



135 River Road • Woolwich, ME 04579
207-837-2199 • tim@atlanticenviromaine.com
www.atlanticenviromaine.com

April 30, 2019

Mr. Alex Jaegerman, Director of Planning & Development
Town of Yarmouth
200 Main Street
Yarmouth, ME 04096

Re: Shoreland Zoning Permit Application for a Dock consisting of a Pier, Ramp, and Float, 130 Whites Cove Road, Yarmouth, Maine.

Dear Mr. Jaegerman,

On behalf of Robert and Eva Ng, Atlantic Environmental, LLC (AE) is pleased to submit a Shoreland Zoning Permit Application for a dock consisting of a permanent pier with a seasonal ramp and float. The dock will provide recreational water access to Casco Bay and adjacent coastal waters (see Location Map).

More specifically, the Applicant proposes to construct a six (6) foot wide by forty (40) foot long pile-supported pier that will connect to a three (3) foot wide by forty (40) foot long ramp and an eight (8) foot wide by twenty (20) foot long float. The float will be secured in place with cross chains pinned to ledge and helix anchors. The ramp and float will be in place for less than seven (7) months and stored in an upland location during the off-season.

The Applicant's property is located in the Low Density Residential (LDR) and the Shoreland Overlay District (SOD). As discussed with Tom Federle of Federle Law, the dock will be located to the north of an existing set of stairs and landing. The dock will not be any further non-conforming than the existing stairs with regards to sideline setbacks. AE has reviewed Article II, Section R of the Town of Yarmouth's Zoning Ordinance and believes the project is in compliance with these standards. Please review the attached information demonstrating compliance with these Articles. The Applicant has submitted applications to the Maine Department of Environmental Protection (MDEP) and the Army Corps of Engineers (ACOE) and relevant sections of those applications are included in the attached application materials. Copies of each permits are included with the attached application materials.

Thank you in advance for your consideration of this Application. If you require any additional information or clarifications, please feel free to contact me at 207 - 837 - 2199 or by email at tim@atlanticenviromaine.com.

Sincerely,
Atlantic Environmental LLC.

A handwritten signature in black ink that reads 'Timothy A. Forrester'.

Timothy A. Forrester, Owner

TOWN OF YARMOUTH

200 Main Street

Yarmouth, Maine 04096

(207)846-2401

WWW.YARMOUTH.ME.US

Fax: (207)846-2438

SHORELAND ZONING PERMIT APPLICATION

PERMIT # _____ ISSUE DATE _____ FEE AMOUNT _____

Date: 2/21/2019 Zoning District LDR and SZ Map 3 Lot 14 Ext _____

APPLICANT NAME: Atlantic Environmental, LLC c/o Tim Forrester PHONE NO: (207) 837 - 2199

MAILING

ADDRESS: 135 River Road Woolwich, ME 04579 e-mail tim@atlanticenviromaine.com

OWNER (other than applicant)

NAME: Robert and Eva Ng PHONE NO: (617) 331 - 1070

MAILING

ADDRESS: 260 Weston Road Wellesley, MA 02482 e-mail eng@babson.edu

CONTRACTOR

NAME: Custom Floats PHONE NO: (888) 844 - 9666

MAILING

ADDRESS: 11 Wallace Avenue South Portland, ME 04106 e-mail cpoole@customfloat.com

PROPERTY

LOCATION: 130 Whites Cove Road

Applicant must also include a narrative of the project including a description of all proposed construction, (E.G. Land clearing, road building, septic systems and wells – Please note: A site plan sketch is required on a separate sheet of paper no less than 11" x 17" or greater than 24"x36"

Please note: Plan set must be bound (not rolled) with a cover sheet and index.

Proposed use of project: Residential

Estimated cost of construction \$20,000

Lot area (sq. ft.) 7,405.2 sq. ft.

Frontage on Road (FT) +/- 48 ft.

SQ. FT. of lot to be covered by non-vegetated surfaces No additional sq. ft.

Elevation above 100 YR Flood Plain N/A

Frontage on water body (FT.) +/- 60 ft.

Height of proposed structure min. 6 ft.

Existing use of property Residential

Proposed use of property Residential

Note: NEXT Questions apply only to expansions of portions of existing structures that are less than the required setback.

- A) Total building footprint area of portion of structure that is less than required setback as of 1/1/89: N/A SQ.FT.
- B) Actual shore setback of existing structure proposed for expansion (measured as required in SOD, e.g.: Highest Annual Tide; Upland Edge of Coastal Wetland; Top of Bank (RP); Normal High Water Line of rivers and streams; as applicable): Water Dependent
- C) Building footprint area of expansions of portion of structure that is less than required setback from 1/1/89 to present: N/A SQ.FT.
- D) Building footprint area of proposed expansion of portion of structure that is less than required setback: +/- 42 SQ.FT.
- E) % Increase of building footprint of previous and proposed expansions of portion of structure that is less than required setback since 1/1/89: % increase = $((C+D) \times 100) / A =$
N/A %
- F) Floor Area and Market Value of Structure prior to improvements: (a) Area: N/A
Value: . Floor Area and Market Value of portions of Structure removed, damaged or destroyed: (b) Area: Value: . If the floor area or market value of (b) exceeds 50% of the area or value of (a), then the Relocation provisions of Article IV.R.5.a.(3) and (4) shall apply. **Note:** A value appraisal may be required or submitted in close cases where the applicant asserts that that 50% trigger and relocation assessment provision is not met. **Any plan revisions after initial approvals to replace rather than renovate building components (foundations, framing, etc.) shall be required to re-calculate the extent of removal, damage or destruction relative to retained structure.**
- ☒ Please provide a site plan to include lot lines, area to be cleared of trees and other vegetation; the exact position of proposed structures, including decks, porches, and out buildings with accurate setback distances from the shoreline, side and rear property lines; the location of proposed wells, septic systems, and driveways; and areas and amounts to be filled or graded. If the proposal is for the expansion of an existing structure, please distinguish between the existing structure and the proposed expansion.
- ☒ Note: For all projects involving filling, grading, or other soil disturbance you must provide a soil erosion control plan describing the measures to be taken to stabilize disturbed areas before, during and after construction.
- ☒ Draw a simple sketch showing both the existing and proposed structures with dimensions.

