



TOWN OF TRURO Conservation Commission

PUBLIC MEETING AGENDA Monday, May 1, 2023 Meeting start time 5:00

Remote Meeting Access Instructions

This will be a remote meeting. Citizens can view the meeting on Channel 18 in Truro and on the Town's web site on the "Truro TV Channel 18" button under "Helpful Links" on the homepage. Once the meeting has started, click on the green "Watch" button in the upper right of the page. **To provide comment during the meeting, please call-in toll free at 1 877 309 2073 and enter the following access code when prompted: 464-567-165#** To join this meeting from your computer, tablet or smartphone: <https://global.gotomeeting.com/join/464567165> Please note that there may be a slight delay (15-30 seconds) between the meeting and the live-stream (and television broadcast). If you are watching the meeting and calling in, please lower the volume on your computer or television during public comment so that you may be heard clearly. We ask that you identify yourself when calling in; citizens may also provide public comment for this meeting by emailing the Conservation Agent at cheebe@truro-ma.gov with your comments.

PUBLIC HEARINGS: The Truro Conservation Commission holds the following public hearings in accordance with the provisions of MGL Ch. 131, s. 40, the Wetlands Protection Act and the Truro Conservation Bylaw, Chapter 8:

1. **Notice of Intent: 706 Shore Road, Maria Kuliopolus (SE#75-1169):** electrical trench; Coastal Dune, Barrier Beach, Land Subject to Coastal Storm Flowage (Map 1, Parcel 5) *continued from 4/3/2023*
2. **Request for Determination of Applicability: 19 South Pamet Road, Sebastian Snow:** confirmation of delineations; Coastal Bank, Bordering Vegetated Wetland (Map 51, Parcel 95) *continued from 4/3/2023*
3. **Request for Determination of Applicability: 21 South Pamet Road, Sebastian Snow:** confirmation of delineations; Coastal Bank, Bordering Vegetated Wetland (Map 51, Parcel 36) *continued from 4/3/2023*
4. **Notice of Intent: 38 Fisher Road, Kimberly Chester (SE#75-1168):** Title 5 upgrade & addition to dwelling; Coastal Bank, Salt Marsh, Land Subject to Coastal Storm Flowage (Map 53, Parcel 35)
5. **Notice of Intent: 40 Corn Hill Road, Jonathon Curtis & Susan Goldstein (SE#75-1170):** Install underground electrical line; Barrier Beach, Coastal Dune, Coastal Banks, Land Subject to Coastal Storm Flowage (Map 45, Parcel 118 & Map 49, Parcel 17)
6. **Notice of Intent: 544 Shore Road, Beach Townhomes Condominium Trust (SE#75-1171):** install bulkhead; Barrier Beach, Coastal Beach, Coastal Dune, Land Subject to Coastal Storm Flowage (Map 7, Parcel 5)
7. **Notice of Intent: 2 Katherine Road, Andrew & Marian Carboy:** small addition, rebuild porch & fencing; Coastal Bank, Land Subject to Coastal Storm Flowage (Map 59, Parcel 52)
8. **Notice of Intent: 494 Shore Road, Sharon Santangelo (SE# 75-1173):** "After the fact" replacement of deck & shed; Barrier Beach, Coastal Dune, Land Subject to Coastal Storm Flowage (Map 8, Parcel 21)
9. **Notice of Intent: 3 Corn Hill Path, Gerald & Marlene Talbot (SE#75-1172):** beach access staircase; Coastal Dunes, Coastal Bank, Land Subject to Coastal Storm Flowage (Map 45, Parcel 24)
10. **Notice of Intent: 6 Castle Road, Pamela Blair:** vegetation management; River Front, Coastal Bank (Map 50, Parcel 146)
11. **Administrative Reviews:** (1) 23 Bayview Road: beach stair replacement; extension request; (2) 372 Shore Road: beach stair replacement. (3) 510 Shore Road, U:B: 1:1 deck replacement; (4) 482 Shore Road: sand nourishment; (5) 209 Shore Road: annual beach raking; (6) 655 Shore Road: 1:1 location replace split rail fence with other
12. **Minutes:**

Site visits: Commissioners will meet at Town Hall on Monday, May 1, 2023, at 10:00 AM and proceed to:

- 1.) 6 Castle Road
- 2.) 2 Katherine Road
- 3.) 38 Fisher Road;
- 4.) 40 Corn Hill Road
- 5.) 3 Corn Hill Path
- 6.) 494 Shore Road
- 7.) 544 Shore Road
- 8.) 706 Shore Road



706 Shore Rd - continued from 4/3/23

EVERSOURCE

WO #10004723

Engineering Details

Line 4-96-96

22.8/13.2kV

3-559AL to Sta 976 & 1 set 3-1/0AL 25kV UG Pri 55' +/-

P9255/396 New 3-15T B 3ph Pri Riser 1-75 (A)

New 10161/010 M126 Pri Pull Box (5'x5'x5')

CONTACT LARRY BELL FOR ALL INSPECTIONS 339-987-7072 OR 17-905-6072

New 2-4" pipes in concrete & 1 set 3-1/0AL 25kV UG Pri 250' +/-

New 10161/020 M126 Pri Pull Box (5'x5'x5')

New customer UG secondary

New customer UG secondary

New 10161/030A Large Sec H-H

New customer UG secondary

New 10161/030 300kVA, 3ph 22.8/13.2kV, 120/208V pm xfmr

3-559AL To 4-675-675

(Not Shown) Eversource to own, maintain, &:
-cut & remove the existing 75kVA, 1ph 22.8/13.2kV, 120/240V OH xfmr w/ c/o on P9255/396 (phA).
-replace the existing 50kVA with a 100kVA, 1ph, 22.8/13.2kV 120/240V OH xfmr on P9255/394 (phB).
-remove the existing secondary breaks on P9255/394 towards P9255/395.
-replace the existing 3-#2Cu with 3x4/0AL, 1ph secondary mains from P9255/394 to P9255/398 via 9255/395, /396, & /397, 4 sections, TL = ?

Eversource to install, own, & maintain:
-2-4" pipes in concrete with counterpoise & from P9255/396 to 10161/010 new primary pull box 2ft +/- within private property line. DL = 55' +/-.
-3-15T fused cutouts & make new primary riser on P9255/396.
-3-1/0AL 25kV UG primary cable from P9255/396 to new xfmr pad 10161/030 via 2 new pull boxes, 3 sections, TDL = 305' +/-.
-a 300kVA, 3ph, 22.8/13.2kV, 120/208V pm xfmr at new 10161/030.
-(make) new secondary terminations at new pm xfmr (customer to provide connectors).

Customer to install, Eversource to own & maintain:
-2-4" pipes in concrete with counterpoise from/including new M1216 pull box 10161/010 to & including new 3ph xfmr pad /030 via & including new M1216 pull box /020, 2 sections, TDL = 250' +/-.
-All secondary cable & 4" pipes to & including new large secondary hand-hole 10161/030A behind new pm xfmr-10161/030.

Customer to install, own & maintain:
-all 4" secondary cable & pipes from new large secondary hand-hole /030A to main building services.

NOTE: Customer site plan provided was not scaled as required.

10161 Eversource

Sketch is not to scale

706 Shore Rd, Truro
C.J. Kennedy Eng'r 10/18/22

2+3

SAFE HARBOR

ENVIRONMENTAL MANAGEMENT
HABITAT RESTORATION



Request For Continuance to Scheduled June 5, 2023, Commission Hearing

Date: April 27, 2023

To: Town of Truro Conservation Commission

From: Gordon Peabody, Safe Harbor Environmental

Office: 95 Commercial St. Room 211, Wellfleet, MA, 02667

Mail: P.O. Box 880, Wellfleet, MA, 02667

Contact: email gordonpeabody@gmail.com Phone: 508-237-3724

RE: 19 & 21 South Pamet Road

On behalf of the property owners, we are respectfully requesting a continuance from the May 1, 2023, Commission Hearing until the scheduled June 5, 2023, Commission Hearing to provide accurate provisions per Commission request. Thank you for confirming.

Thank you,
Gordon Peabody

Conservation Commissioner
TOWN OF TRURO

APR 27 2023



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP.

Conservation Commission
MassDEP File Number

Document Transaction Number
Truro
City/Town

4

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

38 Fisher Road

a. Street Address

Truro

b. City/Town

02666

c. Zip Code

Latitude and Longitude:

53

f. Assessors Map/Plat Number

d. Latitude

35

g. Parcel /Lot Number

e. Longitude

2. Applicant:

Kimberly

a. First Name

Chester

b. Last Name

c. Organization

6 Perry Street

d. Street Address

Sherborn

e. City/Town

508-397-7127

h. Phone Number

i. Fax Number

MA

f. State

kbellchester@gmail.com

j. Email Address

01770-1303

g. Zip Code

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Paul

a. First Name

Shea

b. Last Name

IEC

c. Company

162 West Long Pond Road

d. Street Address

Plymouth

e. City/Town

508-274-0310

h. Phone Number

i. Fax Number

MA

f. State

paulshea162@gmail.com

j. Email address

02360

g. Zip Code

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

\$220.00

a. Total Fee Paid

\$97.50

b. State Fee Paid

\$122.50

c. City/Town Fee Paid



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

MassDEP File Number

Document Transaction Number

Truro

City/Town

A. General Information (continued)

6. General Project Description:

Proposed Title 5 upgrade to existing septic system to replace a cesspool, and a house addition, located at 38 Fisher Road, Truro, MA. Proposed site alterations will occur within the 100' buffer zone of a coastal bank and salt marsh located on the other side of Fisher Road. Alterations will be located outside of the 100 year flood zone, Zone AE El.12.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- | | |
|---|---|
| 1. ☐ Single Family Home | 2. ☐ Residential Subdivision |
| 3. ☐ Commercial/Industrial | 4. ☐ Dock/Pier |
| 5. ☐ Utilities | 6. ☐ Coastal engineering Structure |
| 7. ☐ Agriculture (e.g., cranberries, forestry) | 8. ☐ Transportation |
| 9. ☒ Other | |

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Barnstable

a. County

b. Certificate # (if registered land)

c. Book

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- ☒ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

38 Fisher Rd



Fisher Road
38

Google

Map data ©2023 200 ft



38 Fisher Rd

Building



Directions



Save



Nearby



Send to
phone



Share



38 Fisher Rd, Truro, MA 02666

Photos

PROJECT DESCRIPTION – 38 Fisher Road, Truro, MA

The proposed project by the applicant includes a septic system upgrade with the installation of a new Title 5 septic system (Alternative Technology – Advantex system) to replace the antiquated cesspool located within the property. This new Title 5 septic system will be a significant improvement for the collection and treatment of wastewater within the subject property, the local groundwater system, and the adjacent wetland resource areas located on the other side of Fisher Road (paved road). The existing cesspool will be removed from the property. The project also includes a second story addition to the existing residential house.

The subject property is located adjacent to coastal wetland resource areas. There is a coastal bank, and a salt marsh located off-property, located on the other side or eastern side of Fisher Road from the subject property. The 100' buffer zone from the boundary of the salt marsh, and from the top of coastal bank extends across Fisher Road to the subject property. There is a FEMA 100 year flood zone (AE El. 12), Land Subject to Coastal Storm Flowage, which extends onto the subject property at 38 Fisher Road. No site alterations are proposed within the FEMA 100 year flood zone area. No alterations are proposed within the 50' buffer zone of the wetland resource areas, which includes the location of Fisher Road, which is located within the 50' buffer zone of the coastal bank and salt marsh.

The proposed project will not alter any areas of the FEMA 100 year flood zone (El. 12) located within the far eastern section of the subject property. The proposed project and subject property is separated from the top of coastal bank and the boundary of the salt marsh (Flags A3 – A6) by Fisher Road. The off-property coastal bank and the salt marsh are located to the east of Fisher Road. Proposed site alterations will occur within the 50 to 100' buffer zone of the top of coastal bank and the edge of the salt marsh located on the other side of Fisher Road. Again, Fisher Road (paved road) is located within the 50' buffer zone of the coastal bank and salt marsh (off-property) located just to the east of Fisher Road. The proposed Title 5 Advantex alternative technology septic system will be a significant improvement to the local groundwater system, and the subject wetland resource areas (coastal bank, salt marsh) located downgradient on the other side or eastern side of Fisher Road, from the subject property at 38 Fisher Road. Adequate erosion/sedimentation controls will be utilized at the limit of work lines to protect the downgradient salt marsh from any sedimentation impacts during the construction phase of this project. The second floor house addition will occur within the existing footprint of the existing residential house within the property.

The proposed project meets the performance standards of the Wetlands Protection Act. The removal of the old cesspool, and the installation of a new Advanced Technology (Advantex) septic system to replace the old cesspool within this property is a positive environmental impact to the water quality of the local groundwater system, and to the downgradient wetland resource areas (coastal bank and salt marsh) located on the other side or eastern side of Fisher Road in Truro.

