Work Instruction EPD-WI-2000-25, riprap and plantings are generally required for new and replacement seawalls.
- Notification of the public hearing was sent to property owners within 500 feet of the project site. EPD has received no objections to the request.



Finding

- Pursuant to Orange County Code, Chapter 33, Article IV, EPD has evaluated the proposed SADF Permit Modification application and required documents and has made a finding that the request is inconsistent with Section 33-129 and EPD-WI-2000-25.



Action Requested

- **Acceptance of the findings and recommendation of the Environmental Protection Division staff and denial of Shoreline Alteration/Dredge and Fill Permit Modification SADF-23-01-000-MOD for Federico and Danielle Hollander. District 1.**

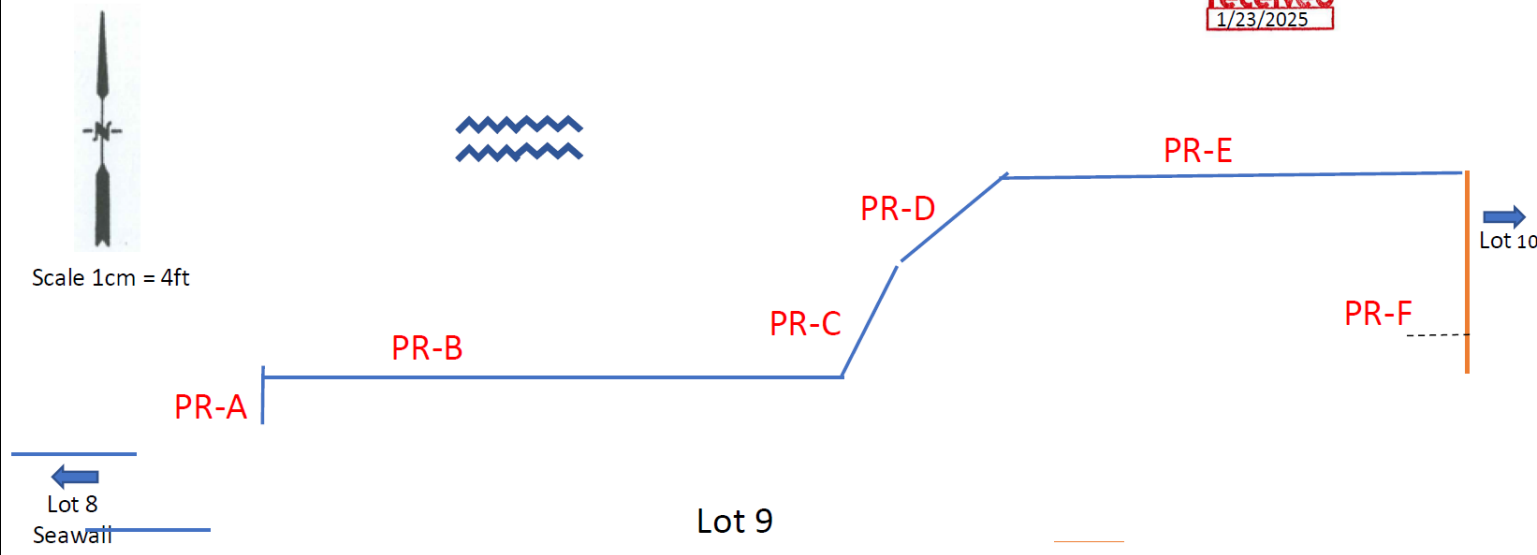




Proposed Site Plan

Energy Wave Dissipation – Area Covered by Plantings

received
1/23/2025



Section	Length	Area of Plantings
A	2.08ft	No
B	55.14ft	Yes
C	8.38ft	Yes
D	20.00ft	No
E	26.66	No
F	20.00ft	No



Alternate Action

- **Rejection of the findings and recommendation of the Environmental Protection Division staff and approval of Shoreline Alteration/Dredge and Fill Permit Modification SADF-23-01-000-MOD for Federico and Danielle Hollander, subject to the conditions listed in the staff report. District 1.**



Criteria for SADF Applications

- **Orange County Code, Chapter 33, Article IV, Section 33-129(e) includes the following criteria by which shoreline alterations are evaluated:**
 - ***33-129(e)(1): The effect of the proposed plan or development on the use of said waters in said district for transportation and recreational or other public purposes and public conveniences.***
 - ***33-129(e)(2): The effect of the proposed plan or development on the free use of waters and waterways within the district.***
 - ***33-129(e)(3): The effect of the proposed plan or development upon erosion control in the said district.***
 - ***33-129(e)(4): The effect of the proposed plan or development upon the flow [of] waters in said district.***



Criteria for SADF Applications

- **Orange County Code, Chapter 33, Article IV, Section 33-129(e) includes the following criteria by which shoreline alterations are evaluated:**
 - ***33-129(e)(5): The effect of the proposed plan or development upon formation of stagnant pockets likely to collect debris.***
 - ***33-129(e)(6): The effect of the proposed plan or development upon the natural beauty and recreational advantage within said district.***
 - ***33-129(e)(7): The effect of the proposed plan or development upon the conservation of wild life, marine life, and other natural resources.***
 - ***33-129(e)(8): The effect of the proposed plan or development upon the upland surrounding or necessarily affected by said plan or development.***