SHORELAND ZONING PERMIT CHECKLIST

Please note that this checklist is intended to help applicants identify major submittal components but it is the applicant's responsibility to review the SOD/RP provisions outlined in Chapter 701 of the Yarmouth Code and provide all required information as well as conform to all design components. Copies of Chapter 701 are available at the Yarmouth Town Hall or can be downloaded on the Town website which is www.yarmouth.me.us.

- ☒ Complete Shoreland Zoning Permit application including signatures of property owners and agents.
- ☒ Appropriate fee.
- ☒ Square footage of lot area within the 250' SOD
- ☒ Square footage and % of lot covered by non-vegetated surfaces within the SOD
- ☒ Square footage and % of cleared area within lot area within the SOD
- ☒ Delineation of 75' setback from upland edge of the coastal wetland
- ☒ Delineation of 250' SOD line from upland edge of the coastal wetland.
- ☐ Delineation of Resource Protection District N/A
- ☐ Height of any proposed structures as measured between the mean original grade at the downhill side of the structure and the highest point of the structure N/A
- ☐ Building elevations of any proposed structures as viewed from side and rear lot lines N/A
- ☒ % Increase of expansions of portion of structure which is less than the required setback (if applicable)
- ☐ Floor Area and Market Value of Structure prior to improvements: (a) Area: N/A
Value: N/A. Floor Area and Market Value of portions of Structure removed, damaged or destroyed: (b) Area: N/A Value: N/A.
- ☐ Elevation of lowest finished floor to 100 year flood elevation N/A
- ☐ Evidence of submission of the application to the Maine Historic Preservation Commission (MHPC) at least twenty (20) days prior to the Planning Board meeting as required in Article IV.R.O
- ☒ Copy of additional permit(s) if applicable:
 - Planning Board (e.g. Subdivision, Site Plan Review)
 - Board of Appeals
 - Flood Hazard
 - Exterior plumbing permit (Approved HHE 200 Application Form)
 - Interior plumbing permit
 - DEP permit (Site Location, Natural Resources Protection Act)
 - Army Corps of Engineers Permit (e.g. Sec. 404 of Clean Waters Act)
- ☒ Please circle all habitat types, marine organisms and shoreline elements present:
(Sand beach) (boulder/cobble beach) (sand flat) (~~mixed coarse & fines~~) (salt marsh)
(ledge) (rocky shore) (~~mudflat~~) (sediment depth if known) (Bluff/bank) (Mussels) (clams)
(marine worms) (rockweed) (eelgrass) (lobsters) (other _____)
- ☒ Signs of intertidal erosion? (Yes) (no)
- ☒ Energy: (protected) (~~semi-protected~~) (partially exposed) (exposed)
- ☒ Copy of deed
- ☒ Soil erosion control plan
- ☒ Photographs
- ☒ Plan view

NOTE: Applicant is advised to consult with the CEO and appropriate state and federal agencies to determine whether additional permits, approvals, and reviews are required.

CONDITIONS OF APPROVAL

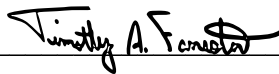
The property shown on this plan may be developed and used only as depicted on this approved plan. All elements and features of the plan and all representations made by the applicant concerning the development and use of the property which appear in the record of the Planning Board proceedings are conditions of approval. No change from the conditions of approval is permitted unless an amended plan is first submitted to and approved by the Planning Board.

I certify that all information given in this application is accurate. All proposed uses shall be in conformance with this application and the Town of Yarmouth Shoreland Regulations in the Zoning Ordinance. I agree to future inspections by the Code Enforcement Officer / Planning Director / Planning Board members (as applicable) at reasonable hours and with advance notice.

“I authorize appropriate staff within the Yarmouth Planning Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to collect facts pertaining to my application.”

Applicant Signature _____

Date _____

Agent Signature  _____
(if applicable)

Date 4/30/2019

Code Enforcement Officer _____

DATE OF APPROVAL / DENIAL OF APPLICATION _____
(by either staff or planning board)



135 River Road • Woolwich, ME 04579
207-837-2199 • tim@atlanticenviromaine.com
www.atlanticenviromaine.com

January 8, 2019

To whom it may concern:

By this letter, I authorize Atlantic Environmental LLC to act on my behalf as my Agent for the preparation and submission of all federal, state, and local town or city permit applications and relevant documents and correspondence related to the construction of a dock located at 130 Whites Cove Road in Yarmouth, Maine. This authorization includes attending meetings and site visits, appearing before all boards, commissions, and/or committees, and providing other services as required for completing the aforementioned tasks.

Thank you for the opportunity to work with you on this project. Should you have any additional questions, please do not hesitate to contact me at 207-837-2199 or via email at tim@atlanticenviromaine.com.

Robert Ng

Print Name

A handwritten signature in black ink, appearing to be 'R Ng', written over a horizontal line.

Signature

January 8, 2019

Date

Sincerely,
Atlantic Environmental LLC.

A handwritten signature in black ink, reading 'Timothy A. Forrester', written over a horizontal line.

Timothy A. Forrester, Owner

EXHIBIT 1.0: ACTIVITY DESCRIPTION

The Applicant owns an approximate 0.17-acre parcel of land located on Whites Cove Road and adjacent to Casco Bay in the Town of Yarmouth, Maine (see **Exhibit 3.0**). There is currently a set of access stairs that begins at the top of the bank and consists of a series of steps and landings and measures approximately fifty (50) feet long. The stairs extend to an eight (8) foot wide by ten (10) foot long platform. The Applicant received Department approval to replace the stairs and platform in PBR # 47950, dated May, 2009. The stairs and platform allow the Applicant to access to the upper intertidal area by foot; however, the upper intertidal consists of exposed ledge, marsh vegetation, and rockweed covered ledge and does not provide access to the resource for boating. In order to safely and reasonably access the adjacent coastal waters for recreational water pursuits, the Applicant proposes to construct a permanent pier with a seasonal ramp and float.

Atlantic Environmental, LLC (AE) investigated the site and the surrounding area to determine the feasibility of accessing the resource and constructing a dock that will accommodate the Applicant's watercraft and meet project goals while avoiding and minimizing impacts to the environment. Based on the Applicant's needs, the existing conditions of the site and the outcome of our investigations, the following design criteria have been determined.