Notification to Abutters – 38 Fisher Road, Truro, MA

Notice of Intent application

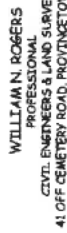
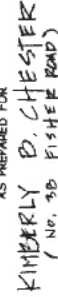
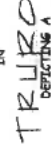
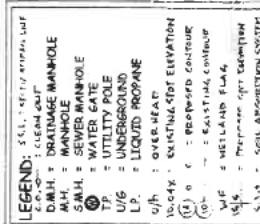
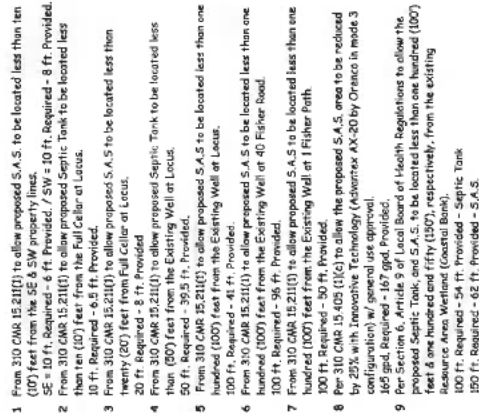
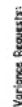
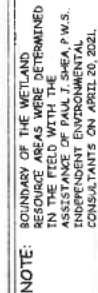
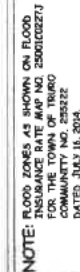
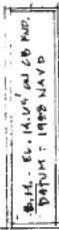
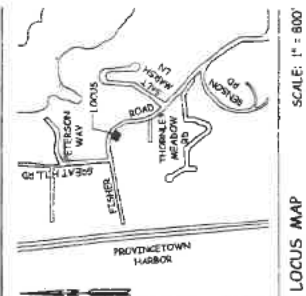
Kimberly Chester

Map 53, Parcel 35

38 Fisher Road

Truro, MA

This letter is a notification to abutting property owners that the applicant has filed a Notice of Intent application with the Truro Conservation Commission for proposed site alterations located at 38 Fisher Road in Truro. The proposed project includes a septic system upgrade, which includes the installation of a new Title 5 septic system (alternative technology), to replace the existing old cesspool within the property. The project also includes a second story addition to the existing house. Coastal wetland resource areas include salt marsh, coastal bank, land subject to coastal storm flowage. Proposed site alterations will occur within the 100' buffer zone of a salt marsh and coastal bank located on the other side of Fisher Road. A public hearing (remote access hearing) has been scheduled with the Truro Conservation Commission at the Truro Town Hall for Monday evening, May 1, 2023, at 5:00 pm. For more information, contact the Truro Conservation Commission at the Truro Town Hall, at 508-349-7004.



ALL CONSTRUCTION TO BE PERFORMED IN STRICT COMPLIANCE WITH THE MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION AND WOOD FRAME CONSTRUCTION MANUAL, FOR ONE- AND TWO-FAMILY DWELLINGS FOR EXPOSURE B WIND LOADS - 110 MPH

ANY STRUCTURAL ENGINEERING REVIEW, IF NECESSARY, IS AT THE DISCRETION OF THE BUILDING COMMISSIONER AND WILL BE THE RESPONSIBILITY OF THE OWNER

NEW PEAK
EL. 45.0'

ATTIC
LOFT EL. 34.29'

PROPOSED
SECOND FLOOR
& ATTIC / LOFT
ADDITION

EXISTING PEAK
EL. 32.5'

2nd. fl. EL. 25.45'

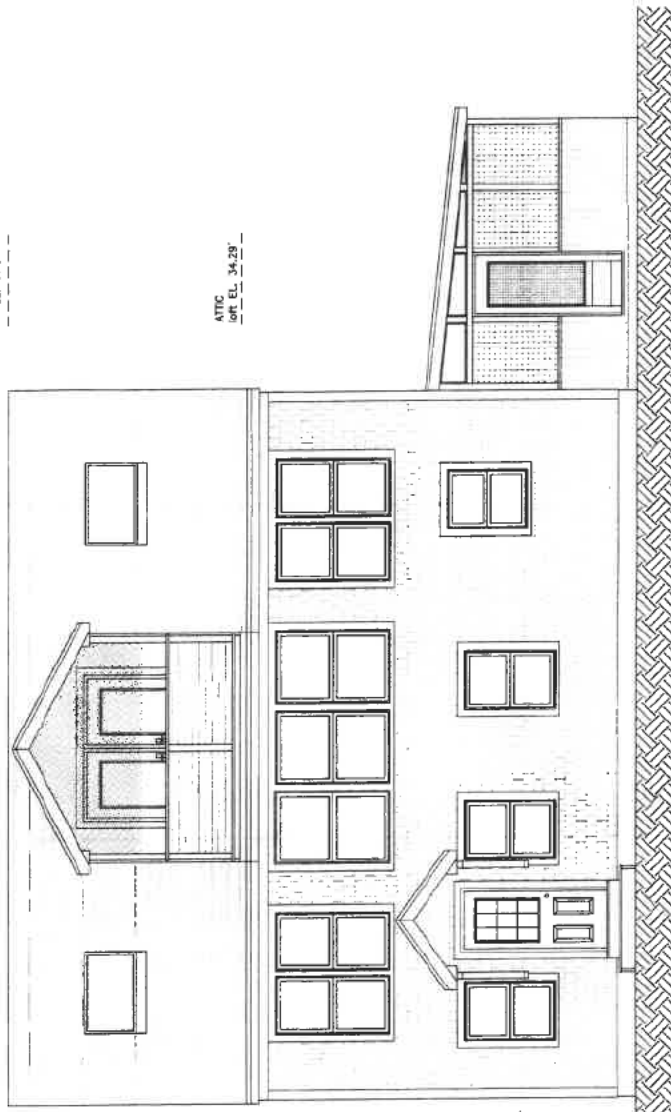
EXISTING
DWELLING

1st. fl. EL. 17.51'

FRONT ELEVATION

(WEST)

(1/4" = 1')



NEW PEAK
EL. 45.0'

ATTIC
LOFT EL. 34.29'

6:12

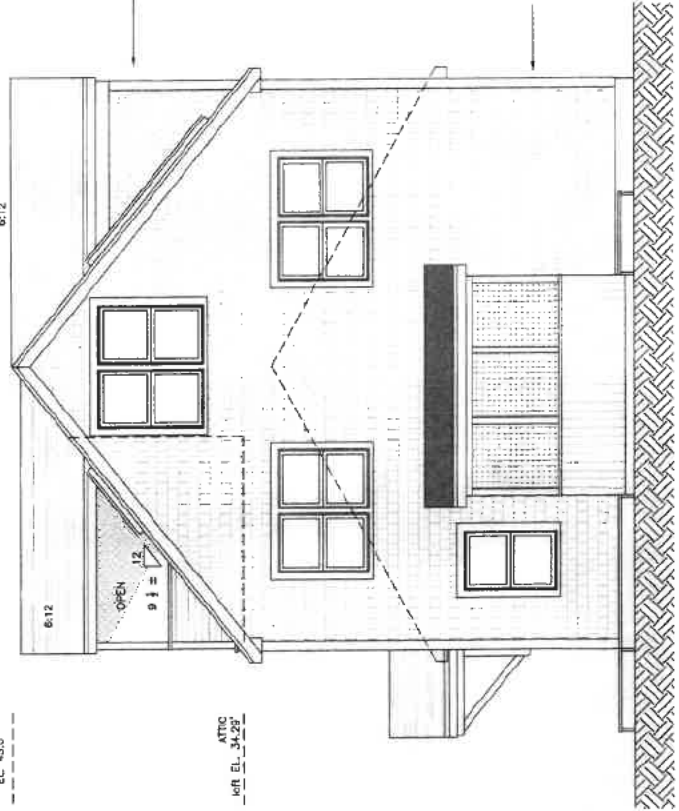
PROPOSED
SECOND FLOOR
& ATTIC / LOFT
ADDITION

EXISTING PEAK
EL. 32.5'

2nd. fl. EL. 25.45'

EXISTING
DWELLING

1st. fl. EL. 17.51'



RIGHT SIDE
ELEVATION

(SOUTH)

(1/4" = 1')



PROPOSED ADDITIONS / RENOVATION

KIMBERLY CHESTER

38 FISHER ROAD

-FRONT ELEVATION

-RIGHT SIDE ELEVATION

DECEMBER 14, 2022

TRURO

ALL CONSTRUCTION TO BE PERFORMED IN STRICT COMPLIANCE WITH THE MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION AND WOOD FRAME CONSTRUCTION MANUAL FOR ONE- AND TWO-FAMILY DWELLINGS FOR EXPOSURE B WIND LOADS - 110 MPH

ANY STRUCTURAL ENGINEERING REVIEW, IF NECESSARY, IS AT THE DISCRETION OF THE BUILDING COMMISSIONER AND WILL BE THE RESPONSIBILITY OF THE OWNER

REAR ELEVATION (EAST)

(3/16" = 1')

PROPOSED
SECOND FLOOR
& ATTIC / LOFT
ADDITION

NEW PEAK
EL. 45.0'

ATTIC
LEFT EL. 34.29'

EXISTING PEAK
EL. 32.6'

2nd. FL. EL. 25.46'

1st. FL. EL. 17.51'

EXISTING
DWELLING

LEFT SIDE ELEVATION (NORTH)

(1/4" = 1')



PROPOSED ADDITIONS / RENOVATION

KIMBERLY CHESTER

TRURO

38 FISHER ROAD

-REAR ELEVATION

-LEFT SIDE ELEVATION

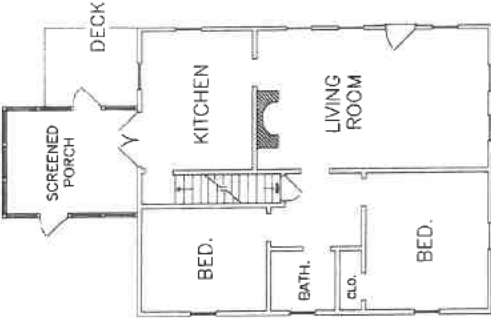
DECEMBER 14, 2022

ARC Design LLC
ARCHITECTURAL
DRAWING

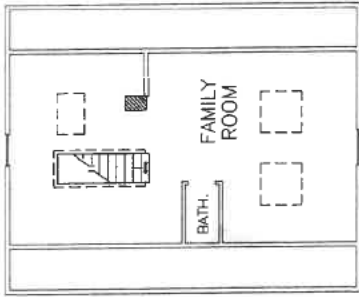
LEGEND

--- REMOVES WALLS, DOORS, ETC. TO BE REMOVED
 --- DENOTES NEW LAYOUT

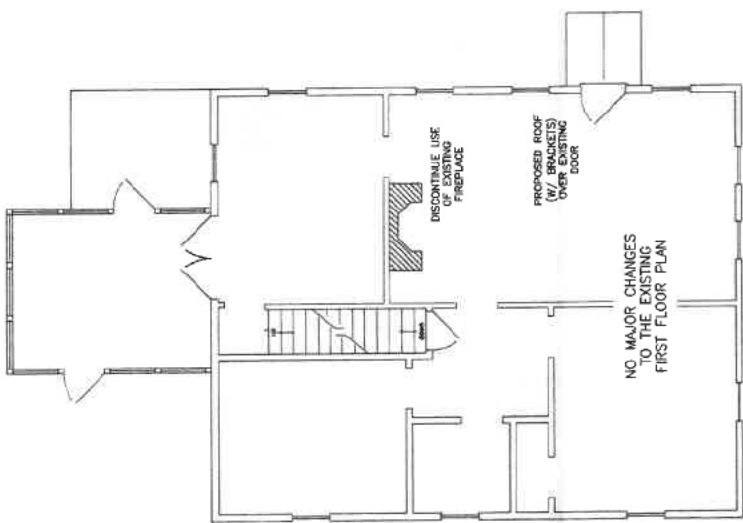
EXISTING FIRST FLOOR (1/8" = 1')



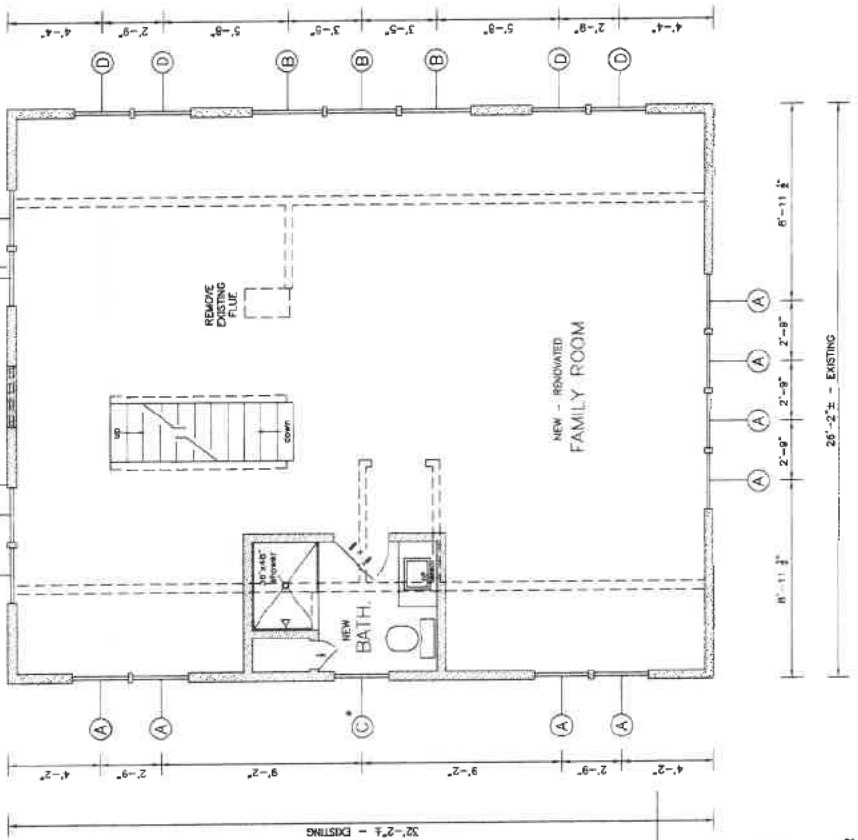
EXISTING SECOND FLOOR (1/8" = 1')



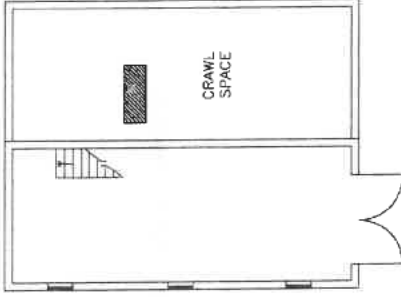
PROPOSED SECOND FLOOR (1/4" = 1') AREA = 844 ± SF.