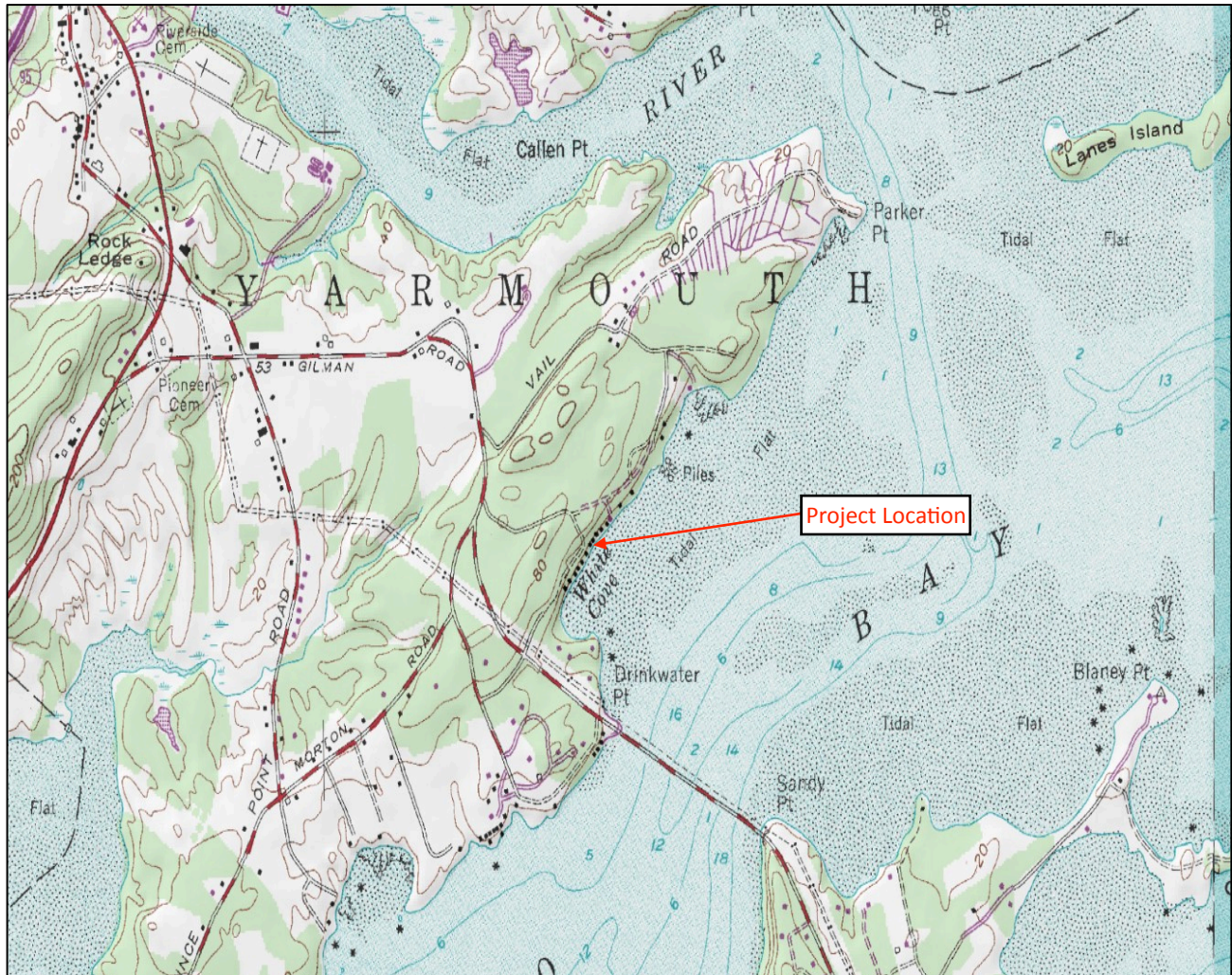
In order to reach navigable waters on a partial-tide basis, the Applicant proposes to construct a dock consisting of a pier, ramp, and float. The pier will begin from the northerly shoreside of the platform and will measure six (6) feet wide by forty (40) feet long. The pier will be supported with eight (8), twelve (12) inch in diameter timber pilings that will be pinned to ledge. Six of the pilings will be located below the Highest Annual Tide (HAT) line and will result in approximately six (6) square feet of direct impacts to the coastal wetland. The pier will

connect to a three (3) foot wide by forty (40) foot long seasonal ramp and an eight (8) foot wide by twenty (20) foot long seasonal float. The float will be secured in place with cross chains pinned to ledge on the landward side and cross chains and helix anchors on the seaward side.

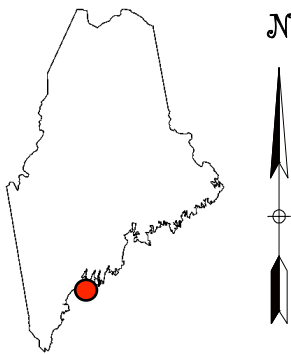
During the off-season, the ramp will be stored on the pier and the float will be hauled off-site and stored at an upland location.

EXHIBIT 3.0: LOCATION MAP

Robert and Eva Ng, 130 Whites Cove Road, Yarmouth, Maine



Directions: From downtown Yarmouth, follow Route 88 south. Turn left on Princes Point Road. At the intersection, turn left on Gilman Road and continue for 0.8 miles. Turn left on Whites Cove Road and travel for approximately 0.3 miles. #130 will be on the left.



| | |
|--|--------------------------------------|
| Notes: | |
| Maine Atlas & Gazetteer Map 6 (Section D-1) 43.780905 -70.153677 | |
|  ATLANTIC ENVIRONMENTAL LLC. Environmental Consultants 135 River Road, Woolwich, ME 04579 (207) 837-2199 tim@atlanticenviromaine.com | |
| Date: 1/4/2019 | DWG Name: Ng Site Location |

Ng Zoning Map



2/21/2019, 1:29:09 PM

- Parcel ID's
- Shoreland Overlay District
- Parcels
- Zoning
- Low Density Residential

1:1,128

0 0.01 0.02 0.04 mi
0 0.01 0.02 0.04 km

DigitalGlobe, Town of Yarmouth

Public User
Town of Yarmouth

EXHIBIT 4.0: PHOTOGRAPHS

The following photographs are taken from the site of the project and represent the proposed location of the dock located at 130 Whites Cove Road in the Town of Yarmouth, ME.



Photograph One. Aerial View of Project Site. Red arrow indicates approximate location of project.
Source: Google Earth. Date: May 4, 2018.



Photograph Two. Facing easterly – view of intertidal area in location of proposed dock. Photographer: Tim Forrester, Atlantic Environmental, LLC Date: August 15, 2018.



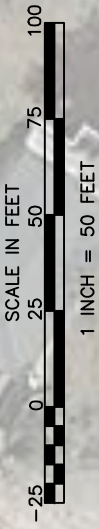
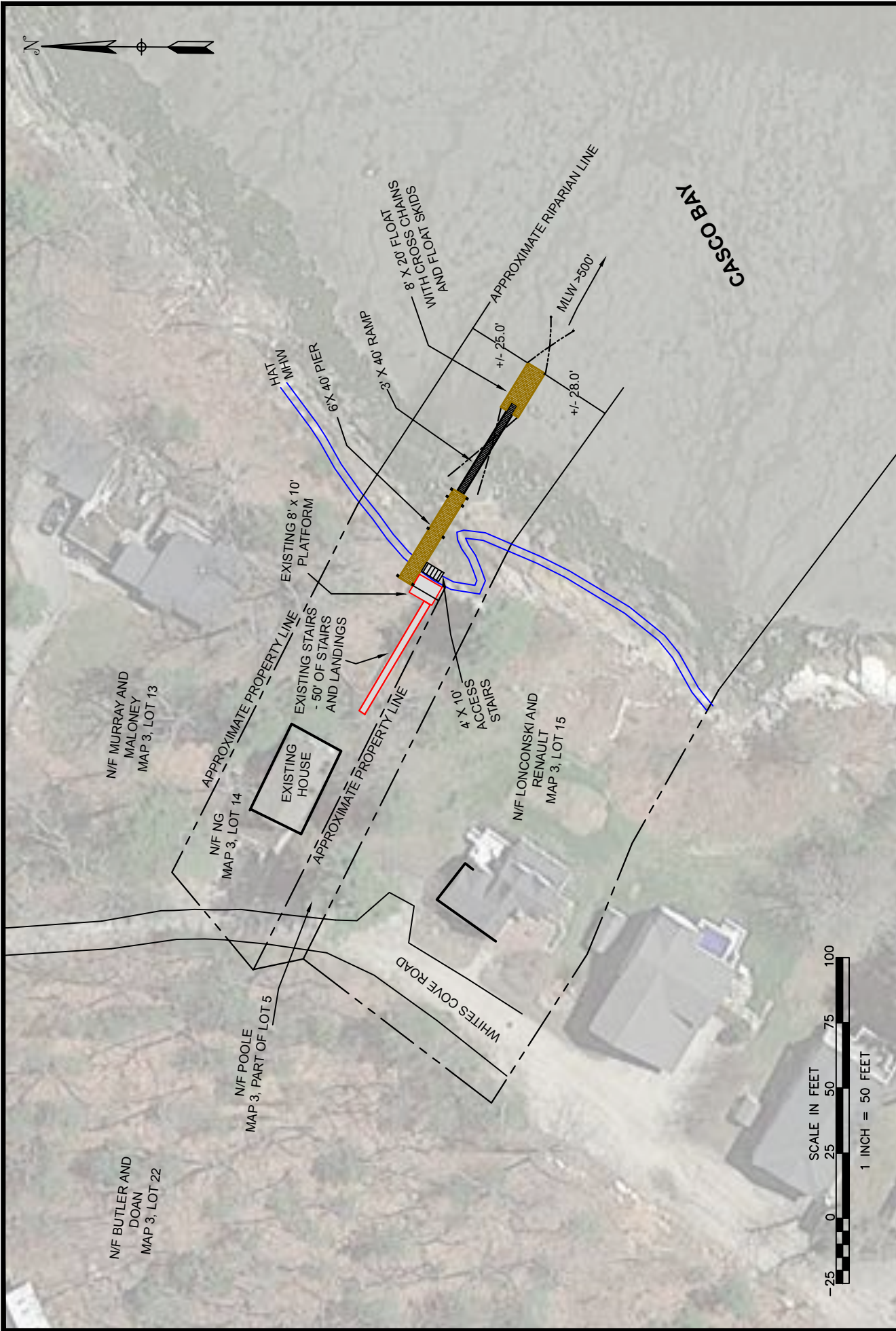
Photograph Three. Facing southwesterly – view of upper intertidal in area of proposed dock
Photographer: Tim Forrester, Atlantic Environmental, LLC Date: August 15, 2018.



Photograph Four. Facing westerly – additional view of intertidal area in proposed dock location.
Photographer: Tim Forrester, Atlantic Environmental, LLC Date: August 15, 2018.



Photograph Five. Facing easterly – view of coastal wetland and surrounding area. Photographer: Tim Forrester, Atlantic Environmental, LLC Date: August 15, 2018.





N/F BUTLER AND
DOAN
MAP 3, LOT 22

N/F MURRAY AND
MALONEY
MAP 3, LOT 13

N/F POOLE
MAP 3, PART OF LOT 5

N/F NG
MAP 3, LOT 14

EXISTING HOUSE
- 50' OF STAIRS
AND LANDINGS

EXISTING 8' x 10'
PLATFORM

HAT
MHWN
6' x 40' PIER

3' x 40' RAMP

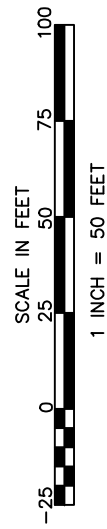
AND FLOAT
8' x 20' FLOAT
WITH CROSS
CHAINS

N/F LONCONSKI AND
RENAULT
MAP 3, LOT 15

4' x 10'
ACCESS
STAIRS

WHITES COVE ROAD

CASCO BAY



ATLANTIC ENVIRONMENTAL LLC.
Environmental Consultants
135 River Road, Woolwich, ME 04579
(207) 837-2199
tim@atlanticeviromaine.com

Date: 1/9/2019
Revised:
Project: Ng, Yarmouth
Drafted By: LCV

Plan View of the Proposed Pier, Ramp and Float for Robert and Eva Ng
located at 130 Whites Cove Road in Yarmouth, Maine.

NOTES:

- 1) ALL PT LUMBER WILL BE CURED IN THE UPLAND FOR 21 DAYS PRIOR TO INSTALL.
- 2) PILINGS WILL BE PINNED TO LEDGE.
- 3) RAMP WILL BE STORED ON PIER AND FLOAT WILL BE HAULED OFF-SITE AND STORED IN AN UPLAND LOCATION DURING THE OFF-SEASON.
- 4) FLOAT WILL BE SECURED IN PLACE WITH CHAINS.