EXISTING FIRST FLOOR (3/16" = 1')



EXISTING BASEMENT (1/8" = 1')



PROPOSED ADDITIONS / RENOVATION

KIMBERLY CHESTER

38 FISHER ROAD

PROPOSED SECOND FLOOR PLAN

EXISTING FLOOR PLANS

DECEMBER 14, 2022

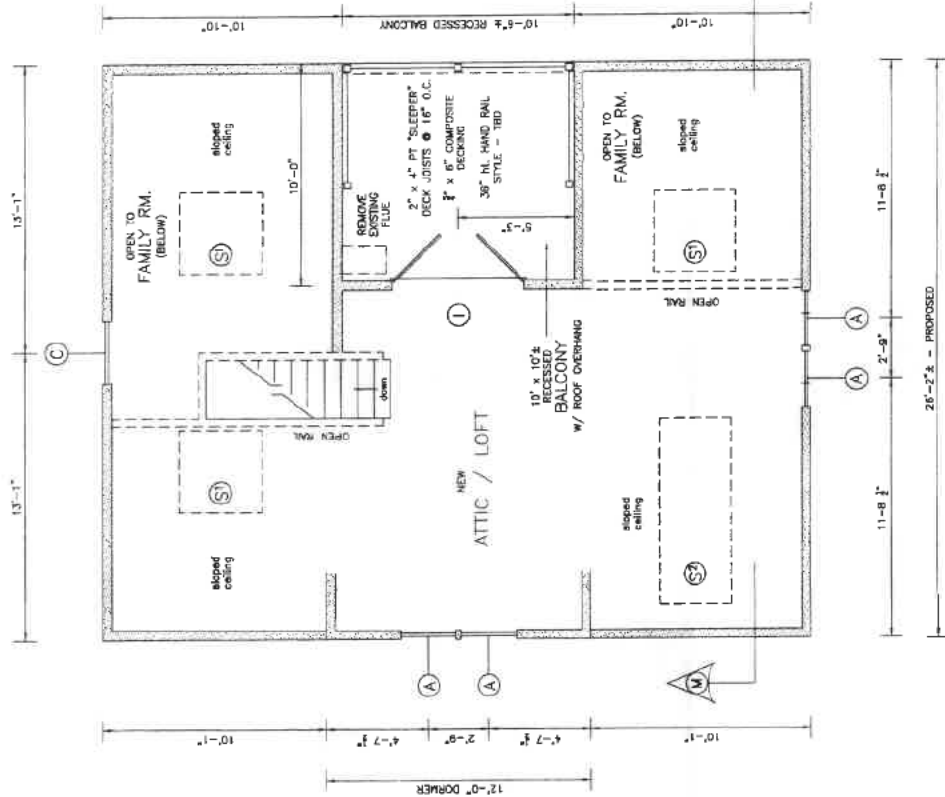
ALL CONSTRUCTION TO BE PERFORMED IN STRICT COMPLIANCE WITH THE MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION AND WOOD FRAME CONSTRUCTION MANUAL FOR ONE- AND TWO-FAMILY DWELLINGS FOR EXPOSURE B WIND LOADS - 110 MPH

ANY STRUCTURAL ENGINEERING REVIEW, IF NECESSARY, IS AT THE DISCRETION OF THE BUILDING COMMISSIONER AND WILL BE THE RESPONSIBILITY OF THE OWNER

ARC Design LLC
 ARCHITECT
 REG. NO. 271-0201

TRURO

PROPOSED
ATTIC / LOFT FLOOR
(1/4" = 1')



DOOR & WINDOW SCHEDULE		CHESTER	
KEY	ITEM	DESCRIPTION	NOTES
A	WINDOW	12. AWC. P12444 IN	20 1/2" x 25 7/8" DOUBLE SLID POCKET
B	"	6. AWC. P12444 IN	20 1/2" x 25 7/8" *TYPED GLASS
C	"	6. AWC. P12444 IN	20 1/2" x 25 7/8" *TYPED GLASS
D	"	6. AWC. P12444 IN	20 1/2" x 25 7/8" *TYPED GLASS
HOLD ALL HEADER HEIGHTS @ 6'-8" UNLESS OTHERWISE NOTED			
S1	ENTRY	3. VELL. 2008 S10124T	44 1/4" x 45 3/4" VERTICAL
S2	ROOF WINDOW	1. VELL. 601 C1000	36 2/8" x 10 1/4" BALCONY ROOF WINDOW
REPLACE WINDOW, IF ANY, ARE NOT INCLUDED			
I	FINISHED	1. AWC. P12444 IN	72" x 80" OUTRIGING OF DOOR

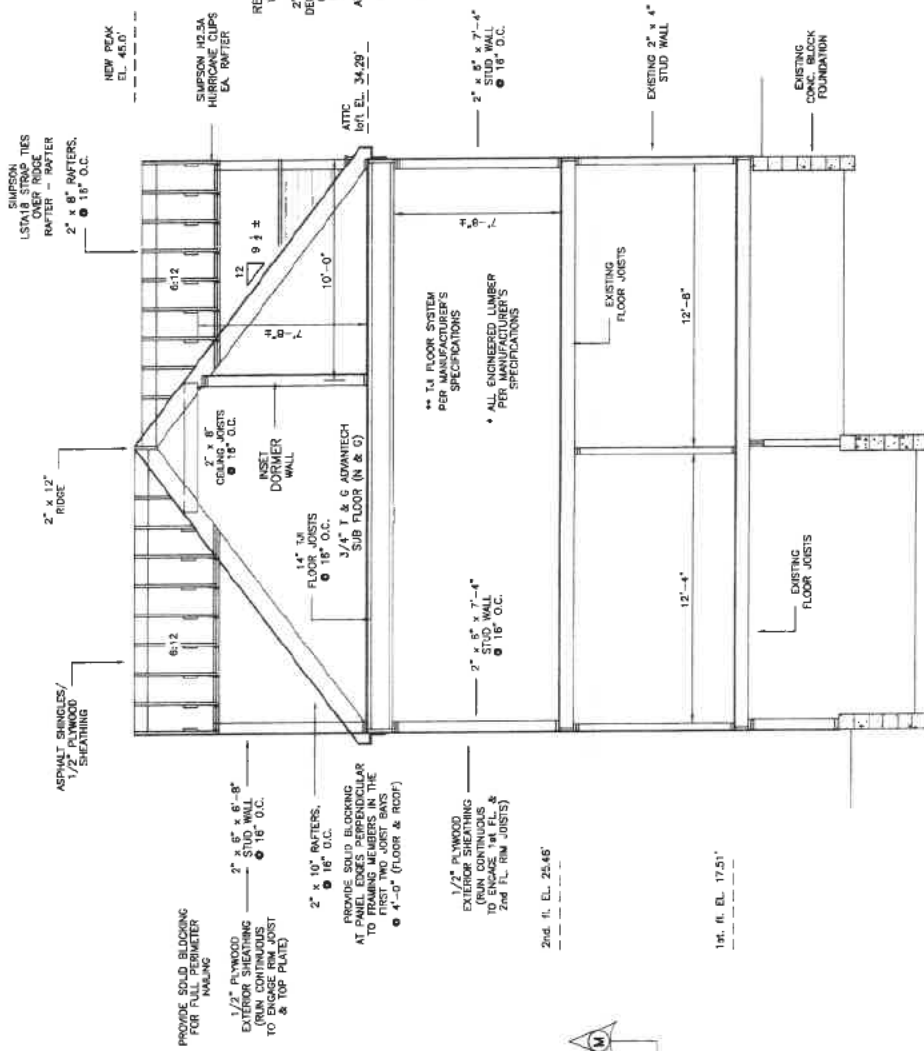
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ARC Design LLC
ARCHITECT
603.237.0261

FRAMING
SECTION "M"
(1/4" = 1')

* VERIFY ALL DETAILS WITH BUILDER
ADJUST AS REQUIRED

- USE ANDERSEN SERIES 400 H-P LOW E GLASS COLOR TO BE DETERMINED BY OWNER
- OPTIONAL INTERIOR / EXTERIOR GRILLE SYSTEM
- VERIFY ALL ROUGH OPENINGS PRIOR TO CONSTRUCTION
- VERIFY ALL MILLWORK PRIOR TO PURCHASE



PROPOSED ADDITIONS / RENOVATION

KIMBERLY CHESTER

38 FISHER ROAD
--PROPOSED ATTIC / LOFT FLOOR PLAN
--DOOR & WINDOW SCHEDULE
DECEMBER 14, 2022

TRURO

5

PROJECT NARRATIVE

1. Introduction

This Notice of Intent (NOI) has been submitted to permit the proposed installation of an underground electrical line to connect service to the existing single-family home located 40 Corn Hill Road in Truro. The proposed electrical route will traverse two properties including 40 Corn Hill Road and 0 Pamet River Road (the route). The Town of Truro Assessors Department references the parcels as #45-118-0 and #49-17-0, respectively. The proposed project is located within wetland resource areas and associated buffer zones. Prior to the start of work, erosion controls will be installed in order to protect the wetland resource areas. This application is being submitted in accordance with the Massachusetts Wetlands Protection Act and the Town of Truro Wetlands Protection Bylaw.

2. Site Description

The proposed electric line will service the existing home at 40 Corn Hill Road (the site). The site consists of a single-family home with associated driveway, detached garaged, shed, and landscape features including a patio, pathways, outdoor shower, decking with stairs, maintained lawn, etc. The site is located to the south of Corn Hill Road and utilizes a shared driveway located along the property at 36 Corn Hill Road. The site has frontage on Corn Hill Road where the road veers north toward Corn Hill Beach. Along this frontage, there is an existing footpath that crosses through the northern portion of the site and directly to the developed portion of the property. The footpath is well defined with varying widths. The electrical route is proposed to be installed within this footpath which is detailed further below. The proposed route also traverses a short length of land across parcel #49-17-0. This parcel is owned by the Town of Truro and consists of a long narrow lot that appears to be an old railroad bed extending from Corn Hill Road to Pamet Harbor. The proposed route will extend across the northern-most portion of this lot, parallel to Corn Hill Road to reach the existing utility pole.

Environmental Consulting & Restoration, LLC (ECR) performed its latest review of the site on March 7, 2023 to examine the existing conditions and confirm the previously completed wetland delineation is still accurate. On September 22, 2022 ECR completed a wetland delineation at the site for two NOI filings (SE75-1139 & SE75-1148) for 40 Corn Hill Road that were reviewed and approved by the Truro Conservation Commission in 2022. Please note, there is ongoing site work that is underway in accordance with these two Orders of Conditions. During ECR's most recent site inspection the wetland flags were reviewed and refreshed where necessary for this filing. ECR can confirm that the limits of the wetland resource areas have not changed since the delineation in 2022. As a result of the field work and review of available environmental databases, ECR is able to confirm that the site contains or is near the following wetland resource areas and areas of Conservation Commission jurisdiction:

- Coastal Bank
- Coastal Dune
- Inland Bank to a perennial stream/tidal river
- Barrier Beach
- 100-Foot Buffer Zone
- 200-Foot Riverfront Area
- Land Subject to Coastal Storm Flowage (FEMA flood zone AE el. 12 ft.)
- Bordering Vegetated Wetland (within 100 feet of the site)

Conservation Commission
TOWN OF TRURO

APR 10 2023

Notes:

1. A small portion of the route is located within an area mapped as Priority Habitat & Estimated Habitat for Rare Species according to the Massachusetts Natural Heritage & Endangered Species Program (MaNHESP).
2. The site does not contain or is near a Certified Vernal Pool according to the MaNHESP.
3. The site is not located within an Area of Critical Environmental Concern (ACEC).

3. Proposed Activities

This application has been submitted to permit the installation of an underground electrical line that is beyond the scope of the two Orders of Conditions currently open. Portions of the proposed electrical line route are located within a Coastal Dune, Coastal Bank, Riverfront Area, Land Subject to Coastal Storm Flowage and the associated 100-foot buffer zones. Please note, the entire route is located within previously disturbed portions of the site and all disturbance associated with the project will be temporary in nature. As described below, all disturbed areas associated with the trenching will be stabilized and restored to their previously existing conditions. The proposed project will involve the following activities:

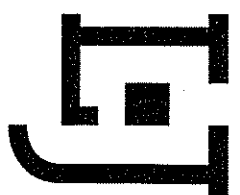
- Installation of Erosion Controls – Prior to the start of work a siltsock, or alternative acceptable to the Truro Conservation Commission, will be installed along the proposed limit of work to protect the nearby wetland resource areas.
- Proposed Installation of the Underground Electrical Line – The proposed underground electrical line shall be installed entirely within previously disturbed areas. From the existing utility pole located at the corner of Corn Hill Road the utility line will be installed within a trench that extends along the shoulder of Corn Hill Road, then within the existing footpath at 40 Corn Hill Road and finally through the developed portion of the property to connect service as detailed on the site plans. The trench will be excavated by a small track-machine and will be approximately 2 feet wide and 2 feet deep. The excavated material shall be stockpiled alongside the trench to be used as backfill once the electrical line is installed. Once backfilled, the material will be gently graded back to the pre-existing condition. The total length of required trenching within resource areas and buffer zone is approximately 440 linear feet.
- Stabilization/Restoration – Once the electrical line has been installed, the trench backfilled and graded, the disturbed areas will be restored and stabilized using a native seed mix. All areas disturbed by the trench shall be hand seeded with the 'Natural Perfection' mix from Colonial Seed (see profile attached). The exception to seeding will be the areas of temporarily disturbed dune. As the route within the Dune currently exists as bare sandy areas (footpath and road shoulder), to restore these areas back to their previously existing condition they will simply be gently graded and not seeded once backfilled.

4. Summary

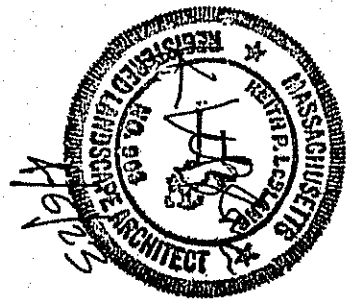
Erosion and sediment control measures will be implemented and maintained throughout the duration of the installation process to prevent the conveyance of sedimentation into environmentally sensitive areas. Disturbed areas will be stabilized upon the completion of work and restored to their previously existing conditions. Because the utility line is located underground, there will be no permanent alteration of the landscape – all work areas will be returned to their original elevation and condition. In the event that intense rainfall is expected, reinforcing control measures will be installed as needed to protect all wetland resource areas. Stockpiling of soils, shall be located immediately adjacent to the trench and backfilled as soon as possible. Erosion

Notice of Intent
40 Corn Hill Road, Truro

control measures shall remain in place and be maintained until such time that a Certificate of Compliance has been issued by the Truro Conservation Commission, stating that the project has been constructed in accordance with the conditions set forth in the Order of Conditions. As a result, it is my opinion that the project protects the Interests of the Massachusetts Wetlands Protection Act and the Town of Truro Conservation Bylaw for the adjacent Resource Area and the Applicant is entitled to an Order of Conditions approving the project.



LEBLANC JONES LANDSCAPE ARCHITECTS, INC.
535 Albany Street No. 5A
Boston, MA 02118
617.426.6475
leblancjones.com



GENERAL NOTES:

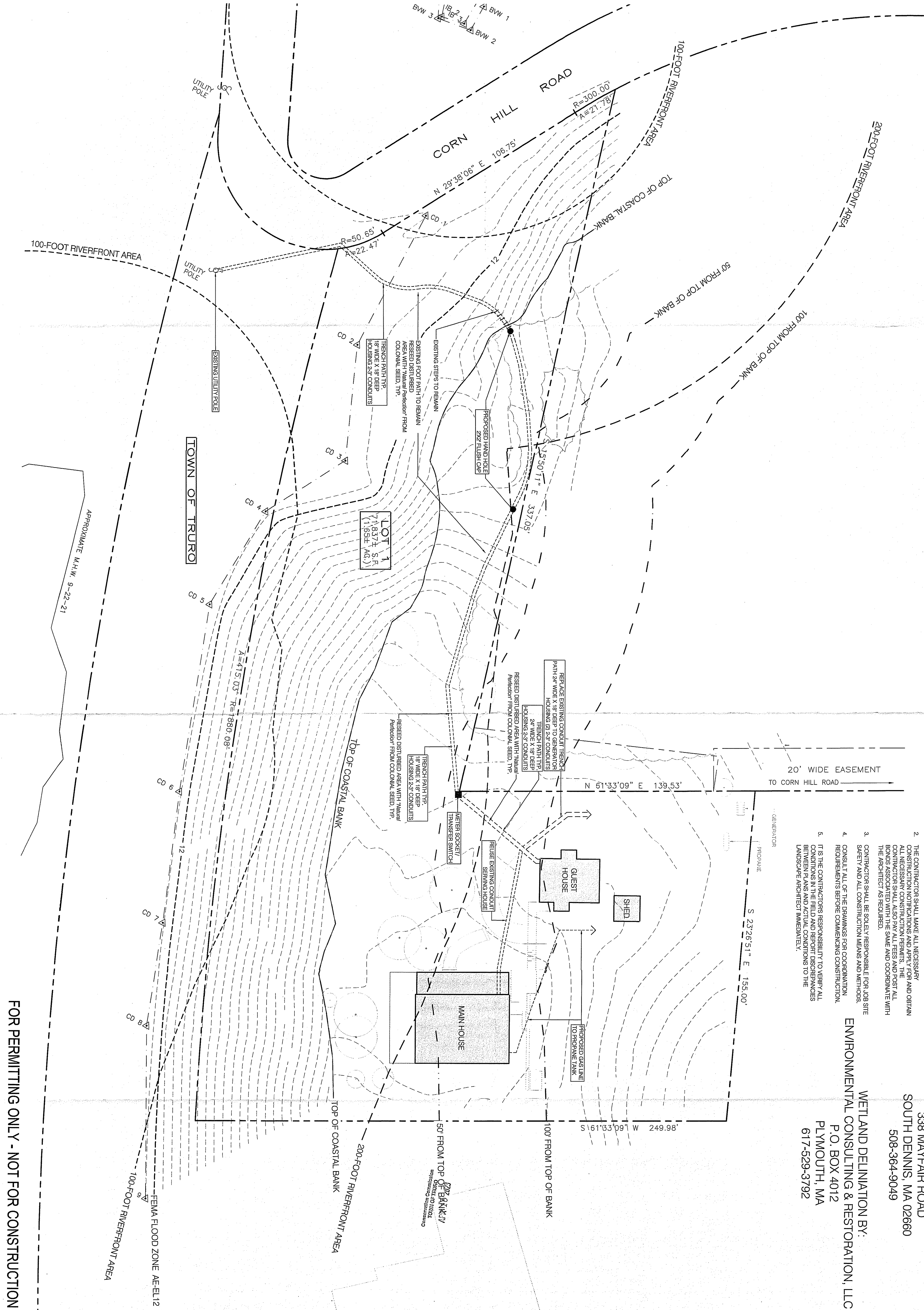
- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS PREPARED BY DEMAREST LAND SURVEYING, DATED 11/09/2021 AND 04/04/2023.
- THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS. THE CONTRACTOR SHALL ALSO PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME AND COORDINATE WITH THE ARCHITECT AS REQUIRED.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.
- CONSULT ALL OF THE DRAWINGS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL CONDITIONS IN THE FIELD AND REPORT DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE LANDSCAPE ARCHITECT IMMEDIATELY.

SURVEY BY:

DEMAREST LAND SURVEYING
338 MAYFAIR ROAD
SOUTH DENNIS, MA 02660
508-364-9049

WETLAND DELINEATION BY:

ENVIRONMENTAL CONSULTING & RESTORATION, LLC
P.O. BOX 4012
PLYMOUTH, MA
617-529-3792



FOR PERMITTING ONLY - NOT FOR CONSTRUCTION

Revisions	No	Date	Description

40 CORN HILL RD

TRURO, MA

Scale: 1"=20'

Project No: 2135

Date: 04-10-23

PROPOSED TRENCHING
AND UTILITIES

L1.0



1.

Introduction

On behalf of the Applicant, Baybeach Townhome Condominium Trust/Association, LEC Environmental Consultants, Inc., (LEC) is filing this Notice of Intent Application (NOI) for a proposed bulkhead to protect the Baybeach Condominiums at 544 Shore Road. Proposed work occurs within Coastal Beach, Coastal Dune, Barrier Beach, and Land Subject to Coastal Storm Flowage as protected under the *Massachusetts Wetlands Protection Act and Regulations* (310 CMR 10.00) and the *Truro Conservation Bylaw* (Chapter VIII of the General By-Laws) and *Truro Conservation Regulations*. The proposed bulkhead is necessary to protect the Baybeach Condominiums that have experienced continued and significant coastal storm damage. Site photographs are included as Appendix B, depicting the coastal site conditions in May 2021 in comparison to March 2023, following significant coastal storm damage this past winter.

The following NOI Application provides a description of the existing site conditions, Wetland Resource Areas, and proposed project that will protect the interests and values of the Resource Areas. Project details are depicted on the *Site Plan*, prepared by Grady Consulting, LLC, dated April 7, 2023 (Appendix C).

2.

General Site Description

The project site affords frontage on Shore Road (north) and Cape Cod Bay (south), south of Route 6 and Pilgrim Lake in North Truro. The Baybeach Townhome Condominiums contain 11 units within a long rectangular building and two adjacent cottages. Based on assessor's records, the structures appear to have been constructed in 1963. All three structures are visible on historic aerial images from 1971 (see photograph below via historicaerials.com). A paved parking lot exists between the long rectangular building and Shore Road.

Ground-penetrating radar has indicated the presence of an underlying (presumed) seawall or bulkhead southwest of the long rectangular building, as depicted on the *Site Plan*.

The subject parcel is located within a Coastal Dune, Land Subject to Coastal Storm Flowage, and on a Barrier Beach between Pilgrim Lake and Cape Cod Bay. As depicted on the photographs included within Appendix B, snow fencing with American beachgrass (*Ammophila breviligulata*) plugs and cedar shims (biomimicry) were previously present within the Coastal Dune to trap and build-up sand. Previously, the Coastal Dune was

more robust and vegetated as evident on prior aerial images (i.e., 2013-2014 MassGIS Aerial Orthophoto).

Recent storms have caused significant damage and currently, only remnant sections of the snow fencing are present. As evident in photographs 11 and 12 (Appendix B), the easterly end of the building's foundation is now exposed.



2.1 FEMA Designation

According to the *Federal Emergency Management Agency Flood Insurance Rate Maps*, for Barnstable County, Massachusetts (Map Number 25001C0117J), dated July 16, 2014, the subject parcel is located within Zone VE (El. 115) – *Coastal areas with a 1% or greater chance of flooding (base flood elevation determined)* (Appendix A, Figure 3).

2.2 NHESP Designation

According to the 15th Edition of the *Massachusetts Natural Heritage Atlas* (effective August 1, 2021), areas south of the long-rectangular building are located within Priority Habitat of Rare Species/Estimated Habitat of Rare Wildlife mapped by the Massachusetts Natural Heritage and Endangered Species Program (NHESP) (Appendix A, Figure 4). The seaward Coastal Resource areas are specifically mapped as the southeasterly

terminus of potential shorebird foraging habitat as the beach narrows, in comparison to wider beach/dune conditions to the north.

A copy of the NOI is concurrently being submitted to NHESP for Streamlined Review under the WPA/MESA. LEC has been in communication with NHESP on conceptual project details and will continue to incorporate recommendations based on the proposed project.

3. Wetland Resource Areas

Wetland Resource Areas associated with the project include Coastal Beach, Coastal Dune, Barrier Beach, and Land Subject to Coastal Storm Flowage (LSCSF).

3.1 Coastal Beach

Coastal Beach is defined in 310 CMR 10.27(2) as *unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing human-made structures, when these structures replace one of the above lines, whichever is closest to the ocean.*

Coastal Beach extends from the Mean Low Water (MLW) line (El. -4.64) to the Coastal Dune. Mean High Water is El. 4.65. The beach is composed of coarse to medium sand.

3.2 Coastal Dune

Coastal Dune is defined at 310 CMR 10.28(2) as *any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control.*

The Coastal Dune is located upgradient of the Coastal Beach, nearly equivalent to El. 8, and extends up to the long rectangular building. Currently, only the northwesterly portion of the Coastal Dune is vegetated with beachgrass, and remnant beach rose (*Rosa rugosa*) and seaside goldenrod (*Solidago sempervirens*), while the remaining Coastal Dune has been denuded by winter storms.

3.3 Land Subject to Coastal Storm Flowage (LSCSF)

Land Subject to Coastal Storm Flowage (LSCSF) is defined at 310 CMR 10.04 as *land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater*

As previously indicated, the entire site is mapped within a Zone VE (El. 15) – *Coastal areas with a 1% or greater chance of flooding (base flood elevation determined)*. The entire site is therefore within LSCSF.

3.4 Barrier Beach

Coastal Dune is defined at 310 CMR 10.29(2) as *a narrow low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends.*

As previously stated, the subject parcel is situated on a Barrier Beach between Cape Cod Bay and Pilgrim Lake.

4. Project Description

The proposed project involves the installation of a 244-foot-long wooden bulkhead extending parallel to the long-rectangular building. Snow fencing, biomimicry, and American beachgrass plugs have proven unsuccessful to protect the Coastal Dune and on-site buildings, thus necessitating the current proposal to protect the pre-1978 buildings. Taking no action will result in extensive damage to the building.

The project has been designed to improve coastal storm resiliency and reduce vulnerability to flood damage. Bulkhead details are protected on the *Site Plan*. The westerly end of the proposed bulkhead primarily overlaps with the buried seawall (to be properly disposed of off-site, if encountered). The top of the bulkhead will be established at El. 15, equivalent to the Flood Zone VE elevation. All proposed work will occur upgradient of Mean High Water.

Sand nourishment is proposed on the seaward and landward side of the bulkhead along with American beach grass plantings, where appropriate. The dune restoration will be completed to mimic and improve prior site conditions.

Seasonal beach access mats (Mobi-mat) will be installed to provide ADA access.

Construction access is in the process of being coordinated and updates will be provided to the Commission at the May 1, 2023 Public Hearing.

The bulkhead will be installed outside of the shorebird breeding season April 1-August 31 (i.e., fall 2023).

In order to protect the easterly end of the building prior to the bulkhead installation, emergency sand nourishment is requested.

6.0

Summary

On behalf of the Baybeach Townhome Condominium Trust/Association, LEC is filing this NOI Application for a proposed bulkhead to protect the Baybeach Condominiums at 544 Shore Road. Proposed work occurs within Coastal Beach, Coastal Dune, Barrier Beach, and Land Subject to Coastal Storm Flowage as protected under the *Massachusetts Wetlands Protection Act and Regulations* (310 CMR 10.00) and the *Truro Conservation Bylaw* (Chapter VIII of the General By-Laws) and *Truro Conservation Regulations*. The proposed bulkhead is necessary to protect the Baybeach Condominiums that have experienced continued and significant coastal storm damage. The project has been designed to improve coastal storm resiliency and reduce vulnerability to flood damage

Appendix A

Locus Maps

Figure 1: USGS Topographic Map

Figure 2: Aerial Orthophoto

Figure 3: FEMA Flood Insurance Rate Map

Figure 4: NHESP Map

Conservation Commission
Yonkers, New York
10003-1000



LEC Environmental Consultants, Inc.