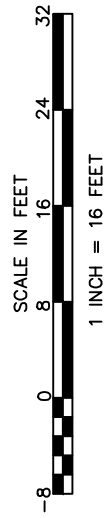


EXHIBIT 6.0: CONSTRUCTION PLAN

The pier will be supported with pilings pinned to ledge as described in **Exhibit 1.0**. Any CCA-treated lumber used for the construction of the pier will be cured on dry land for 21 days prior to the start of construction. The ramp and float will be constructed off-site and set in place once the pier is constructed.

All materials will be transported to the site from the upland and construction access will take place from the adjacent upland. It is not anticipated that measureable soil disturbance will occur as a result of the construction of the pier given the ledge in the area. The construction of the dock should take approximately one (1) to two (2) weeks.

EXHIBIT 7.0: EROSION CONTROL PLAN

The construction of the dock involves minimal excavation and/or earth moving and all work will be conducted at low tide. Given that minimal sedimentation, if any, will occur for the construction of the proposed structures, no formal measures are proposed to control erosion or sedimentation.

EXHIBIT 8.0

APPENDIX B: MDEP COASTAL WETLAND CHARACTERIZATION: INTERTIDAL & SHALLOW SUBTIDAL FIELD SURVEY CHECKLIST

NAME OF APPLICANT: Robert and Eva Ng PHONE: (207) 837 – 2199 (agent)

APPLICATION TYPE: Individual NRPA

ACTIVITY LOCATION: Yarmouth COUNTY: Cumberland

ACTIVITY DESCRIPTION: ☐ fill ☒ pier ☐ lobster pound ☐ shoreline stabilization ☐ dredge ☐ other:

DATE OF SURVEY: January 2, 2019

OBSERVER: Tim Forrester

TIME OF SURVEY: 2:00 pm

TIDE AT SURVEY: Low-Tide

SIZE OF DIRECT IMPACT OR FOOTPRINT (square feet):

Intertidal area: 6 square feet Subtidal area: 0

SIZE OF INDIRECT IMPACT, if known (square feet):

Intertidal area: approximately 490 square feet Subtidal area: 0

HABITAT TYPES PRESENT(check all that apply):

☐ sand beach ☐ boulder/cobble beach ☐ sand flat ☐ mixed coarse & fines ☒ salt marsh
☒ ledge ☐ rocky shore ☒ mudflat (sediment depth, if known:____)

ENERGY: ☐ protected ☒ semi-protected ☐ partially exposed ☐ exposed

DRAINAGE: ☒ drains completely ☐ standing water ☐ pools ☐ stream or channel

SLOPE: ☐ >20% ☐ 10-20% ☐ 5-10% ☒ 0-5% ☐ variable

SHORELINE CHARACTER:

☐ bluff/bank (height from spring high tide:____) ☐ beach ☐ rocky ☒ vegetated

FRESHWATER SOURCES: ☐ stream ☐ river ☐ wetland ☒ stormwater

MARINE ORGANISMS PRESENT:

| | absent | occasional | common | abundant |
|--------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| mussels | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| clams | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| marine worms | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| rockweed | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| eelgrass | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| lobsters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| other | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SIGNS OF SHORELINE OR INTERTIDAL EROSION? ☐ yes ☒ no

PREVIOUS ALTERATIONS? ☒ yes* ☐ no

*PBR #47950 Approved in 2009 for Adjacent Activities located within 75 feet of HAT and Replacement of Structures

CURRENT USE OF SITE AND ADJACENT UPLAND:

☐ undeveloped ☒ residential ☐ commercial ☐ degraded ☒ recreational

PLEASE SUBMIT THE FOLLOWING:

☒ Photographs ☒ Overhead drawing

(pink)

WARRANTY DEED
Maine Statutory Short Form

Know all Persons by these Presents,

That we, Albion L. Payson and Susan D. Payson, of Yarmouth, State of Maine,
for consideration paid, grant to:

Robert E. Ng and Eva W. Ng

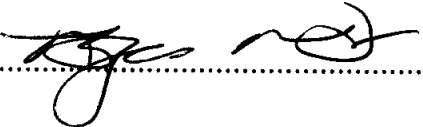
of Wellesley, Commonwealth of Massachusetts, whose mailing address is:

260 Weston Road, Wellesley, Massachusetts 02482, with **warranty covenants**, as **joint tenants**, the land in Yarmouth, County of Cumberland, and State of Maine, described as follows:


A certain lot or parcel of land, together with any buildings and improvements thereon, situated in the Town of Yarmouth, County of Cumberland, and State of Maine being more particularly described in Exhibit A attached hereto and made a part hereof.

Witness our hands and seals this 18th day of April, 2009.

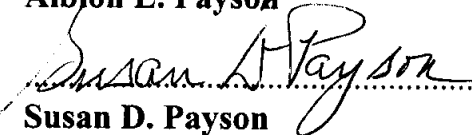
Signed, Sealed and Delivered
in the presence of


.....

TO BOR
.....


.....

Albion L. Payson


.....

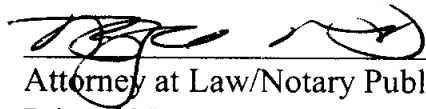
Susan D. Payson

State of Maine
County of Cumberland

ss

April 18th, 2009

Then personally appeared before me the above named Albion L. Payson and Susan D. Payson and acknowledged the foregoing instrument to be their free act and deed.


.....
Attorney at Law/Notary Public
Printed Name: _____

ABIGAIL R. DOUGLAS
Notary Public Maine
My Commission Expires June 20, 2015

MAINE REAL ESTATE TAX PAID

EXHIBIT A
130 Whites Cove Road, Yarmouth, Maine

A certain lot or parcel of land, with the buildings thereon, situated on the Shore of White's Cove in Casco Bay in the Town of Yarmouth, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a drill hole in the ledge at high water mark at the most southerly corner of land conveyed to Susan P. Kinghorn by Charles G. Woodman and others by warranty deed dated October 10, 1925 and recorded in Cumberland County Registry of Deeds in Book 1219, Page 111; thence North $46^{\circ} 15'$ West, one hundred sixty-five (165) feet to an iron post; thence North 67° East, forty-eight (48) feet to an iron post; thence South $46^{\circ} 15'$ East parallel to the first mentioned line to a drill hole in the ledge at high water mark; thence westerly along high water mark to the point of beginning.