Plymouth, MA
508.745.9461
www.lecenvironmental.com

Figure 1: USGS Topographic Map

544 Shore Road
Truro, Massachusetts



April 6, 2023



LEC Environmental Consultants, Inc.

Plymouth, MA
508.746.9491
www.lecenvironmental.com

Figure 2: Aerial Othophoto Map

544 Shore Road
Truro, Massachusetts



April 6, 2023



SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

Without Base Flood Elevation (BFE)

With BFE or Depth Zone AE, AO, AH, VE, AR
Regulatory Floodway

OTHER AREAS OF

OTHER AREAS OF FLOOD HAZARD

OTHER AREAS

GENERAL STRUCTURES

1

OTHER FEATURES

MAP PANELS



This map compares digital flood maps. The base map accuracy stands

70°

This map includes elements do legend, scale FIRM panel 1 unmapped a regulatory p



Figure 4: NHESP Map

544 Shore Road
Truro, Massachusetts

Conservation Commission
TOWN OF TRURO
APR 10 2023

LEC
LEC Environmental Consultants, Inc.
Plymouth, MA
508.746.9401
www.lecenvironmental.com

N
April 6, 2023

Appendix B

Photographs

Construction Completion
TOWN OF BLOOMING

7.2.10.2023



Photo 1: Northeasterly view of condos (May 28, 2021)



Photo 2: Northeasterly view of condos (March 28, 2023)

Conservation Commission
TOWN OF TOWN

7.3.10.2023



Photo 3: Easterly end of condo building (5/28/21)



Photo 4: Easterly end of condo building (3/28/23)

Conservation Commission
TOWN OF TOWN
MAR 10 2023



Photo 5: Coastal Dune conditions—west end (5/28/21)



Photo 6: Coastal Dune conditions—east end (3/28/21)

Conservation Contributor
12.11.21
12.10.21



Photo 7: Coastal Dune conditions—east end (5/28/21)



Photo 8: Coastal Dune conditions—east end (3/28/23)

Conservation Commission
TOWNSHIP OF TOWNSHIP
1.2.20 2023



Photos 9 & 10: Northwesterly (above) and southeasterly conditions (below).



Conservation Commission
TOWN OF TOWN
MAR 10 2021

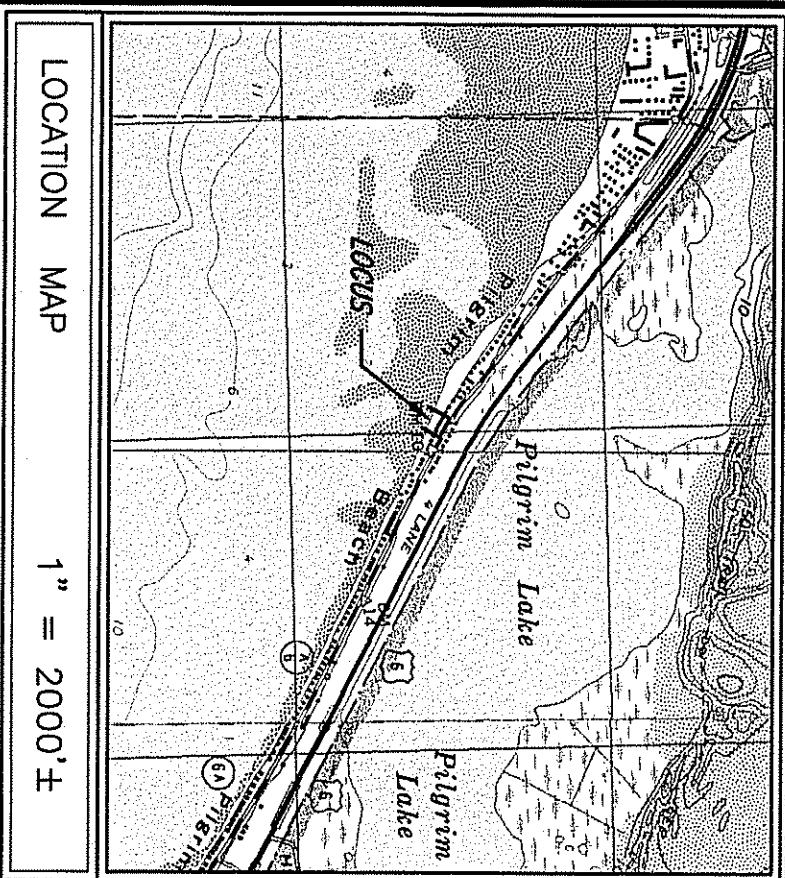


Photos 11 & 12: Exposed foundation on east end of building (1/26/23).

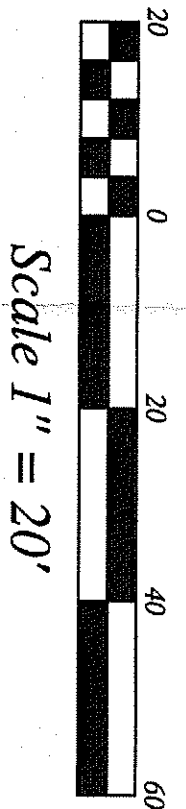


Conservation Commission
TOWN OF TOWN

FEB 10 2023



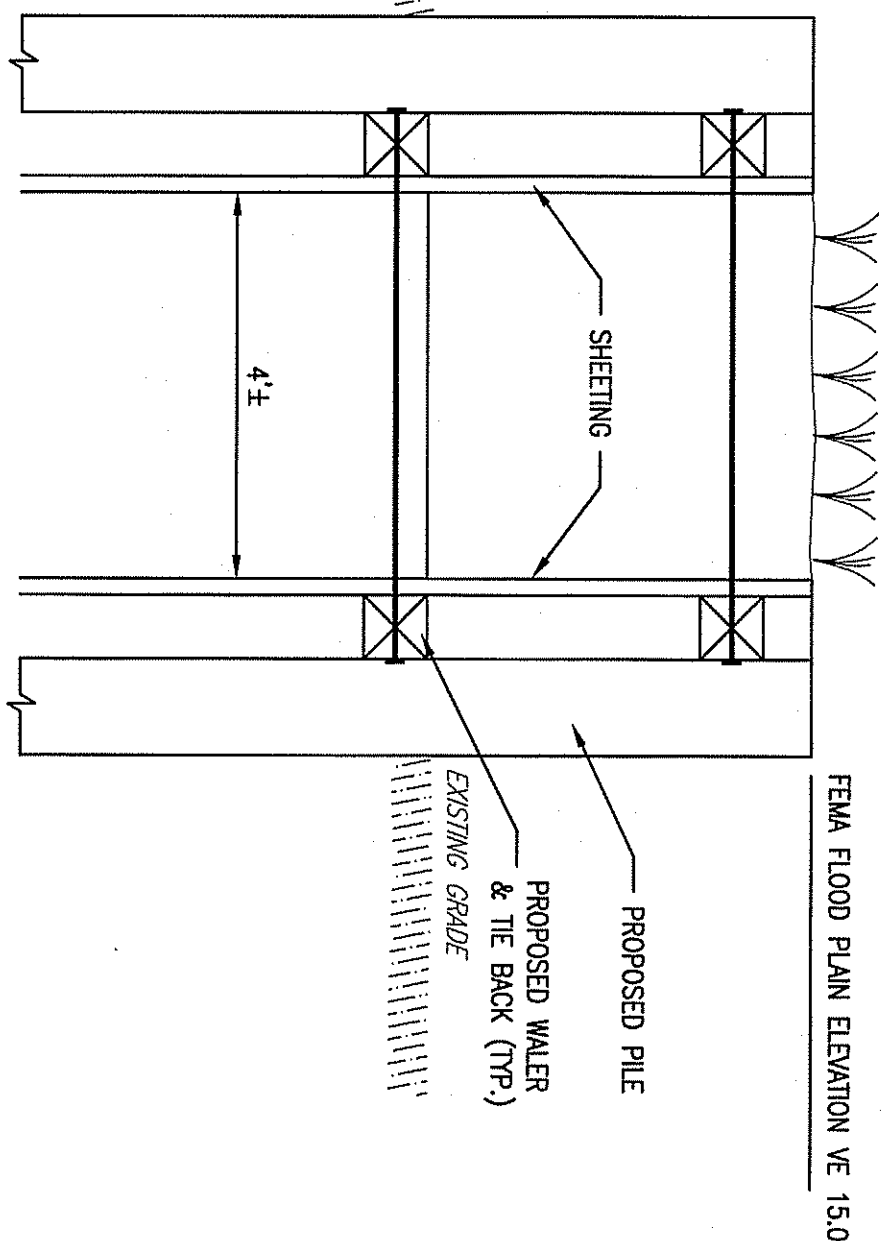
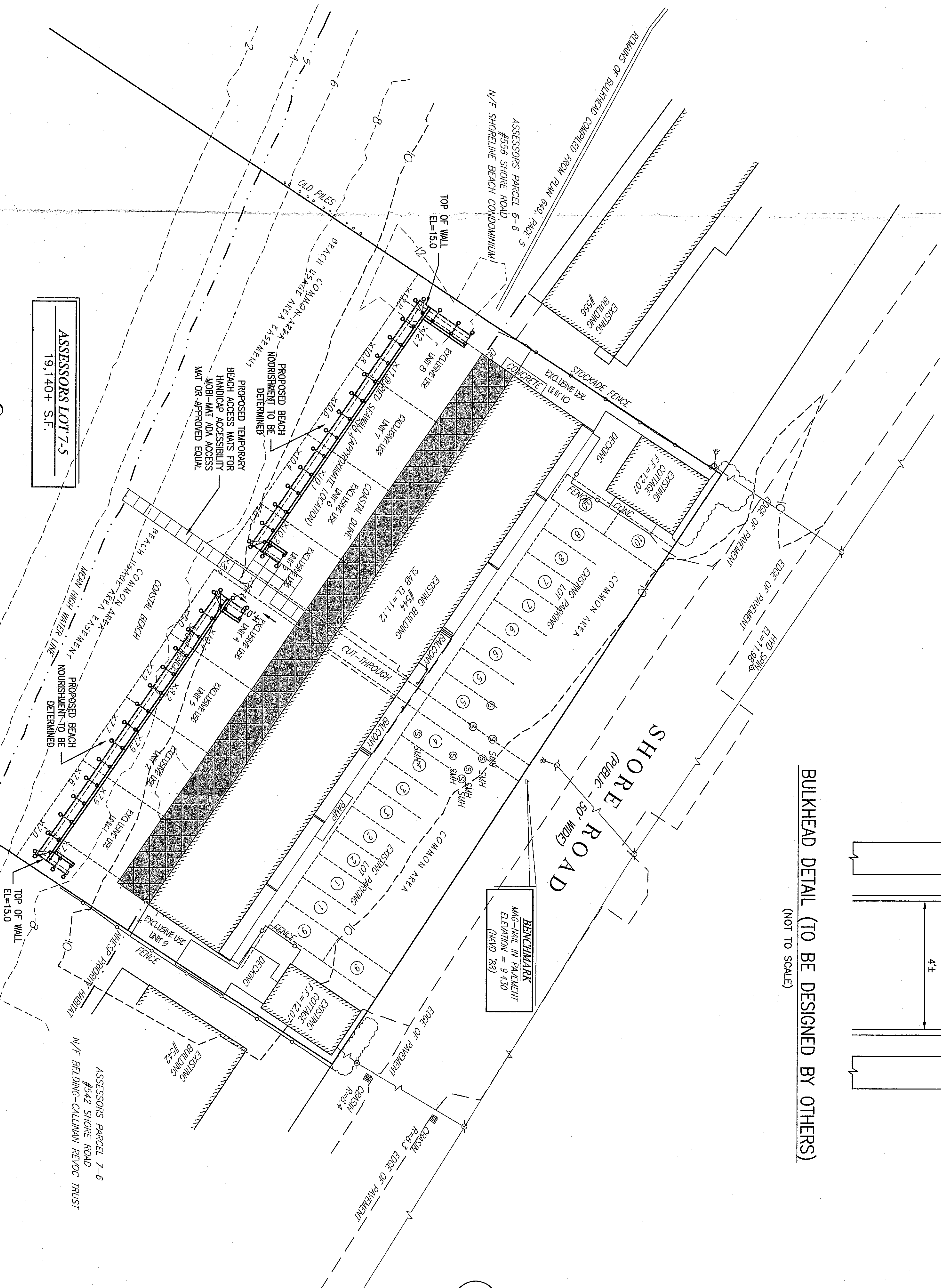
DATUM
NAVD 88 = 0.00
MEAN LOW WATER = -4.64
MEAN HIGH WATER = +4.65



Scale 1" = 20'