Being the same premises conveyed to the Grantors herein by warranty deed from Edwin O. Nielsen dated June 25, 1969 and recorded in the Cumberland County Registry of Deeds in Book 3091, Page 548.

Also conveying an easement or right of way appurtenant to the above-described premises for purposes of access and the installation and maintenance of utilities over the existing private way known as Whites Cove Road extending from the Gilman Road to the above described premises. The warranty covenants set forth herein, however, are excluded from the grant of the aforementioned easement or right of way.

Received
Recorded Register of Deeds
Apr 21, 2009 02:49:44P
Cumberland County
Pamela E. Lovley



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

MAINE GENERAL PERMIT (GP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

Robert and Eva Ng
260 Weston Road
Wellesley, Massachusetts 02482

CORPS PERMIT # NAE-2019-00177
CORPS PGP ID# 19-040
STATE ID# Exempt

DESCRIPTION OF WORK:

Install and maintain a permanent 40'x6' pier, a seasonal 40'x3' ramp, and a 20'x8' floating dock, in Casco Bay in Yarmouth, Cumberland County, Maine as shown on the attached plans entitled "Robert and Eva Ng" in three (3) sheets dated January 7, 2019. **Additional conditions attached.**

LAT/LONG COORDINATES: 43.780905° N -70.153677° W USGS QUAD: Yarmouth, ME

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP). This is your Corps Permit.**

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 37 of the GP (page 16) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 13, 2020. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 13, 2021.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [] , ISSUED [] , DENIED [] DATE _____

APPLICATION TYPE: PBR: _____, TIER 1: _____, TIER 2: _____, TIER 3: _____, NRPA: _____, LURC: _____, DMR LEASE: _____, NA: X

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 1/31/2019 LEVEL OF REVIEW: CATEGORY 1: _____ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 _____, 404 _____, 10/404 X, 103 _____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

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JANA JACOBSON
PROJECT MANAGER
MAINE PROJECT OFFICE

FRANK J. DEL GIUDICE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION
DATE 2/19



US Army Corps
of Engineers[®]
New England District

ADDITIONAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
GENERAL PERMIT
NO. NAE-2019-00177

1. The permittee shall ensure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.
2. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
3. No additional structures (such as but not limited to, ramps, floats, pier additions, buildings on the float) are authorized without written approval from the Corps.
4. Any float(s) that do not extend beyond mean low water shall be constructed in such a way as to keep them elevated a minimum of 18" above the tidal bottom as practicable. Techniques include but are not limited to float stops, skids, blocks, or other practicable means.
5. This permit for a float does not eliminate the need to obtain local harbormaster approval or conform to local harbor management plans. If, in the best interest of overall navigation and under harbormaster direction, it becomes necessary to relocate the float, prior written authorization from the Corps is not required. No float may be relocated into a Federal Navigation Project. If relocation occurs, the permittee shall provide the Corps with a copy of the harbormaster approval and a plan and coordinates depicting the new location of the float.
6. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals). **The forms are attached after the plans.**



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

| | |
|-----------------------------|------------------------------------|
| ROBERT AND EVA NG |) NATURAL RESOURCES PROTECTION ACT |
| Yarmouth, Cumberland County |) COASTAL WETLAND ALTERATION |
| RESIDENTIAL PIER SYSTEM |) SIGNIFICANT WILDLIFE HABITAT |
| L-28110-4P-A-N (approval) |) WATER QUALITY CERTIFICATION |
| L-28110-TW-B-N (approval) |) FINDINGS OF FACT AND ORDER |

Pursuant to the provisions of 38 M.R.S. §§ 480-A–480-JJ, Section 401 of the Federal Water Pollution Control Act (33 U.S.C. § 1341), and Chapters 310, 315, and 335 of Department rules, the Department of Environmental Protection has considered the application of ROBERT AND EVA NG with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History of Project: The Department accepted a Natural Resources Protection Act (NRPA) Permit by Rule Notification Form (PBR #47950) on May 8, 2009, for activities adjacent to a natural resource, replacement of a structure, movement of rock/vegetation and installation of an outfall pipe in accordance with Chapter 305 (2), (4), (6) and (7) of Permit by Rule Standards.

B. Summary: The applicants propose to construct a residential pier system consisting of a six-foot wide by 40-foot long permanent pier structure, a three-foot wide by 40-foot long seasonal ramp, and an eight-foot wide by 20-foot long seasonal float. The permanent pier structure will be supported by eight pilings pinned to ledge, six of which will be located in the coastal wetland. The proposed pier system will result in six square feet of direct impacts to the coastal resource due to pilings and 490 square feet of indirect impacts due to shading from the pier, ramp, and float. The proposed project is located in mapped Tidal Waterfowl and Wading Bird Habitat (TWWH) which is designated as Significant Wildlife Habitat under the NRPA. The proposed project can be seen on a set of plans, the first of which is titled “Plan View of the Proposed Pier, Ramp, and Float,” prepared by Atlantic Environmental, LLC, and dated January 9, 2019. The project is located at 130 White Cove Road in the Town of Yarmouth.

C. Current Use of the Site: The site of the proposed project is located on a 0.17-acre parcel of land, which is developed with a residential property in the upland area. The project site is identified as Lot #14 on Map #3 on the Town of Yarmouth’s tax maps.

D. Title, right or interest: An application must include documentation demonstrating that the applicants have title, right or interest in the property proposed to be developed or used for the project sufficient for the nature and duration of the proposed development or

use. The applicants' deed does not expressly state ownership below the Highest Annual Tide (HAT) line. The deed was reviewed by the Department and based on the existing stake along the shore and ownership consistencies to the water within the deed's 120-year history, the Department finds that sufficient title, right and interest has been demonstrated for the proposed project.

2. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

The Natural Resources Protection Act (NRPA), in 38 M.R.S. §480-D(1), requires the applicants to demonstrate that the proposed project will not unreasonably interfere with existing scenic, aesthetic, recreational and navigational uses.

In accordance with Chapter 315, *Assessing and Mitigating Impacts to Scenic and Aesthetic Uses* (06-096 C.M.R. ch. 315, effective June 29, 2003), the applicants submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A to the application along with a description of the property and the proposed project. The applicants also submitted several photographs of the proposed project site and surroundings. Department staff visited the project site on April 5, 2019.

The proposed project is located in Casco Bay, which is a scenic resource visited by the general public, in part, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities. Existing vegetation on the applicants' shoreline consists of trees and shrubs. The proposed project is similar in design to previously approved and installed pier systems nearby. The applicants have also designed the pier system to blend in with the natural surroundings by limiting vegetation removal and replanting native species. All disturbed areas from construction will be revegetated with native plant species. The applicants must monitor the plantings and the plantings must be replaced or maintained as necessary to achieve 85% survival after one full growing season.

Department staff utilized the Department's Visual Impact Assessment Matrix in its evaluation of the proposed project and the Matrix showed an acceptable potential visual impact rating for the proposed project. Based on the information submitted in the application, the site visit and the visual impact rating, the Department determined that the location and scale of the proposed activity is compatible with the existing visual quality and landscape characteristics found within the viewshed of the scenic resource in the project area.

The Department of Marine Resources (DMR) stated that the proposed project should not cause any significant adverse impact to navigation, recreation, fishing, and riparian access based on the nature of the project and its location.

The Department finds that the proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses of the coastal wetland provided plantings are maintained and monitored as described above.

3. SOIL EROSION:

The NRPA, in 38 M.R.S. §480-D(2), requires the applicant to demonstrate that the proposed project will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

No trees or other vegetation removal is proposed for the construction of the proposed pier system which will be constructed from upland, and any disturbed area during construction will be revegetated with native plant species. Pilings for the proposed pier system will be pinned to ledge. The proposed ramp and float will be constructed at an off-site location and set in place once the pier is constructed. The proposed project will work in accordance with the Department's *Maine Erosion and Sediment Control Best Management Practices*, dated October 2016. Based upon these construction methods, the applicants anticipate that soil disturbance associated with project construction will be minimal.

The Department finds that the activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

4. HABITAT CONSIDERATIONS:

The NRPA, in 38 M.R.S. §480-D(3), requires the applicant to demonstrate that the proposed project will not unreasonably harm significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

The project site is developed consisting of trees and vegetation with a residential structure located in the upland area and a platform and set of stairs accessing the resource. The substrate at the proposed project site consists of ledge and salt marsh in the intertidal area and mud within the subtidal area.

According to the Department's Geographic Information System (GIS) database, there is mapped TWWH which is designated as Significant Wildlife Habitat under the NRPA within the project site.

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project and stated that there are no Essential or Significant Wildlife Habitats at the project site.

The Department of Marine Resources (DMR) stated that the project as proposed would not cause any significant adverse impact to marine resources.

The Department finds that the activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic

or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

5. WATER QUALITY CONSIDERATIONS:

The NRPA, in 38 M.R.S. §480-D(5), requires the applicants to demonstrate that the proposed project will not violate any state water quality law, including those governing the classification of the State's waters.

The applicants propose to use lumber treated with chromated copper arsenate (CCA) to construct the pier system. To protect water quality, all CCA-treated lumber must be cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction.

Provided that CCA-treated lumber is cured as described above, the Department finds that the proposed project will not violate any state water quality law, including those governing the classification of the State's waters.

6. WETLANDS AND WATERBODIES PROTECTION RULES:

The proposed project will result in six square feet of direct impacts to the coastal resource from pilings and 490 square feet of indirect impacts to the coastal wetland due to shading from the pier, ramp, and float.

The *Wetlands and Waterbodies Protection Rules*, 06-096 C.M.R. ch. 310 (last amended January 26, 2009), interpret and elaborate on the Natural Resources Protection Act (NRPA) criteria for obtaining a permit. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would cause a loss in wetland area, functions and values and there is a practicable alternative to the project that would be less damaging to the environment. Each application for a NRPA permit that involves a coastal wetland alteration must provide an analysis of alternatives to demonstrate that a practicable alternative does not exist.

A. Avoidance. An applicant must submit an analysis of whether there is a practicable alternative to the project that would be less damaging to the environment and this analysis is considered by the Department in its assessment of the reasonableness of any impacts. The applicants submitted an alternatives analysis for the proposed project completed by Atlantic Environmental, LLC., and dated January 14, 2019. The purpose of this project is to provide readily available, safe, partial-tide access to navigable waters for recreational boating and swimming. The applicants considered not constructing the pier system, however the existing set of stairs and platform lead to ledge and marsh vegetation which is difficult to traverse and results in impacts to the marsh vegetation from dragging recreational watercraft to and from the resource. The applicants considered the use of public and private boat launch facilities located in the Town of Yarmouth, the closest facility is located approximately 1.9 miles from the project site. Because the boat launch

only allows non-motorized boats, and is not safe for swimming and kayaking, the applicants determined that this facility does not meet the project purpose. The applicants also considered a temporary pier system, constructing the pier system in a different location and different designs. However, the proposed pier system design provides the safest access to the resource by avoiding the need to traverse over the rocky intertidal area and salt marsh vegetation, the greatest structural integrity by installing a permanent structure with pilings for support, and the location allowed for the shortest distance to navigable waters while avoiding significant adverse impacts to TWWH located within the project site. Based on these considerations, the applicants stated that there is no other practicable alternative to the proposed project that avoids impacts to the resource.

B. Minimal Alteration. In support of an application and to address the analysis of the reasonableness of any impacts of a proposed project, the applicants must demonstrate that the amount of coastal wetland to be altered will be kept to the minimum amount necessary for meeting the overall purpose of the project. The location of the proposed pier system was chosen to minimize impacts to the coastal resource by pinning the pilings to exposed ledge. The seasonal ramp and float will also be stored up and out of the coastal wetland during the off-season.

C. Compensation. In accordance with Chapter 310 Section 5(C)(6)(b), compensation is not required to achieve the goal of no net loss of coastal wetland functions and values since the project will not result in a direct impact greater than 500 square feet of fill in the resource, which is the threshold over which compensation is generally required. Further, the proposed project will not have a significant adverse impact on marine resources or wildlife habitat as determined by the DMR and MDIFW. For this reason, the Department determined that compensation is not required.