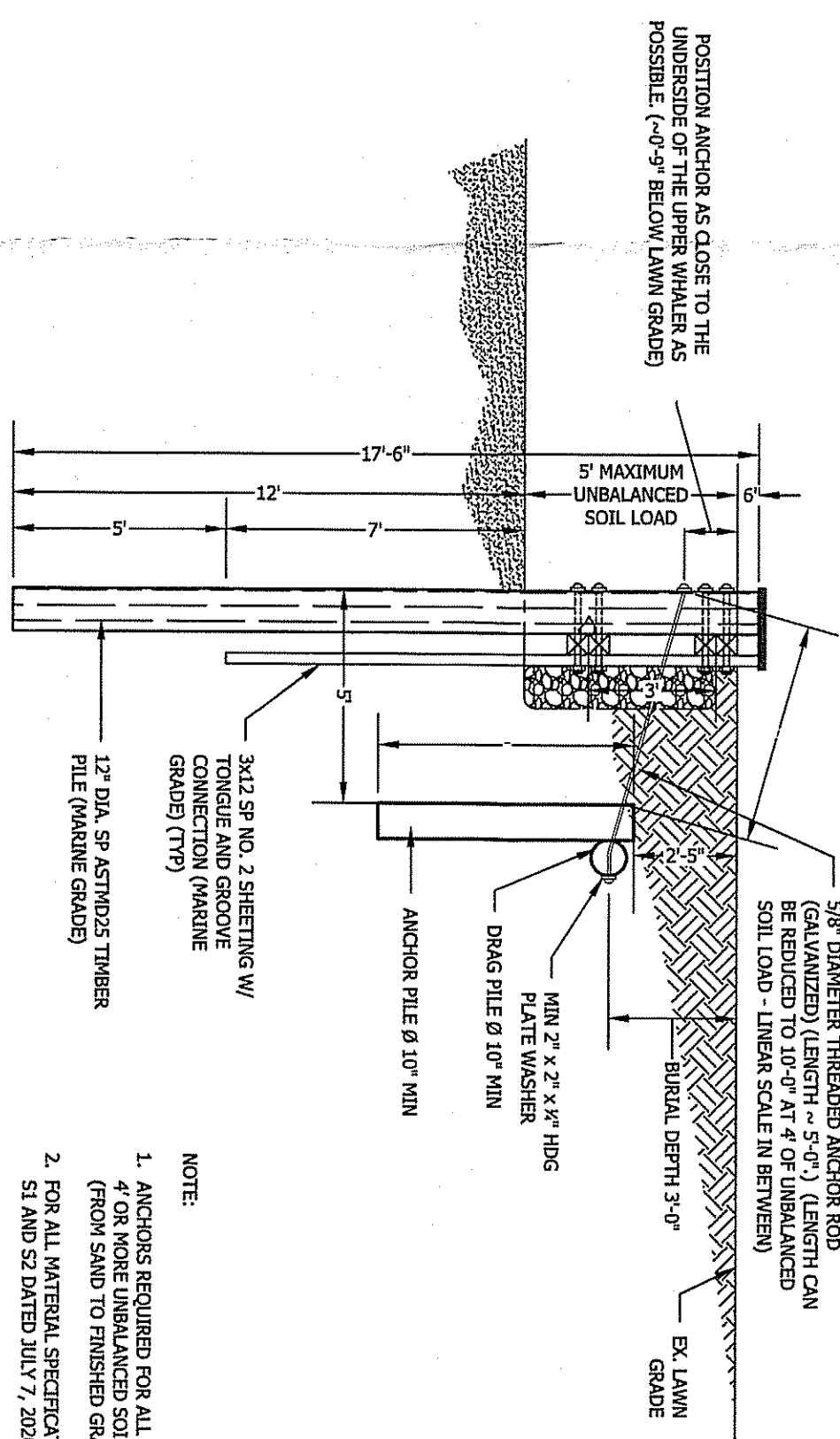
CAPE COD BAY

ASSESSORS LOT 7-5
19,140+ S.F.

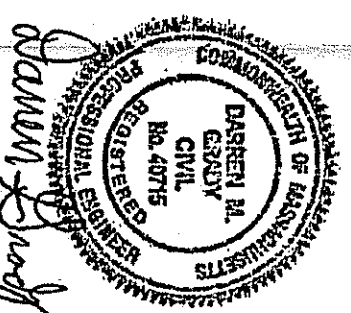


2 SEAWALL SECTION - AT MAXIMUM HEIGHT

SCALE 1/4" = 1'-0"
(SEE STRUCTURAL DESIGN DRAWINGS BY SSB ENGINEERING)



- ### NOTES
1. TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN IS BASED ON A FIELD SURVEY DONE BY GRADY CONSULTING, L.L.C. ON AUGUST 2, 2021.
 2. THE SITE IS NOT LOCATED IN AN ACQUIFER PROTECTION ZONE II.
 3. THIS SITE IS LOCATED IN A COASTAL BEACH AND COASTAL DUNE RESOURCE AREA.
 4. SUBJECT SITE IS IN THE RS-40 ZONING DISTRICT.
- ### FLOOD NOTE
- BY GRAPHIC NOTING ONLY, THIS PROPERTY IS LOCATED IN ZONE VE (EL. 15) AS DERIVED ON FLOOD INSURANCE RATE MAP, COUNTY FRAME NO. 25001C 0117J, WHICH BEARS AN EFFECTIVE DATE OF JULY 16, 2014.



SITE PLAN
ASSESSORS ID 7-5
#544 SHORE ROAD
TRURO, MASSACHUSETTS

PREPARED FOR:
BAY BEACH TOWNHOMES CONDOMINIUM
c/o GEORGE HALLER
88 BLACK FALCON AVENUE, SUITE 345
BOSTON, MA 02210

APRIL 7, 2023
SCALE: AS SHOWN
JOB NO. 21-309

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 565-2300 Fax (781) 565-2378

Abutter comment for 544 Shore Rd

Emily Beebe

From: [REDACTED]
Sent: Wednesday, April 26, 2023 2:45 PM
To: Emily Beebe
Cc: Anil Perumalu; Clem Bellairs; Elaine Tortora Bridgman; Paula Pitas-Lewis; Michael Flannery
Subject: Fwd: FW: NOI documents for 544 Shore Rd

Lynn has directed me to send this concern to you.

----- Forwarded Message -----

Subject: Re: FW: NOI documents for 544 Shore Rd
Date: Sun, 23 Apr 2023 12:07:37 -0400

From: [REDACTED]
To: Lynne Budnick <LBudnick@truro-ma.gov>
CC: [REDACTED]

Lynne, thank you for the documents.

As a representative of Ebb Tide on the Bay, #538 Shore Rd. we have concerns as to the potential impact of a bulkhead on our property which is already experiencing extensive beach erosion and structural damage.

I would like to see an environmental study that would clearly delineate the impact on adjacent beach front.

On 4/21/2023 4:10 PM, Lynne Budnick wrote:

Good afternoon, Sally

Please find the requested information here in attachment.

Here is the documentation for 544 Shore Rd's NOI for a seawall.

[Lynne G. Budnick](#)

Lynne G Budnick

1100 N. Main Street, Suite 200 / Hingham, MA 02043
Phone: 508/548-1100
Fax: 508/548-1101
www.budnick.com

April 10th, 2023



Truro Conservation Commission
Attn: Emily Beebe (Health and Conservation Agent)
Arozana Davis (Assistant Health and Conservation Agent)
Truro Town Hall
24 Town Hall Road
Truro, MA 02666

Re: Project Narrative & Alternatives Analysis

Project Location: 2 Katharine Road, Truro, MA 02653

Dear Truro Conservation Commissioners,

Crawford Land Management (CLM) would like to respectfully submit a Notice of Intent application for the project proposed at 2 Katharine Road. This letter explains the existing conditions on the property and the overall scope of proposed work. We have also included in this letter an alternatives analysis that outlines potential alternatives to the proposed work which might have a less adverse impact, and why we believe that the proposed work is a better approach.

Project Narrative

The project is located at 2 Katherine Road, north of Bound Brook and East of Cape Cod Bay. A small southwestern corner of the property falls within the 100' buffer of an adjacent wetland. The wetland buffer is interrupted by Katherine Road. The southern portion of the property falls within Flood Zone AE (El. 13') and the majority of the property lies within the 0-100' buffer zones of the top of that coastal bank. An existing dwelling with decks and retaining walls sits within the 50-100' buffer zone to that coastal bank, as well as crushed stone driveway and walkway areas, and landscape retaining walls made of concrete, timber, and stone boulders. An existing rinse station with associated retaining walls and paving stones are also in this zone. Within the 0-50' buffer from the top of coastal bank, there is a concrete retaining wall, landscape stepping stones and cobble edging.

The proposed construction project includes a small addition to the northeast corner of the house, re-construction and slight modification of the front porch steps and landing, the demolition of existing timber walls/steps and replacement with concrete or stone, and the

addition of a small dry-laid patio and stepping-stones. Also proposed are privacy fencing for the existing rinse station, and safety fencing around the proposed patio area for dogs/children. Two Black Locust trees (*Robinia pseudoacacia*) which are identified by MIPAG as a state-listed invasive species are proposed for removal. One sits between the driveway and rinse station, and the other

(which is damaged) sits within the existing landscaped area to the south of the driveway. Existing old locust tree stumps within the natural lawn area will be grinded.

The total increase in impervious surfaces (structure and hardscape areas) due to proposed construction activity is 505 square feet. All of this work is proposed in areas that are currently already developed/unvegetated. Proposed pervious unvegetated surfaces consisting of crushed stone are reduced, resulting in an overall decrease of a minimum of 181 square feet in total site coverage (combined unvegetated pervious and impervious surfaces).

As mitigation for the 505 square foot increase in impervious surface, a combination of native trees and shrub plantings has been proposed along the southern edge of the property within currently existing turf areas, to supplement existing adjacent naturalized vegetation along the road. Proposed mitigation plantings include 2 trees and 7 native shrubs.

PERFORMANCE STANDARDS (310 CMR 10.00: WETLAND PROTECTION)

10.30: COASTAL BANKS

WHEN A COASTAL BANK IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION OR FLOOD CONTROL BECAUSE IT SUPPLIES SEDIMENT TO COASTAL BEACHES, COASTAL DUNES OR BARRIER BEACHES, 310 CMR 10.30(3) THROUGH (5) SHALL APPLY:

(3) No new bulkhead, revetment, seawall, groin or other coastal engineering structure shall be permitted on such a coastal bank except that such a coastal engineering structure shall be permitted when required to prevent storm damage to buildings constructed prior to the effective date of 310 CMR 10.21 through 10.37 or constructed pursuant to a Notice of Intent filed prior to the effective date of 310 CMR 10.21 through 10.37 (August 10, 1978), including reconstructions of such buildings subsequent to the effective date of 310 CMR 10.21 through 10.37, provided that the following requirements are met:

- (a) a coastal engineering structure or a modification thereto shall be designed and constructed so as to minimize, using best available measures, adverse effects on adjacent or nearby coastal beaches due to changes in wave action, and
- (b) the applicant demonstrates that no method of protecting the building other than the proposed coastal engineering structure is feasible.
- (c) protective planting designed to reduce erosion may be permitted.

--Regulation does not apply. No structures are proposed within the coastal bank

(4) Any project on a coastal bank or within 100 feet landward of the top of a coastal bank, other than a structure permitted by 310 CMR 10.30(3), shall not have an adverse effect due to wave action on the movement of sediment from the coastal bank to coastal beaches or land subject to tidal action. Effective 10/24/2014 310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

--Performance standard is met. Project elements do not have an adverse effect due to wave action



(5) The Order of Conditions and the Certificate of Compliance for any new building within 100 feet landward of the top of a coastal bank permitted by the issuing authority under M.G.L. c. 131, § 40 shall contain the specific condition: 310 CMR 10.30(3), promulgated under M.G.L. c. 131, § 40, requires that no coastal engineering

structure, such as a bulkhead, revetment, or seawall shall be permitted on an eroding bank at any time in the future to protect the project allowed by this Order of Conditions.

--Performance standard is met

WHEN A COASTAL BANK IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION OR FLOOD CONTROL BECAUSE IT IS A VERTICAL BUFFER TO STORM WATERS, 310 CMR 10.30(6) THROUGH (8) SHALL APPLY:

(6) Any project on such a coastal bank or within 100 feet landward of the top of such coastal bank shall have no adverse effects on the stability of the coastal bank.

-Performance standard is met

(7) Bulkheads, revetments, seawalls, groins or other coastal engineering structures may be permitted on such a coastal bank except when such bank is significant to storm damage prevention or flood control because it supplies sediment to coastal beaches, coastal dunes, and barrier beaches.

-Regulation does not apply

(8) Notwithstanding the provisions of 310 CMR 10.30(3) through (7), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

-Regulation does not apply

TRURO CONSERVATION REGULATIONS (TCR)

SECTION II – SUBSTANTIVE AND PROCEDURAL REGULATIONS

TCR Section II, 1.05, (e) Variances

1. The Commission may, in its discretion, grant variances from one or more of these Regulations pursuant to the provisions of this section. Variances may be granted on a case-by-case basis and shall not set a precedent for future Variance requests.

2. The Commission may, in its discretion, grant a Variance for the following reasons and under the following conditions:



i. upon clear and convincing proof, provided by the applicant, that the proposed work, or its impacts and effects, will not adversely affect the public interests and values protected by the Bylaw and these Regulations.

Although there is a slight increase in impervious surface due to building addition and patio installation, the impervious areas are all proposed within existing unvegetated, already developed areas of the site, and result in a net decrease of 181 square feet of overall developed area (gravel/crushed stone area).

ii. A description of the alternatives explored that would allow the project to proceed in compliance with the performance standards in these Regulations and an explanation of why each is not feasible.

Alternative 1: Re-locate the building addition and patio to a location outside of the 100' buffer zone. Re-locating the building addition and patio to the Northeast corner of the existing house structure would result in inadequate parking / turnaround and shed storage space, causing the need to expand the driveway in areas that are currently occupied by vegetation or areas closer to the Resource Area. Expanded parking closer to the Resource Area is not only undesirable from a regulatory perspective, but is also not possible without a much larger expansion of the limit of construction and built elements as the expansion would have to occur on a hillside. The area most suitable for parking is already utilized for such and is mostly outside jurisdictional areas. Those areas to the North of the existing house are also not conducive to the structure and layout of the existing house and deck configurations and would make a small addition a much larger construction project.

Alternative 2: Complete the project without the patio and stepping stones. The existing areas where patio and stepping stones are proposed already consist of compacted, crushed stone, and are currently used for gathering and walking. They could remain as-is, but the function and longevity of the exterior spaces would be diminished and the overall developed footprint remains the same.

In summary, the project as proposed results in an overall decrease of altered area within the Buffer Zone. The area for the proposed addition is already developed as a patio and walkway. Mitigation is proposed to provide more wildlife habitat within the resource areas.

iii. A description of the mitigation measures to be used to contribute to the protection of the wetland values protected by this ordinance.

Mitigation plantings in the form of (2) Native trees and (7) Native shrubs have been proposed to mitigate for the construction work. The mitigation plantings are proposed in



the Coastal Bank resource area and LSCSF resource area.

- iv. Evidence that an overriding public interest is associated with the project which justifies modifying one or more performance standards.
- v. In exercising its discretion, the Commission shall require a written analysis of reasonable alternatives for the proposed activity which might be undertaken with less adverse impacts on an Area Subject to Protection under the Bylaw and these Regulations as defined in section 1.03 and without deviating from the provisions of these Regulations.
- vi. The applicant shall provide the Commission with a written alternative's analysis and any other information which the Commission requires to make a decision. Failure of the applicant to provide information within a time period specified by the Commission may result in the denial for a variance request.

TCR Section II, 2.00 : Additional Regulations for Wetland Resource Areas

2.01: BUFFER ZONE (INCLUDING THE 50-FOOT VEGETATED BUFFER STRIP):

- a. Statements of significance:
- b. Definition, Critical Characteristics and Boundary
- c. Presumption of Significance
- d. General Performance Standards

- 1. Where the presumption set forth above is not overcome, any proposed work in the Buffer Zone shall not adversely impact or otherwise impair any portion of said area.

There will be no adverse impacts to the Buffer Zone or Coastal Bank resource area from the project.

- 2. Where the Buffer Zone overlays other resource areas subject to protection under the Bylaw, the applicable performance standards for each resource area shall be independently and collectively applied and the project appropriately conditioned to protect all stated interests.

The Buffer Zone from the wetland located across Katharine Road from the subject property falls within the Coastal Bank resource area. All performance standards for the Coastal Bank resource area have been met or exceeded.

- 3. The Commission may issue an Order of Conditions permitting work in the Buffer Zone provided that the applicant has submitted a written alternatives analysis that examines all practicable



alternatives to the project which would further minimize impacts to the Buffer Zone and demonstrates that all impacts can be properly mitigated. The alternatives analysis shall be submitted to the Commission in writing.

There will be no adverse impacts to the Buffer Zone, Coastal Bank resource area, or Land Subject to Coastal Storm Flowage (LSCSF) from the project.

i. Activities within the Buffer Zone shall avoid, minimize and mitigate adverse impacts. The purpose of evaluating project alternatives is to locate activities so that impacts to the buffer and resource areas are avoided to the extent practicable. As much of a project as feasible shall be sited outside the buffer zone. If locating a project entirely outside the Buffer Zone is not practicable, the alternatives shall be evaluated in order to locate the project as far as possible from present Areas Subject to Protection and thereby minimize impacts to the Buffer Zone.

The alternatives analysis submitted discusses the location of the proposed activities. It

should be noted that almost the entire property is within the Buffer Zone along with the existing dwelling.

ii. An alternative shall be considered practicable if it is available and capable of being done. Practicable alternatives may include realignment, reconfiguration or re-sizing of project components to minimize impacts to the Buffer Zone. Projects involving demolition of an existing structure and reconstruction of a new dwelling shall be subject to an alternative analysis.

The alternatives analysis submitted discusses the proposed activities. It should be noted that the project works with the existing dwelling rather than proposing a raze and replace.

4. Where no practicable alternatives are available or capable of being done which would otherwise avoid or minimize adverse impacts to the Buffer Zone, the following standards shall apply:

No Significant Adverse Impact: Within the 100-foot Buffer Zone, the Commission may allow the total alteration of up to 5000 square feet subject to the following:



- i. total alteration of the land area within the Buffer Zone shall be calculated in square feet to describe what is currently altered or developed, and what is proposed. Total alteration shall include disturbed areas such as (but not limited to) building footprint, driveways, pathways, yard areas and lawns.

Total existing alteration in the Buffer Zone is 7,690 +/- sf.

Total proposed alteration in the Buffer Zone is 7,509 +/- sf.

The project has a net reduction of altered areas within the Buffer Zone of -181 +/- sf.

- ii. The alteration calculations shall describe the amount and types of alterations between 0-50-feet, and 50-100-feet of the buffer. Any area where vegetation is to be removed or where soils will be disturbed shall be included in this calculation.

Refer to the Landscape & Mitigation Plan by Jenick Studio dated 4/5/2023 for a breakdown existing and proposed alterations by 0-50 zone and 50-100 zone.

- iii. The area within the limit of work will reflect the limit of the altered area and shall be shown clearly and accurately on all plans submitted to the Conservation Commission at the time of filing.

The Limit of Work is shown and labeled on all submitted plans.

- iv. At a minimum, a 50-foot-wide area of undisturbed vegetation (the vegetated buffer strip) shall be provided between the wetland resource area and the work.

The existing altered area within the 0-50 zone is located along the 50' buffer line and is not expanding or getting any closer to the adjacent resource area. The 0-50 zone is mainly comprised of the existing gravel driveway (no alteration proposed) and unirrigated, Cape Cod lawn and trees, as is the adjacent Coastal Bank and LSCSF resource areas. If there is no 50-foot-wide area of undisturbed vegetation within the Buffer Zone, the existing vegetative



cover shall be preserved and/or extended beyond 50-feet in some areas by re-vegetating with native plants to the maximum amount feasible in order to approximate a 50-foot-wide corridor of native vegetation.

The existing vegetation in the 50' buffer zone is being preserved. Additional plantings are proposed in the adjacent Coastal Bank/LSCSF resource areas.

- v. On previously developed or disturbed sites, all work proposed within the buffer zone shall result in an improvement of the existing conditions and an enhanced capacity of the resource area(s) and Buffer Zone to protect the public interests and values protected under the Bylaw.

All proposed activities are within areas that are already disturbed. The project will result in an overall net decrease in Buffer Zone coverage while native plantings are being added to the resource areas.

- vi. The Conservation Commission may require, as mitigation for new alteration within the Buffer Zone: re-vegetation and restoration of areas previously altered or disturbed within the buffer zone; rerouting existing roof runoff through gutters and roof drains which direct roof drainage into drywells or leaching pits; and may require drainage improvements and/or other mitigating measures.

Mitigation is proposed in the form of native plantings within the resource areas. Refer to the Landscape & Mitigation Plan for details and locations.

5. Expansion of existing structures within the Buffer Zone may be allowed provided that:

- i. No new structure or addition to an existing structure shall be located closer to a wetland resource area than existing conditions.

*The proposed addition and landscape alterations are **not** located closer to a wetland resource area than currently exists.*



ii. The area of the proposed disturbance and all previously disturbed areas shall not, cumulatively, exceed the 5,000-square foot threshold for allowable disturbance within the Buffer Zone.

The proposed alterations are within existing disturbed areas and the majority are in the 50-100 Buffer Zone.

6. Projects which include substantial demolition (i.e. removal of more than one exterior wall) and subsequent reconstruction of a dwelling shall be considered a new building and shall site as much of the project as possible outside of the Buffer Zone. Projects for expansion of existing homes greater than 25% of the existing size, as measured in square footage of the foundation or cubic footage of the structure, shall be considered a new building and shall site as much of the project as possible outside of the Buffer Zone.

N/A – The proposed project does not include substantial demolition and is not greater than 25% of the existing size.

7. All new construction projects within the Buffer Zone shall address how stormwater drainage will be managed. The project must ensure that runoff from built and developed areas will drain directly into the soil on the subject site and will not runoff onto neighboring properties or streets. Methods to address drainage shall include but are not limited to vegetated swales, rainwater gardens, catchbasins, use of gutters and roof drains, drip lines with crushed stone; and pervious and dry-laid stone.

All areas around the proposed addition rooflines are comprised of crushed stone or dry-laid stone.

8. Driveways within the Buffer Zone shall be constructed with pervious materials such as crushed stone. Permeable pavers with a void space of less than 30% are not considered compliant with this requirement.

The existing driveway is crushed stone. No changes are requested.

9. Cutting, pruning, lifting the canopy, limbing or other destruction of above ground vegetation shall be limited. View clearing or vista pruning will not be permitted without a specific view corridor identified.

No vista pruning is proposed for this project. 9(i.-ix.) do not apply.



10. For lots and subdivisions recorded after May 6, 2019, the alternatives analysis shall include all alternatives available prior to subdivision of the lot(s) and all work shall be located outside the 100- foot Buffer Zone.

N/A.

11. Within the 50-foot vegetated buffer strip, the Commission may issue an Order of Conditions allowing the following activities:
- i. Pruning to reduce a hazard, to improve tree or plant structure, to provide a reasonable vista, or to improve the health of trees and shrubs.
 - ii. Selective Cutting of vegetation
 - iii. Removal of invasive species
 - iv. Planting of native vegetation
 - v. Habitat management activities designed to enhance the values protected by the Bylaw;
 - vi. Construction and maintenance of unpaved pedestrian access paths not more than 4-feet in width;
 - vii. Maintenance of existing structures, utilities, storm water management structures;
 - viii. Construction and maintenance of water dependent structures and uses; Construction of new utility lines where the proposed route is the best environmental alternative;
 - ix. Septic system maintenance and, if a system has failed, repair/replacement meeting state/local standards where the disturbance to the buffer zone is avoided and/or minimized to the maximum extent practicable;
 - x. Construction, maintenance, repair/replacement of drinking water wells;
 - xi. Maintenance, repair and drainage improvements on existing roadways and driveways.

12. The following activities are prohibited within the 50-foot vegetated buffer strip:

- i. New and/or expanded lawn and garden areas; underground irrigation;

No expanded lawn and garden areas or underground irrigation is proposed.

- ii. New structures including but not limited to homes, buildings, swimming pools, sheds and decks; and



No new structures in the 0-50 Buffer Zone are proposed.

iii. Expansion of existing structures including but not limited to homes, buildings, sheds and decks.

No expansion of existing structures in the 0-50 Buffer Zone are proposed.

2.00 : COASTAL BANK

a. Statement of Significance

b. Definition, Critical Characteristics and Boundary

c. Presumption of Significance

1. Where a proposed activity involves work on a Coastal Bank, the Commission shall presume that such area is significant to storm damage prevention, flood control, erosion control, prevention of pollution, protection of land containing shellfish, protection of fisheries, and protection of wildlife habitat. This presumption may be overcome only upon clear and convincing proof that the Coastal Bank does not play a role in the protection of said interests and values protected by the Bylaw and if the Conservation Commission makes a written determination to that effect.
2. Coastal Banks that have all or a portion of the bank within a FEMA V-zone of the mapped 100-year coastal floodplain are significant to storm damage prevention or flood control because they supply sediment to coastal beaches, coastal dunes, barrier beaches or tidal flats. The ability of the coastal bank to erode in response to wave action is critical to the protection of said interests and values.

No portion of the property is within a FEMA V-zone.

3. When the Conservation Commission determines that a Coastal Bank is significant to storm damage or flood control because it acts as a vertical buffer to storm surges, the stability of the bank and the natural resistance of the bank to erosion caused by wind, rain, and storm water runoff is critical to the protection of said interests and environmental values.

The Coastal Bank acts as a vertical buffer and is within a mapped Flood Zone AE, Elevation 13.0.

d. Performance Standards

1. Coastal banks along the bay side of Truro have experienced



accelerated rates of erosion, at times from a single storm event. The Commission will allow an “erosion control” project only as an *interim* measure, and in all cases shall require the property owner to submit plans to move or remove threatened structures as a condition of allowing such projects.

N/A No ‘erosion control’ activities are proposed.

2. The Truro Conservation Commission is of the opinion that coir tube installations, and similar structures, are “coastal engineering structures” within the meaning of the DEP Regulations 310 C.M.R. 10.30 (3), and that, as such, installation of coir tubes and similar projects are prohibited for the protection of buildings constructed after 1978. However, by letter dated February 18, 2011, and incorporated herein by this reference, the Truro Conservation Commission was informed by DEP that the Department views this type of structure as a “soft solution” to stabilize eroding banks, which is a permitted structure under the cited regulation. In the event that DEP reconsiders its interpretation of 310 C.M.R. 10.30 (3) the Truro Conservation Commission reserves the right to rescind these regulations and to prohibit installation and maintenance of coir tube projects and similar structures within the Town of Truro.

N/A

3. When a Coastal Bank is determined to be significant to storm damage prevention or flood control because it supplies sediment to coastal beaches, coastal dunes or barrier beaches the following performance standards shall apply:

*TCR 2.04;3(i.-xi) are **not applicable** – the Coastal Bank on the subject property is not an active sediment source to any coastal beaches, coastal dunes, or barrier beaches and no ‘erosion control’ project is proposed.*

2.05: LAND SUBJECT TO COASTAL STORM FLOWAGE

- a. **Statement of Significance**
- b. **Presumption of Significance**
- c. **Performance Standards**

1. In addition to the interests and values set forth above in Sections 2.05(a) and (b), the following standards shall also be applied to work within LSCSF:

Any activity subject to jurisdiction, and proposed on LSCSF shall not:



- i. Reduce the ability of the resource to absorb and contain flood waters;

The only activity proposed within LSCSF are native plantings, which will enhance the areas ability to absorb flood waters and dissipate potential wave energy.

- ii. Reduce the ability of the resource to buffer more inland areas from flooding and wave damage;

Proposed native plantings will enhance the areas buffering capacity from flooding.

- iii. Displace or divert flood waters to other areas;

Proposed native plantings will not displace or divert flood waters.

- iv. Cause or create the likelihood of damage by debris to other structures on land within the flood plain (collateral damage); built structures such as stairs or walkways shall be seasonally removable,

Proposed plantings will not increase the likelihood of damage by debris to other structures in the flood plain.

- v. Cause ground or surface pollution triggered by coastal storm flowage; and

Proposed plantings will enhance the areas ability to reduce ground or surface pollution.