The Department finds that the applicants has avoided and minimized coastal wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

7. OTHER CONSIDERATIONS:

The Department finds, based on the design, proposed construction methods, and location, the proposed project will not inhibit the natural transfer of soil from the terrestrial to the marine environment, will not interfere with the natural flow of any surface or subsurface waters, and will not cause or increase flooding. The proposed project is not located in a coastal sand dune system, is not a crossing of an outstanding river segment, and does not involve dredge spoils disposal or the transport of dredge spoils by water.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S. §§ 480-A–480-JJ and Section 401 of the Federal Water Pollution Control Act:

- A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses provided plantings are maintained and monitored as described in Finding 2.
- B. The proposed activity will not cause unreasonable erosion of soil or sediment.
- C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.
- D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.
- E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.
- F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters provided that CCA-treated lumber is cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction.
- G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.
- H. The proposed activity is not on or adjacent to a sand dune.
- I. The proposed activity is not on an outstanding river segment as noted in 38 M.R.S. § 480-P.

THEREFORE, the Department APPROVES the above noted application of ROBERT AND EVA NG to construct a residential pier system as described in Finding 1, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.
2. The applicants shall take all necessary measures to ensure that their activities or those of their agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.
3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

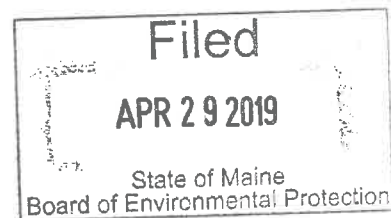
4. All CCA-treated lumber shall be cured on dry land in a manner that exposes all surfaces to the air for 21 days prior to the start of construction.
5. The applicants must monitor the plantings and the plantings must be replaced or maintained as necessary to achieve 85% survival after one full growing season.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 29TH DAY OF APRIL, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 
For: Gerald D. Reid, Commissioner



PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

AJaS/L28110ANBN/ATS#84013/84301



Natural Resources Protection Act (NRPA) Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCES PROTECTION ACT, 38 M.R.S. § 480-A ET SEQ., UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

- A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
- B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
- C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.
- D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.
- E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.
- G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.
- H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

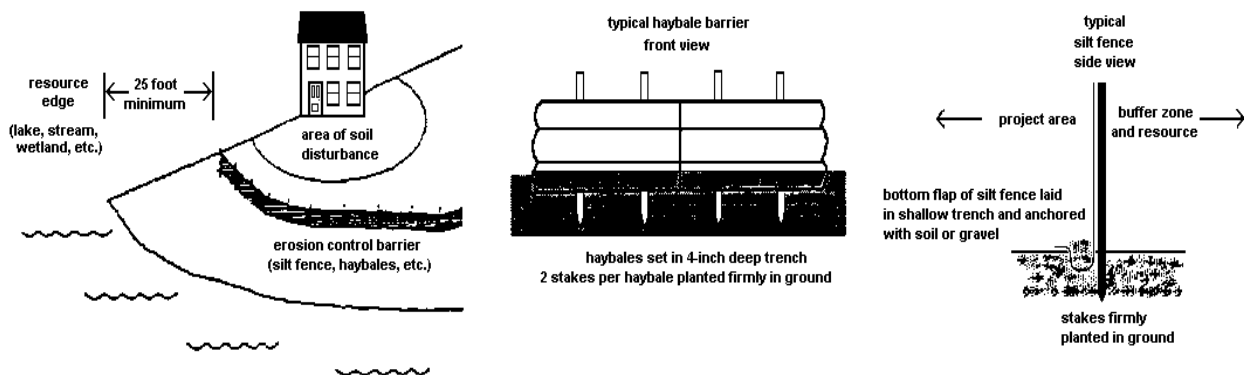


STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
 17 STATE HOUSE STATION, AUGUSTA, MAINE 04333

Erosion Control for Homeowners

Before Construction

1. If you have hired a contractor, make sure you discuss your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is, and where it is located. Most people can identify the edge of a lake or river. However, the edges of wetlands are often not so obvious. Your contractor may be the person actually pushing dirt around, but you are both responsible for complying with the permit.
2. Call around to find where erosion control materials are available. Chances are your contractor has these materials already on hand. You probably will need silt fence, hay bales, wooden stakes, grass seed (or conservation mix), and perhaps filter fabric. Places to check for these items include farm & feed supply stores, garden & lawn suppliers, and landscaping companies. It is not always easy to find hay or straw during late winter and early spring. It also may be more expensive during those times of year. Plan ahead -- buy a supply early and keep it under a tarp.
3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the soil-disturbance activity.
4. If a contractor is installing the erosion control barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level or elevation across the land slope, whenever possible. This keeps stormwater from flowing to the lowest point along the barrier where it can build up and overflow or destroy the barrier.



During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops hitting the bare ground that makes the soil begin to move downslope with the runoff water, and cause erosion. More than 90% of erosion is prevented by keeping the soil covered.
2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. You or your contractor then need to figure out what can be done to prevent more soil from getting past the barrier.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

After Construction

1. After your project is finished, seed the area. Note that all ground covers are not equal. For example, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high-maintenance areas. But this same seed mix is a poor selection for stabilizing a road shoulder or a cut bank that you don't intend to mow. Your contractor may have experience with different seed mixes, or you might contact a seed supplier for advice.
2. Do not spread grass seed after September 15. There is the likelihood that germinating seedlings could be killed by a frost before they have a chance to become established. Instead, mulch the area with a thick layer of hay or straw. In the spring, rake off the mulch and then seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away or being eaten by birds or other animals.
3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

Why Control Erosion?

To Protect Water Quality

When soil erodes into protected resources such as streams, rivers, wetlands, and lakes, it has many bad effects. Eroding soil particles carry phosphorus to the water. An excess of phosphorus can lead to explosions of algae growth in lakes and ponds called blooms. The water will look green and can have green slime in it. If you are near a lake or pond, this is not pleasant for swimming, and when the soil settles out on the bottom, it smothers fish eggs and small animals eaten by fish. There many other effects as well, which are all bad.

To Protect the Soil

It has taken thousands of years for our soil to develop. Its usefulness is evident all around us, from sustaining forests and growing our garden vegetables, to even treating our septic wastewater! We cannot afford to waste this valuable resource.

To Save Money (\$\$)

Replacing topsoil or gravel washed off your property can be expensive. You end up paying twice because State and local governments wind up spending your tax dollars to dig out ditches and storm drains that have become choked with sediment from soil erosion.