- vi. Reduce the ability of the resource to serve as a wildlife habitat and migration corridor through activities such as, but not limited to the removal of vegetative cover and/or installation of fencing and other similar structures.

Proposed plantings will enhance the areas ability to serve as wildlife habitat by providing nesting and foraging habitat for bird populations and other wildlife.

- vii. Any activity proposed in the floodplain may require mitigation to enhance or restore natural functions of the floodplain.

The only activity proposed is enhancement of the floodplain area through the addition of native plantings.

OPTIONAL PLANTINGS (ON APPROVED LIST)			
NOTE: SPECIES WILL BE SELECTED FROM THE LISTS BELOW WHICH ARE ON THE TIRURO CONSERVATION COMMISSION APPROVED PLANT LIST. FINAL SELECTIONS TO BE DETERMINED BASED ON AVAILABILITY/CLIENT PREFERENCE AT THE TIME OF PLANTING.			
SCIENTIFIC NAME	COMMON NAME	QTY. / SIZE	
TREES			
AR	Acer rubrum	TBD	
CR	Cornus alternifolia	TBD	
JV	Juniperus virginiana	TBD	
IO	Ilex opaca	TBD	
NS	Nyssa glauca	TBD	
QS	Quercus alba, rubra, velutina	TBD	
WOODY SHRUBS			
A	Aronia melanocarpa	TBD / #3-#15	
C	Clethra alnifolia	TBD / #3-#15	
IG	Ilex glabra	TBD / #3-#15	
IV	Ilex verticillata	TBD / #3-#15	
MP	Maackelia pensylvanica	TBD / #3-#15	
PM	Prunus maritima	TBD / #3-#15	
VC	Vaccinium angustifolium	TBD / #3-#15	
VD	Viburnum dentatum	TBD / #3-#15	
VT	Viburnum tinifolium	TBD / #3-#15	
GRASSES / SEDGES			
	Deschampsia flexuosa	TBD	
	Panicum virgatum	TBD	
	Schizachyrium scoparium	TBD	
	Sorghastrum nutans	TBD	
PERENNIALS			
	Asclepias syriaca	TBD	
	Asclepias tuberosa	TBD	
	Aster laevis	TBD	
	Aster novae-angliae	TBD	
	Eupatorium perfoliatum	TBD	
	Lupinus perennis	TBD	
	Penstemon digitalis	TBD	
	Solidago canadensis / Goldenrod	TBD	
	Verbena hastata	TBD	
NATURALIZING GROUNDCOVERS / UNDERPLANTING			
	Dennstaedtia punctilobula	TBD	
	Matteuccia struthiopteris	TBD	
	Onoclea sensibilis	TBD	

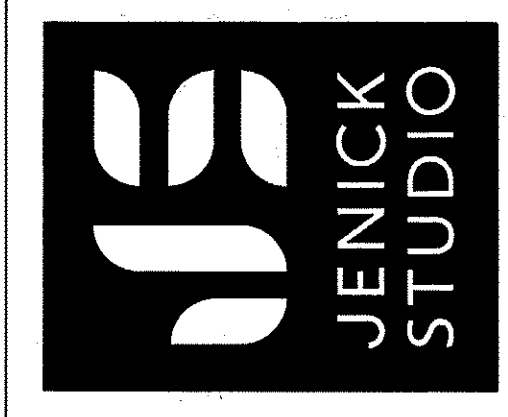
REQUESTED OPTIONAL PLANT SPECIES NATIVE TO BARNSTABLE COUNTY			
Native to Barnstable County According to The Vascular Plants of Massachusetts: A County Checklist by Melissa Dow Cullina, Bryan Connolly, Bruce Sornie and Paul Somers (Massachusetts Division of Fisheries and Wildlife) First Edition or USDA United States Department of Agriculture Natural Resources Conservation Service Plants Database			
SCIENTIFIC NAME	COMMON NAME	QTY. / SIZE	Source
Carex pensylvanica	Pennsylvania Sedge	TBD	Vascular Plants of MA
Carex albicans	Emmons Sedge	TBD	Vascular Plants of MA
Carex blanda	Short Fescue Sedge	TBD	Vascular Plants of MA
Carex ciliata	Fringed Sedge	TBD	Vascular Plants of MA
Carex flacca	Curly-Styled Wood Sedge	TBD	Vascular Plants of MA
Carex stricta	Tussock Sedge	TBD	Vascular Plants of MA
Danthonia polystachya	Poverty Oat Grass	TBD	Vascular Plants of MA
Eragrostis spectabilis	Purple Love Grass	TBD	Vascular Plants of MA
Juncus tenuis	Pink Rush	TBD	Vascular Plants of MA
PERENNIALS			
Achillea millefolium	Yarrow	TBD	Vascular Plants of MA
Allium cepum	Nodding onion	TBD	Vascular Plants of MA
Asclepias incarnata	Downy Swamp-Milkweed	TBD	Vascular Plants of MA
Asclepias purpurascens	Purple Milkweed	TBD	Vascular Plants of MA
Asclepias verticillata	Whorled Milkweed	TBD	Vascular Plants of MA
Aster divaricatus	Wood Aster	TBD	Vascular Plants of MA
Aster spectabilis	Wood / Showy / Aster	TBD	Vascular Plants of MA
Carex lasiocarpa	Pink Tickseed	TBD	Vascular Plants of MA
Echinacea pallida	Pale Purple Coneflower	TBD	USDA Database
Eupatorium hyssopifolium	Hyssop Leaved Boneset	TBD	USDA Database
Geranium maculatum	Wild Geranium	TBD	Vascular Plants of MA
Liatris scariosa	New England Bazing Star	TBD	Vascular Plants of MA
Physostegia virginiana	Obscure Plant	TBD	USDA Database
Pycnanthemum multum, tenuifolium, virginianum	Mountain Mint	TBD	Vascular Plants of MA
Solidago canadensis	Bluestem-goldenrod	TBD	Vascular Plants of MA
Solidago nemoralis	Gray goldenrod	TBD	Vascular Plants of MA
Solidago odora	Sweet Goldenrod	TBD	Vascular Plants of MA
Solidago serotina	Seaside Goldenrod	TBD	Vascular Plants of MA
Symphoricarpos racemosa	Heath Aster	TBD	Vascular Plants of MA
Symphoricarpos racemosa	Calico Aster	TBD	Vascular Plants of MA
NATURALIZING GROUNDCOVERS / UNDERPLANTING			
Antennaria neglecta	Pussytoes	TBD	Vascular Plants of MA
Fragaria virginiana	Wild Strawberry	TBD	Vascular Plants of MA
Hieracium odorata	Vonilla Sweetgrass	TBD	Vascular Plants of MA
Packera aurea	Groundsel	TBD	Vascular Plants of MA

MITIGATION AND OPTIONAL PLANTING NOTES

- OPTIONAL PLANTING AREAS WITHIN CONSTRUCTION LIMIT OF WORK:**
- After construction work is complete, optional planting areas that are in existing gravel soils remain over-compacted by construction activity. If so, soils will be ripped to de-compact until compaction meter readings are acceptable.
 - 6-12" of imported loam/planting mix will be installed. The area will be fine-graded, raked smooth and prepared for seeding or planting with specified materials. If much is used it will be applied at a depth of no more than 2-3" deep and be free of any debris or dyes.
 - Seed all exposed lawn areas with a drought tolerant fescue mix (Black Beauty or Natural Perfection) and cover with a layer of sterile chopped straw.
 - MITIGATION / OPTIONAL PLANTING OUTSIDE THE LIMIT OF WORK:**
 - Trees and shrubs will be pit-planted within the existing naturalized grassy area. Any bare soil areas will be fine-graded, raked smooth and prepared for seeding or planting with specified materials.
 - Once plantings are installed, seed all exposed soils with Restoration Seed Mix and cover with a layer of sterile chopped straw or wood chips.
 - The mitigation area plantings, including seeded grasses, will be allowed to grow naturally (after establishment), with the exception of activity to manage invasive species.
- MAINTENANCE & ESTABLISHMENT FOR MITIGATION AREAS (3 SEASONS MIN.):**
- Monitor mitigation/restoration area and perform maintenance cut and wipe treatments or hand weed invasive, non-native, and aggressive species that have germinated from existing seed bank, or re-sprouted from roots after removal.
 - Mow/cut cool season grasses in June to encourage establishment of warm-season grasses, if necessary.

- SUPPLEMENTAL IRRIGATION:**
- Install a temporary, above-ground irrigation system to provide supplemental water to all plantings for 2-3 growing seasons, or until plants are fully established.
- APPLICATOR & OVERSIGHT QUALIFICATIONS:**
- Herbicide application will only be completed by Massachusetts state-licensed and insured pesticide applicators knowledgeable with invasive, non-native, and native plant identification, both in-field and bare-lwig.
 - All restoration work will be overseen by a Certified Ecological Restoration Practitioner (CERP).

SITE COVERAGE CALCULATIONS			
	ZONE A (0-50' BUFFER)	ZONE B (50-100' BUFFER)	TOTAL (BOTH ZONES)
EXISTING IMPERVIOUS STRUCTURE AND HARDSCAPE	182 SF	2593 SF	2775 SF
EXISTING GRAVEL AREA	1925 SF	2990 SF	4915 SF
TOTAL EXISTING COVERAGE	2107 SF	5583 SF	7690 SF
PROPOSED IMPERVIOUS STRUCTURE AND HARDSCAPE	195 SF	3085 SF	3280 SF
PROPOSED GRAVEL AREA	1915 SF	2317 SF	4232 SF
TOTAL PROPOSED COVERAGE	2107 SF	5402 SF	7509 SF
NET CHANGE IN TOTAL COVERAGE	0 SF	-181 SF	-181 SF



88 Route 6A Suite 2B | Sandwich, MA 02563
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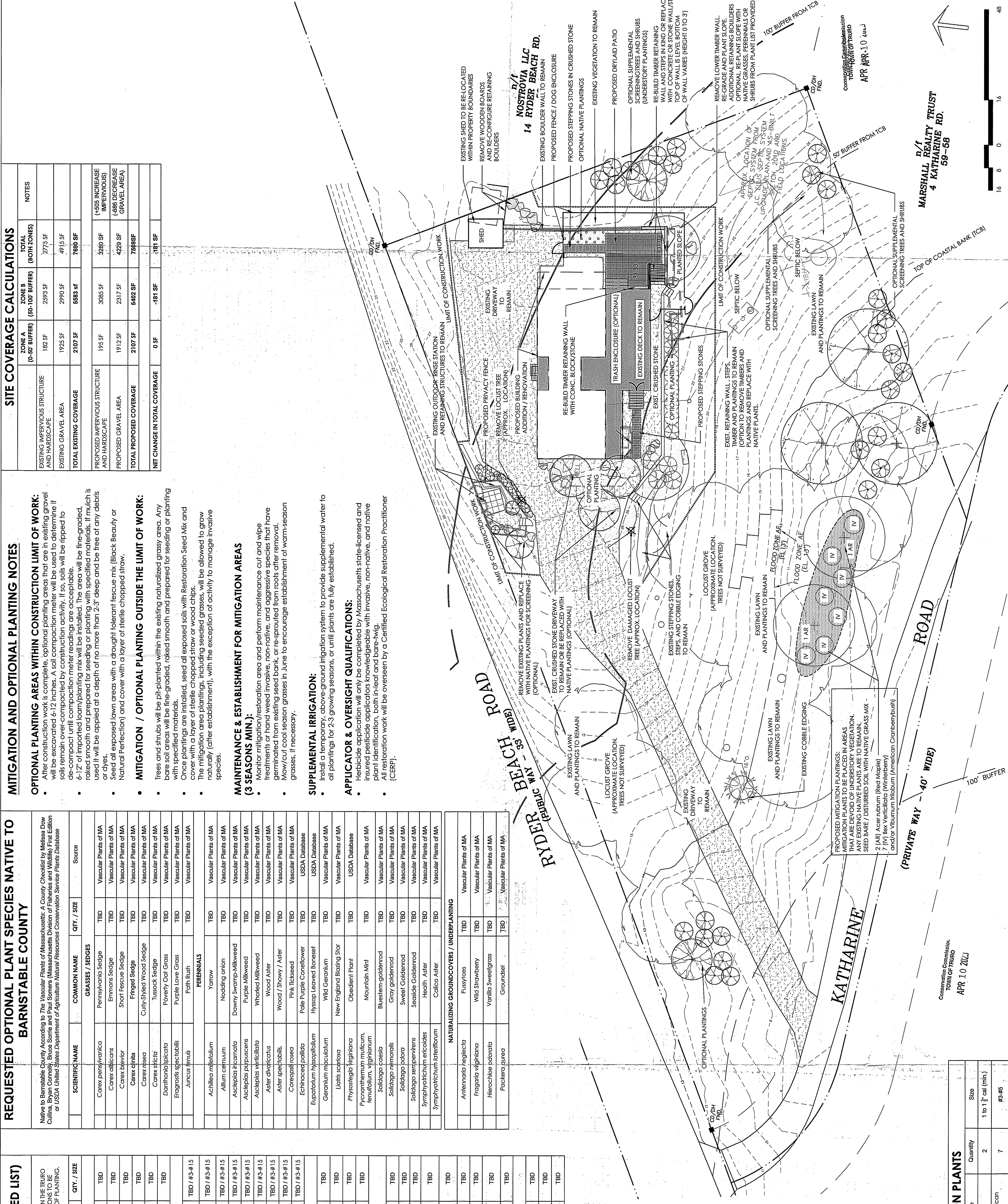
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Conservation Commission,
TOWN OF TIRURO
APR 10 2023

PROPOSED MITIGATION PLANTS			
Symbol	Latin name	Common Name	Quantity
AR	Acer rubrum	Red Maple	2
IV	Ilex verticillata / Viburnum nudum	Winterberry / American Cranberrybush	7

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SITE PLAN

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